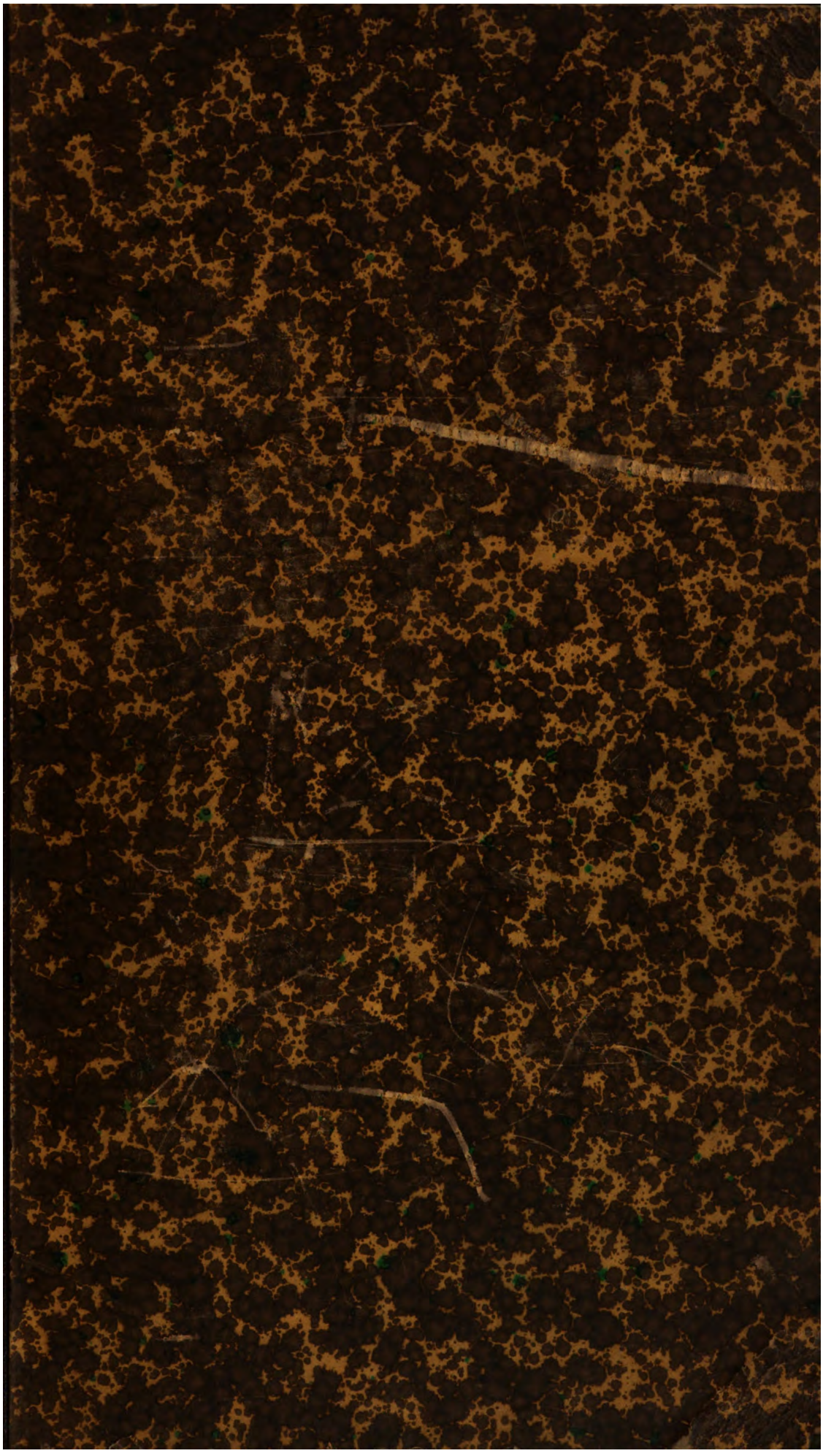


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Introductory Address
ON
RESEARCH IN MEDICINE AND WOMEN IN RESEARCH.

Delivered at the Opening of the Winter Session, 1911, at the London School of Medicine for Women,

BY SIR HENRY T. BUTLIN, BART., D.C.L., LL.D., P.R.C.S.,

CONSULTING SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

LADIES AND GENTLEMEN,—I imagine that an Introductory Address a century ago afforded the hospital staff the opportunity of welcoming the new students and of giving them some idea of the scope and nature of the work which lay before them. And I have no doubt that the orator did sometimes tell the young men that the profession they sought to enter was a great and noble profession, and of an interest sufficient in itself to repay them for their labours. A hundred years ago there was ample reason for the address, for, once admitted to the school, the student was left much to his own resources.

REMARKS ON INTRODUCTORY ADDRESSES AT THE PRESENT DAY.

In these days the Introductory Address needs justification. What with students' numbers of the journals, what with resident colleges, wardens, tutors, and demonstrators, the student has no need of an address of welcome or of warning or of general advice. My own school (St. Bartholomew's) recognised this many years ago and abolished the Introductory Address; it has never regretted that it did so. But the custom still exists in most of the schools, and the orator, not being tied to the one subject, selects any subject which pleases him, usually without any reference to the opening of the winter session, or to the new students, except for a few words at the beginning or end of his address. In truth, it is difficult to find use or excuse for the Introductory Address in this twentieth century—except at the School of Medicine for Women, where the conditions are wholly different. The entrance of women into the medical profession, the foundation of this school, the success of women at examinations and in the honours' lists, the story of the pioneers who fought so bravely, the story of the positions which women have captured, the financial success or otherwise of the movement, the lines of practice which are likely to open to them, and a number of other subjects, all of which might perhaps be treated at another place or at another time, are nevertheless much more fitly treated here. The story of the struggle cannot be too often told to the students of the school. Nay, more, it is scarcely over yet, and those who may have to fight have need to be heartened up to wage the battle bravely. When I was invited to deliver the address I therefore accepted gladly—first, because I was very proud of the compliment; second, because your school, individually and collectively, has been more than kind to me; third, because, in the language of the day, I thought I had a "soft job" in hand. It seemed as if nothing could be easier than to select any one of the subjects I have mentioned and deliver an interesting address upon it, and I set the whole matter aside much longer than I ought to have done, for I have been heavily occupied this year. Finally, before deciding on the subject, I thought I would look through the addresses of the last 15 or 20 years to see what had been done. Imagine my dismay when I discovered that every conceivable and appropriate subject had been dealt with, and by persons who knew far more about each one of them than I could ever know. They were experts in them. They had borne a part in the fray. They had fought with purse and pen, if not with sword. And they had naturally been listened to, when they thought fit to speak, with that profound attention which the hero commands when he describes his own experience and offers advice and counsel which are founded on it.

When I discovered the trap into which I had fallen I was very sad. I had so earnestly desired to deliver an address which should be worthy of you—at least to offer you my very best. And it seemed that I had really nothing to offer. But about this time I attended a committee at the Lister Institute of Preventive Medicine. Visiting the laboratories after the meeting, I saw one or two women at work, and learned that they were engaged in research, and I wondered whether they were good at it. I had previously been introduced to a woman-worker in the museum of the British Medical Association last year in London and was pleased to find that some of the most beautiful microscopical exhibits had been prepared by her. The sight of these ladies interested me, and I thought I would find out whether medical research has been embraced by women to any large extent and whether they have succeeded in it or are likely to succeed in it. I am going to tell you what I have learned, but the information is very scanty and would not fill or justify an address were it not that I am anxious to direct the attention of medical women, both qualified and unqualified, to research in medicine, and that to do so will give me an opportunity of making some general remarks upon research in medicine.

RESEARCH BY OBSERVATION OR BY EXPERIMENT.

In my young days we spoke of such work as "original work," and very little encouragement was shown to it. At the present time it goes by the name of "research," and is very much in evidence and receives considerable support. The object of research is to discover something which was not previously known, or to correct or to confirm some previous observations. There are two methods of research—the one by *Observation*, the other by *Experiment*. In medical research the method by Observation is much out of fashion; it is slow and may be often interrupted for want of material. The imperfection of the material is often very disappointing. The method by Experiment (not by any means limited to experiments on animals), on the other hand, is the fashion of the day; it is quicker, less liable to be interrupted, and may yield brilliant results in a very short space of time. It is, therefore, naturally beloved of all young research workers. But it is a two-edged weapon, and needs to be used, and its results to be accepted, with great caution. Mr. Hunter, who was a confirmed and most ingenious experimenter, said in the course of his evidence at the trial of Captain Donellan: "I apprehend a great deal depends upon the mode of experiment; no man is fit to make one but those who have made many and paid attention to all the circumstances that relate to experiments."[1]

I should not trouble you with these remarks on the two methods if the young workers were the only persons who preferred experiment to observation. But it is quite otherwise. Within the last few years I was associated with Mr. Shattock, whom you know as a distinguished pathologist, in the selection of a pathologist who would be expected to engage in research for a well-known cancer institution. Mr. Shattock was insistent that the pathologist should be an experimenter, and gave me to understand that, in his opinion, clinical pathology was played out and that nothing more was to be learned from it, and that our knowledge in the future must be gained by experimental investigation.

INVESTIGATION OF CANCER.

Let me give you my experience of these two methods in the investigation of cancer. Many years ago there was great confusion in the minds of pathologists and surgeons regarding the differences and resemblances between sarcoma and carcinoma. I made a diligent study of them by observation of the cases at my hospital, the cases at other hospitals, and the cases recorded in the literature of many countries. The research was very long, very tedious, and very disappointing by reason of the small number of cases which were sufficiently recorded to be available for use. The results formed the subject of the Erasmus Wilson lectures 30 years ago, and proved that the life-history of the varieties of malignant disease does not depend merely on their structure, but upon their seat of origin, and that the varieties of malignant disease of every part of the body must be separately studied if they are to be treated with success. Observations of a similar kind have been made by other clinical pathologists, with the result that the most successful operations for cancer at the present time are based on the results of clinical pathology. For no part of the body has this been done with greater success than for the breast.

[1] Palmer's "Works of John Hunter," vol. i., p. 195. London, 1837.

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Charles Moore and Mitchell Banks urged the importance of very large operations many years ago, but surgeons fought shy of them because they lacked that which was supplied many years later by Heidenhain and Styles, a scientific basis. Recently, Handley has again added valuable information on the same subject, founded on clinical and microscopical observation.

I have never engaged, personally, in experimental investigation on account of the difficulty of doing so 30 years ago. But I have been associated with the Imperial Cancer Research, and in touch with its staff from the foundation of the Research, and have been a member of the Publication Committee of all its scientific reports. It has done nothing on the lines in which observation has been so useful. It has not unfolded the life-history of a single variety of cancer so that we can base our operations on the information. It has not even discovered whether spontaneous cancer of a particular part of the body in the rat or mouse runs a similar course to spontaneous cancer of the same part of the body in the human subject. These problems are not suited for experimental investigation: they are determined by observation. On the other hand, within the space of eight or ten years it has definitely settled a matter of dispute which was discussed and fought long before I became a student, perhaps for centuries. It has proved, beyond the possibility of doubt, that cancer in its early stages is a local, not a constitutional or blood, disease. It is impossible to overrate the value of this knowledge to the surgeon. So long as he believed that cancer is in the blood and that an operation only removes the local manifestation of it, he was hopeless of the results of his operations, and removed the tumour solely to afford the patient temporary relief. Now he goes to his operation filled with hope that, if the disease is limited and in an early stage and his operation is well designed and skilfully carried out, it may be quite successful. Thus, it will be seen that the two methods, *observation* and *experiment*, have their special values in relation to cancer, that each is supplementary to the other, and that neither is fitted to take the place of the other.

THE QUESTION OF UTILITARIAN OBJECT.

It will be noticed that I have dwelt on the use to which these researches have been put in the treatment of cancer and of the value of them to human beings. You may fairly think these ought to be the immediate objects of all research in medicine and that researches which are not likely to be immediately useful should be discouraged. But while I freely admit that my sympathy is in favour of this view, I am bound also to admit that it is wholly erroneous. I have fought this question on the platform at the annual meeting of the British Medical Association on several occasions and referred to it again in July of last year, and I shall not repeat the arguments which I used or the examples to which I referred. I would merely say that the investigator should be solely interested in discovering the truth, and that his attention should not be diverted and his judgment warped by the desire that his research should terminate in a particular manner because that might seem likely to be more useful to medicine and surgery. It is notorious that some of the researches which have seemed to fulfil no useful purpose have yielded the most valuable practical results, while other researches, pursued with a useful end in view, have furnished nothing good. If a utilitarian value were considered essential to research many young investigators who have later produced the most brilliant work would have been choked off and discouraged, so that they might never have persevered in original research. I need only give two illustrious examples, Pasteur and Lister.[2] Their first researches had no utilitarian object. What a lamentable thing it would have been if they had been discouraged from research on that account. The great thing is that young people who are fitted to do so should be encouraged to search. What they search for is of comparatively small consequence. On the other hand I would not have it supposed that a utilitarian research is derogatory to the dignity of the worker or necessarily damages his *morale*. Sir Humphry Davy deliberately worked out the problem of coal-gas and explosions, and invented a safety-lamp at the urgent request of the coal-owners. Professor Pasteur investigated the nature of the pébrine disease of silkworms at the request of M. Dumas, and moved by pity at the wretched condition into which the silkworm industry had fallen. He discovered that it depended on a parasitic protozoon and devised a successful method of stamping it out.[3]

[2] The first researches of Pasteur were on the crystallisation of tartaric acid and its salts. The first researches of Lister were on the contractile tissue of the iris and on the muscular tissue of the skin.

COST OF RESEARCH.

Just a few words on the cost of research. Dr. Leonard Hill[4] pointed out some years ago what great results could be achieved by an able worker with the simplest materials and at the smallest cost, and that fine laboratories and costly apparatus are not essential to research in medicine. All this is very true, just as it is true that David killed Goliath with a stone cunningly hurled from a sling. I do not think David at the present day would sally forth with a sling to oppose a foreign host. And our profession is continually urging on the wealthy public the financial claims of research. In order to justify our demands let me give you two concrete illustrations of the cost which attends certain researches. The Imperial Cancer Research is provided with laboratory accommodation, free of rent, by the two Royal Colleges. I think we also provide heat and light and water. But the annual cost of the research, including salaries and wages, amounts to little short of £6000 a year.

A rich man of business who is interested in acoustics in relation to the human ear found that his views could not be proved unless he possessed accurate measurements of the dimensions of the cochlear passages of the ear, and that no such measurements have been recorded. In the course of last summer he wrote to ask me whether the Royal College of Surgeons of England would administer a certain sum of money which he was prepared to supply for the research and referred me to our conservator, Professor Keith, for information on the subject. Professor Keith told me it was quite a proper subject for research, and advised that my old pupil, Mr. Sydney Scott, should superintend and direct it. I was disposed to recommend the Council of the College to accept the trust. But, before doing so, I thought I should like to know whether the sum proposed by the gentleman was likely to cover the cost. If it would not, we should then be obliged to abandon the research without having obtained any tangible result, or the College might have to complete it at its own proper cost. It was well I inquired. Mr. Scott made a rough estimate for me. The material would really cost nothing. But the research involved the cutting of an immense number of sections of the bone by an expert workman, and Mr. Scott only knew one workman in London whom he would care to entrust with the work. If a single section went wrong, all the other sections made from that bone might be useless. Every fourth section must be drawn to scale. Moulds would have to be made, and this could be done only by an expert. Finally, an exact model, mathematically correct, would be constructed. Mr. Scott estimated that this research, which I had thought quite simple, might require one year or two years to carry through, and that the cost would not be likely to be less than £1000.

QUALITIES NEEDED IN AN INVESTIGATOR.

In order to determine whether women are likely to be useful and successful in research it is necessary to consider the qualities which should be looked for in an investigator—I mean, in an investigator who has the sole charge of a research, even though it be carried out in a laboratory where other persons are at work. I am not speaking of an expert assistant or even of a joint investigator.

For (1) experimental research (including experiments on

[3] Histoire d'un Savant par un Ignorant. 5me édition. Paris: J. Hetzel et Comp. P. 173. "Le Sénat fut saisi d'une pétition désolée, signée de trois mille six cents maires, conseillers municipaux et propriétaires fonciers des départements séricicoles. La grande autorité scientifique de M. Dumas, sa connaissance de l'industrie de la soie, sa sympathie pour les souffrances d'un des départements les plus frappés,—le Gard, son pays natal,—tout contribua à le faire nommer rapporteur de la commission. Pendant qu'il rédigeait son rapport, l'idée lui vint d'engager M. Pasteur à se livrer à des recherches pour conjurer l'épidémie dont personne ne pouvait triompher. M. Pasteur commença par décliner cette offre."

[4] Brit. Med. Jour., 1907, vol. i., p. 960. "Men of science are not made by institutes, money, or apparatus. Helmholtz did his best work on £120 a year, and modelled his inventions out of spectacle lenses and his wife's sewing gear. Faraday did his epoch-making work with bits of wood, glass, and wire. Claude Bernard filled his pupils with enthusiasm in a laboratory little better than a cellar."

animals) I should set down: dexterity and neatness in manipulation; a knowledge, not only of the principles, but of the practice of aseptic and antiseptic surgery; and certainly humanity, so that the experiments which are necessary should be performed with as little suffering to the animals as possible.

For (2) every kind of research I should look for personal cleanliness; cleanliness of habit; industry, which must be extended to mean continued industry; patience, and a large stock of it; perseverance, and a determination to pursue the research to the end; extreme care in observation and strict attention to detail; careful recording of observations, which should be done at the earliest possible moment; thorough belief in the importance of the particular research, amounting even to enthusiasm; conscientiousness.

Many of these desirable qualities will at once commend themselves to you: they need no more than enumeration. But you may wonder why I have set down others of them. For instance, what has cleanliness of habit to do with research provided the investigator is cleanly when at work? Well, preserve me from investigators of careless habits. How many years ago—not very many—is it since poor T—— slew himself, a servant in his mother's house, and a laboratory attendant owing to his slovenly habits? He was a distinguished classic at his university, had been a coach there, entered medicine when he was nearer 30 than 20, qualified with ease, and then settled down to make a reputation. We all liked him, and wished him well, and when he desired to engage in research encouragement was given him. Unhappily, nothing would do but he must study the bacillus of typhoid, the last thing which should have been entrusted to so slovenly a person and so clumsy a manipulator. He used to carry his cultivations of bacilli in his lunch basket, save the mark, with the disastrous finish I have described.

Again, what has conscientiousness to do with research any more than it has to do with any other of the affairs of life? Do I mean that an investigator should be honest and not appropriate or use unfairly the work of other investigators? Oh, no! I assume such honesty as this in every investigator. The conscientiousness of which I speak is of the worker to himself and his own work. In this way. A worker has been engaged in a research during many months. He has made many experiments and observations, and they have all gone to prove the correctness of the result at which he has arrived. But there is still one experiment which it would be well to try. He tries it, and curiously it does not turn out quite right. He put two and two together and they did not make four. And everyone agrees with "The Professor on the Case"[5] that two and two do make four, "not *some* times but *all* the time." Now is the moment when his conscientiousness should come into play. The temptation is overwhelming to explain the failure by some fault in technique, and to set the result of that experiment on one side rather than to repeat it again and again as he ought certainly to have done. Had he done so it would again have failed, and he would have learned in the end, not that two and two do not make four, but that one of his twos was not a two, and he would have avoided publishing that result of his research which was afterwards discovered to be incorrect by a more careful and conscientious worker. It must always be borne in mind that the mischief of a faulty result does not end with that research, but may be the starting point of a long series of equally faulty results.

FITNESS OF WOMEN FOR RESEARCH WORK.

Now, do women possess these qualities? I think so; many of them, indeed, in a higher degree than men do. Humanity, dexterity in manipulation, cleanly habits, continued industry, patience, perseverance, attention to detail: all are truly feminine qualities. Indeed, there is only one point on which I am not certain, and I express myself upon it almost reluctantly because my doubts are founded on information regarding the ways of women which it is mean of me, perhaps, to use. There is nothing more important in relation to research than the accurate recording of observations and experiments. The making of these records is very tedious; it is often inconvenient to make them at the moment, and yet many of them must be made then if they are to be relied on. Nothing is more wonderful, to my mind, than the extraordinary care which is devoted to this part of their work by the greatest investigators. Read Lord Lister's "Collected Papers"[6] and you will see that I am right. Tyndall tells that Faraday left private notes of more than 16,000 experimental researches.[7] Many men fail in this respect, largely from lack of patience. If women fail, I judge that it will largely be from lack of training. It has been told me that the lady secretaries of committees and business meetings are often astoundingly inaccurate in their minutes, that their record of those present cannot be relied on, that resolutions which were passed are not properly worded in the report, and I have even heard of minutes which recorded the wrong person in the chair; and what surprised me more than any other thing was to learn that when these inaccuracies are pointed out the secretary considers herself the aggrieved person. I am not speaking of uneducated persons, but of highly trained and even scientific women, and I wonder whether such people could ever be trusted to conduct and record an investigation. We men take these matters more seriously. Such lapses are not tolerated among us. It is of no consequence whether a secretary is paid or unpaid; he may be indolent and make very meagre records. But what he does record must be accurately recorded, and the only way to do so is to write the minutes at the time or to make ample notes from which they can afterwards be written up. We have been trained in this kind of work for centuries, and I expect it has become a part of the nature of men.

EXTENT OF RESEARCH BY WOMEN WORKERS.

Seeing the fitness of women for research, I hoped to find a good many of them at work. I can scarcely say it is so. The British Medical Association, as many of you know, awards about £300 a year in various sums to assist research workers to buy material and apparatus, but not for maintenance. The first award was made to a woman (Miss Julia Brinck) in 1890. In the 20 years since that time there have been awards to only three other women workers, and the amount of money which has been awarded to women has been £65 out of probably £6000 to £7000 total award. I do not think this is the fault of the Association, for it has always been very well disposed towards women workers. Only once has a research scholarship of the Association been held by a woman (Miss Janet Lane-Claypon in 1904), and she only held it for a year, I think because she was not qualified. But I am told that her work was so good that the committee expressed the wish that she would apply again as soon as the necessary conditions had been fulfilled.

The Brown scholarship at Cambridge (for research) has once been held by a woman. And at the present time three of the Beit Fellowships are held by women. Apart from the Mabel Webb and Helen Prideaux scholarships, which belong to your own school, and which are not sufficiently well endowed to maintain the investigator, and which can, therefore, only claim part-time work, very few research scholarships which are open to men and women have been held by women. On the other hand, there are very clear indications that the attention of women is being directed to research, and there is proof that committees and trustees are disposed to consider their claims favourably. The Brown scholarship was awarded to a woman only as recently as 1909. Twelve women applied for Beit Fellowships, and three of them have been appointed—one in 1910, the other two this year. The Worshipful Company of Grocers has quite recently permitted women to apply for its two research scholarships (each worth £300 per annum). One woman has already applied, but her application did not fulfil the essential conditions. I trust this address may direct the attention of women still further towards research work.

I have no doubt I shall be asked whether I believe that women will be found competent for research, whether they have the breadth of mind necessary for such work, and whether they will ever be able to do more than carry out researches which have been designed for them and in which

[5] "The Professor on the Case," Jacques Futrelle (T. Nelson and Sons), p. 25.

[6] "The Collected Papers of Joseph, Baron Lister." Oxford, 1909.

[7] "Faraday as a Discoverer," new edition, London, 1870, p. 182. "His mode of keeping accounts excited the admiration of the managing board of this institution (the Royal Institution). And his science was similarly ordered. In his experimental researches, he numbered every paragraph and welded their various parts together by incessant reference. His private notes of the experimental researches, which are happily preserved, are similarly numbered; their last paragraph bears the figure 16,041."

they are directed. Indeed, I do not know. They have done so many things in the last 30 years that I never thought they could do, that I would not on any account venture to predict what they will accomplish in research. But I should certainly like to see them try.

Introductory Address
ON
LUCIDITY.

Delivered at St. George's Hospital Medical School on Oct. 2nd, 1911,

BY H. A. MIERS, D.Sc., F.R.S.,
PRINCIPAL OF THE UNIVERSITY OF LONDON.

GENTLEMEN,—Some of the most difficult problems in education are those connected with professional training, and as time goes on these do not tend, I fear, to become more easy. The requirements of the professions become every year more exacting; if the student is to get to work on the business of life before his grey hairs appear he is driven to begin his professional training earlier and to compress more and more into the few years at his disposal. And so it becomes increasingly difficult to secure in addition that general education which everyone knows to be so desirable—that introduction to the world of literature, science, and art which ought to be more useful perhaps to the medical man than to the member of almost any profession.

I confess that up to the present time medical men have held their own in a marvellous manner as students and exponents of all that makes up general culture, and that judged, at any rate, by the standard of their leading men they have managed to keep their wider interests and activities flourishing and fruitful in spite of the exacting calls of a strenuous profession and the years of very special study by which it has to be preceded.

If I may quote only one example of local significance, the annual exhibition of paintings by the St. George's Hospital staff used to give abundant evidence that even within the walls of a single hospital quite a number of accomplished physicians and surgeons may prove themselves to be equally accomplished as artists. But whether this is to continue, whether the increasing pressure of professional training, and the overcrowded nature of the school curriculum which comes before it, are not going to rob the medical man of some of his literary and artistic interests and powers, I should not venture to predict. The serious business of fighting disease, and the necessity of mastering all the weapons with which the never-ceasing contest is to be waged, are making the medical man's life one of such grim earnest that he will perhaps have in the future even less opportunities than he has now for those more refined studies and pursuits that presuppose some leisure and freedom of mind.

I wish, however, on the present occasion to draw attention to one feature of modern school and university life that represents a more serious defect, or at any rate the danger of a defect, in the medical profession; and not only in this, but in the other professions; may be not only in professions, but in all walks of life. It is, perhaps, not a matter of serious importance to the world at large whether a medical man can give expression to his ideas with the brush or pencil, provided that he be sufficiently learned and accomplished in the exercise of his calling; he is not necessarily a better doctor because he possesses and can exercise this artistic gift; neither is it necessary that he should have the powers of expression of an author or a musician. But there is need of one power that is as important to him as to others, and that is the ability to express his meaning in the written words of his own language, the great power resulting from mastery over the pen.

LACK OF CLEARNESS IN WRITTEN LANGUAGE AND ITS CAUSES.

I am led to choose this as a subject on which to address you, not merely from the want of anything new to say, but because it has been borne in upon me as a serious matter by the reports of some of our examiners in the University of London. They say that in medical examinations and even in the M.D. examination an essay or thesis is often not only devoid of any literary quality or finish, but is badly constructed and difficult to understand. If this can be so at the end of a man's university career, what must it have been at the beginning, and is there any chance of its becoming any better as he grows older? I do not think that the fault is entirely that of the candidates themselves. Whatever subjects they may have learnt at preparatory or public schools, the writing of their own language has in general not been one of them; even during their university career the use of the written English language, except as a machine for the taking of notes, or the answering of examination questions, or the bare record of work done, has not formed any regular part of their course.

The proper teaching of English at school is a large and important subject, and one on which I do not propose to enter at present; the acquisition of a good literary style is a luxury to which all cannot aspire; to which, indeed, comparatively few can attain; but the power of expressing clearly one's own ideas in one's own language is a thing which ought now to be within reach of every English-speaking man and woman. That so many of us do not possess it, even those who are quite well educated and accomplished persons, is due, I think, not so much to the fact that we have not been properly taught as to the fact that we have not been encouraged to teach ourselves. To me it has always seemed remarkable that while there are few who fail to express their meaning intelligibly by the spoken word, there are so many who fail to be intelligible when they write. The two faculties seem quite disconnected, and there is apparently nothing which necessarily makes the same person a good speaker and a good writer. Among those who are inarticulate in speech, and little able to convey their meaning in simple straightforward sentences, are to be found some both thoughtful and learned persons to whom writing seems the only proper and easy medium of expression. And, on the other hand, everyone must be familiar with examples of clever and accomplished speakers who lose all their power of expression when they write. And, more strange still, mastery over another language and ease of diction in a foreign tongue may exist side by side with the inability to write or to speak clearly in the mother tongue. I have known Englishmen who could be trusted to write a more intelligible treatise, possibly even to make a more lucid speech, in Latin than in English. Quite seriously, I think some part of the cause is to be sought in the difficulty of our language, and many educated persons get lost in its intricacies just as they get lost in its spelling. One must, of course, realise that the same wealth of vocabulary and variety of construction which make the language difficult bestow upon it the greatest possibilities in the matter of style. But for this very reason I do not believe that the remedy for the defect of which complaint is made is to be found in the imitation of great authors.

INUTILITY OF STUDY OF GREAT AUTHORS.

It is often assumed that constant reading and imitation of the great masters of English literature will enable one to acquire a style which is good because it is based upon theirs. John Bright and Professor Tyndall, to mention only two among many, attributed much of their own command of language to the fact that they had early in life been made familiar with the English Bible and the works of Milton, and that they had maintained their knowledge of these masterpieces of style through life. But I think it will be found that they had both already, by another process to which I will presently direct your attention, acquired the power of expressing themselves in straightforward English, the one in speaking, the other in writing, at an early stage of their career; and it is to such persons, already so equipped, that the profound and unceasing study of the great authors brings an increasing mastery over the difficulties of the English language. To introduce a child to the great masters of style with the injunction that he is to learn to copy them and by so doing to acquire something of their power, is like expecting an artist to acquire the power of expressing himself by nothing but a course of copying in the picture galleries without independent effort. Listening to good music will not make a musician.

Although the systematic study of great authors is usefully pursued at schools, yet the usual methods of teaching English still leave the average boy and girl singularly deficient in the art of saying what they mean on paper. Now

people like ourselves, who have more or less finished our education, are not going to get very much more out of it than children, who in these matters are far more ready and apt pupils than ourselves, being of course more imitative and quicker to learn. Except to those who have already acquired in some measure the faculty of expressing themselves *in their own way*, indifferent though that may be, I do not think that the mere study of authors who possess a great style is going to confer upon the ordinary reader any great power to express himself in the manner of those authors.

I am inclined to believe that the attempt to write good English is to many a person an effort that only makes him sink the deeper into the quicksands of unintelligibility. For think what this effort means. Analyse the style of Ruskin or Stevenson, of Macaulay or Burke, of Pater or De Quincey; how is a reader who has not yet learnt to make himself intelligible to improve matters by imitating the delicate shades of expression, the fine suggestions, the haunting echoes, the persuasive rhythm of their sentences? Any one of us may admire the consummate skill of such authors just as we may admire the workmanship and the art of a painter without being able to paint a stroke ourselves; or still more easily perhaps the beautiful creations of a musician although we cannot write a note of music. Before even the young artist who possesses some natural gift can emulate these, he must go through a long apprenticeship. And our great authors are artists in words whom it may not even be desirable for us to emulate. For the difference is that whereas we cannot all be painters and musicians, but must content ourselves with remaining intelligent admirers and critics, we have perforce all to be writers, whether we wish it or no, and our writing will be necessarily either good or bad or indifferent.

How to Learn to Write Clearly.

What, then, is the necessary foundation which I have been so long suggesting without naming, which is to be secured as the basis before the delicate structure of good style can be firmly erected? It is simply this—that we should think about expressing our own meaning in absolutely clear and intelligible language before we think about the manner in which that language is to be manipulated or the style in which the meaning is to be conveyed. To express some thought of one's own in language which cannot be misunderstood and which makes it quite clear to others is an extremely difficult task; it is one of the things which is least satisfactorily taught at school and at the university; it is one which has been least effectively acquired by most people among all the necessary things that they have to do in life. You have only to read carefully the letters in the newspapers from people who write both, I presume, because they think they have something to say, and because they think they can write, to be convinced that what I say is no exaggeration. And then think of the thousands of people who do not write to the newspapers, and in fact do not write at all if they can help it, because they know that they are not able to do so with any credit to themselves.

One of the best educational exercises possible in the use of the English language is to take one of these letters and analyse it, and show a child, or for the matter of that a grown person, how it fails to make its meaning clear, how in some cases the words may have two meanings and in others no meaning at all. Let me quote a recent example from a daily paper. "It surely should not be possible for an individual to destroy the trade of a town with which he has no connexion other than as the organiser of a society claiming a general right of interference by practically compelling the permanent closing of industries in which there was before his coming, no actual dispute or necessity for interference except in virtue of this society's claim." I have purposely chosen a sentence in which there is nothing really wrong except that it is not clear, so that you must read it at least twice before you can discover what it means. But this is, after all, only criticism, and, as I have said, we are condemned to be not only critics but users of words. And so a much better educational exercise is to get your pupil to write something of his own, and to criticise that in the same manner. Only so will he understand the difficulties by practice and learn to profit by experience. Some of the best learning in the world is done by making mistakes, and in no subject is this method so effective as in the writing of one's own language.

Defects of Present System of Teaching Composition.

How is the practice of composition actually taught? Set essays are written and corrected, or a subject is prescribed and the pupil's account of it is criticised. But I suspect that the criticisms are more often directed to the wrong use of words, to faults of grammar, to defects of style, than to the question of prime importance—namely, intelligibility. And yet a split infinitive is really a far less important fault than a failure to express one's meaning. Translation ought, one would think, to be a good exercise, for here an effort is made to interpret the ideas of a foreign author into one's own language; yet translation fails to a large extent, because, after all, they are the ideas of another person which the pupil is called on to express. And so the result is that more attention is paid to the style and the manner than to the intelligibility, and a generation grows up that has never been called upon to make its own meaning clear to anyone. This result is particularly to be feared and is particularly noticeable in professional training. I can assure you that I have recently had appeals both from young officers in the army themselves and from others on their behalf asking how and where they are to learn to write clear and intelligible reports. For reports they have to write in the exercise of their profession, and these, if they are not clear, fail, of course, in the whole object and purpose of a report. Too late have such persons found out that they have never learnt how to express themselves in simple and clear language. Surely this is the very thing that should have been learnt in early school days.

And now we hear the same complaint from the examiners of medical candidates. The difficulty is particularly acute with those who, like yourselves, have received a scientific education. I have actually heard teachers and examiners in scientific subjects say of a pupil or examinee that he evidently understands what he is trying to say, but is merely unable to express his meaning. And then they have given him full credit for the knowledge and pardoned him the failure to express it. But surely to be inarticulate on paper is as bad as to be inarticulate in speech. And I can never believe that the man whose ideas are clear can be permanently incapacitated from expressing those ideas intelligibly with his pen. If, however, our scientific teachers and examiners do not insist upon the clear expression of scientific statements which ought more than anything to lend themselves to clear exposition, perhaps the fault is to be laid to their charge. The quality which I believe we have to seek, one which is so little fostered by our present system of teaching English, is, to put it in a single word—Lucidity.

Lucidity in Great Writers.

Among the great writers, those who impress us most both by what they have to say and by the manner in which they say it, are those who possess this admirable quality of lucidity. As two pre-eminent examples among the moderns, I may mention Cardinal Newman and Charles Darwin—in very different ways; for in the one it amounts to the highest perfection of style, while in the other it appears to involve rather an absence of style. Newman's limpid passages with all their grace possess the very essence of clear and lucid exposition; analyse any one of these passages and it appears to exhibit nothing but the most direct simplicity. If this be art, it is the art of a Duse which is almost indistinguishable from unaffected nature. He who possesses such lucidity may graft upon it the style of Milton, or Gibbon, or Ruskin, or Burke, and not much will be either gained or lost; of course, a beautiful style confers an additional charm upon all writing; and a page of Newman is better reading than a page of Darwin.

I am aware that lucidity is a word which was originally applied to the mind and only subsequently to literary expression. When the shadow was lifted temporarily from the clouded mind and the sunshine of reason returned it was said of the patient in the old legal phraseology: "Non est compos mentis sed gaudet lucidis intervallis," and the history of the word is instructive, for it is still the lucidity of mind which has to come before there can be lucidity of expression. There cannot be clear writing without clear thinking; and he who learns to write clearly will in the process learn to think clearly.

Necessity of Intelligent Self-criticism.

Now if I have, up to the present, done little more than deplore the absence of this quality, I do not mean to imply

that the only remedy lies in a reformation of our methods of teaching English at school, highly desirable as this may be. I believe that lucidity of expression is one of those things which can be acquired without teaching and by learning alone; further, that the only learning necessary is constant practice accompanied by intelligent self-criticism. We are too apt to be satisfied with the words in which we express ourselves without pausing to think whether they are intelligible. Take something which you have written and show it to any candid and discerning friend for his criticism, and see whether he does not find in it some flaw that is not at first apparent to yourself. He will tell you the same story as the examiners who look over your thesis, that the words do not say what you mean, and that the expression is in some way or other loose and unintelligible. It is very difficult at first to criticise what we have written ourselves—but the faculty is soon acquired. In ordinary life—since it was not made necessary for us at school—we have so little practice in this useful art. The only occasions when most of us have to weigh our words carefully in order that we may be quite sure that they will not be misunderstood are when we have to compose a telegram, or to draft a resolution or an amendment at some meeting; and everyone knows how difficult this is. Believe me, the same care is really necessary in anything that we write if it is to stand the test of criticism. The most wholesome experience of all is to have written a book, or an article in a journal, and to see your words staring you in the face in print and to realise too late how inadequate they are, and that they remain in print to condemn the author for all time. For the rest, the hasty letter is all that most people have in the way of practice, and the telephone is rapidly making this less and less necessary.

I have said elsewhere that the reason why our grandfathers and grandmothers could express themselves so much better than ourselves is, in my opinion, the fact that they had so much more practice in letter-writing, and that the letter was so much more important in their day than in ours. With the disappearance of the long, infrequent, carefully written letter, which would often be criticised at its destination by many eager readers, a great field of literary practice has been removed and has had no successor. If this be true—and it is the reason why I have been led to believe that the present defect is chiefly due to want of practice—then the remedy is simple: constant practice in careful writing. It is this which makes most people more ready with their tongues than with their pen; they get more constant practice in speaking than in writing, and they are liable to be constantly called upon to explain themselves if their meaning is not clear. If this check were always ready to be applied to all that is written as to all that is spoken half the difficulty would disappear.

VALUE OF CONSTANT PRACTICE IN LUCID WRITING.

It has always seemed to me that one of the chief reasons why practice is so necessary in both speaking and writing is that the thoughts flow at so different a pace from that of speech or the pen. Many inexperienced speakers are constantly being tripped up in their words in the endeavour to keep pace with their own thoughts, trying to retain a hold upon the swift thought while they are following it in less rapid speech. If this be so with speaking, still more must it be true with writing, where the hand and pen lag behind at a yet greater distance. I confess that writing has always been, and is even now, a slow, clumsy, and laborious process for getting a permanent record of our swiftly moving and evanescent thoughts, and that there is need of something better; it may be that the phonograph and dictaphone will ultimately make it unnecessary to transcribe in our present slow and laborious fashion, and I for one would welcome any scientific inventions which will make it easier for our recording instruments to keep pace with the mind. But I venture also to believe that for accurate thinking it is not a bad thing to have this drag upon the brain, and that to school the mind to keep pace with the pen is an excellent training for exact thought. And so I return to my suggestion that in order to remove this reproach from which the present generation suffers, which attaches particularly to professional students, and not least among them to medical men, we have to exercise ourselves constantly in the practice of lucid thinking by exercising ourselves in the practice of lucid writing. Schools and universities have their debating clubs and societies in which anyone can get valuable practice in speaking, and learn by experience to express himself fluently and clearly, and suffer for his sins if he does not do so. It is a pity that there are no societies which give a young man precisely the same valuable training in the use of the pen; and if any school or college will introduce a fashion for this sort of thing I believe that a great public service will be done. There was a time when the magazines were addicted to symposia, and induced prominent authors to take part in a written discussion on some topic of general interest; then one could at any rate see how accomplished masters of the art could wield the pen. A better thing would have been for the readers to do it themselves, just as it is a better thing to play cricket and football than merely to look on at cricket and football matches. Failing this, there is a course which everyone may easily pursue, and that is to get in the habit of seeing that every sentence which he is called upon to write is lucid; and the best way of acquiring this faculty is to keep what you have written and read it again in the cold light of reason, and when your mind is not full of the subject as it was when you wrote.

Most of the failures to be lucid are due to the habit of confusing what we think with what we write, and to imagine that because a thing is in the mind it is also on the paper. It is a common experience that in some respects and for the minor errors an author is the worst person to correct his own proofs; he knows what he meant to write, and he actually thinks that it is there and fails to see the mistake. In the same way each man is a bad critic of his own writing. This is the reason why I began by suggesting that you should first get a candid friend to be your critic; and, failing him, this is why I suggest that you should read the written page at some time when you are not biased by thinking of the subject rather than the manner in which it is expressed.

SCIENTIFIC WRITINGS.

The worst sinners of all are some of the scientific writers, and it is a standing reproach to science that at this period of its existence it is marred by so many ill-written, ill-constructed, and unintelligible books and papers. It was fortunate that in the earlier days of the great movement in the last century science enjoyed the aid of so many excellent writers. Davy, Faraday, Lyell, Darwin were such clear thinkers that they could not fail to be clear writers; but it was well also that somewhat later the public ear was caught by such graceful and skilful writers as Tyndall and Huxley. With them we find lucidity coupled with the graces of style, and since their day there have been many accomplished authors who have managed to make a text-book or an abstruse memoir delightful by their powers of expression. Even a mathematical text-book may charm by its manner—witness those of Dr. Salmon, who was equally accomplished as a mathematician and a theologian; and Clerk Maxwell showed in his little book, "Matter and Motion," how the most advanced mathematical reasoning can be expressed in the most simple and lucid language. In the same way was not Gladstone able to invest a Budget speech with a certain literary charm?

Among scientific books it is, curiously enough, some of the translations which fail most ignominiously in the attempt to be lucid. Let me quote an example from the translation of a very well-known text-book which in its original language is quite clear and intelligible.

> The successful scrutiny of the student of nature reveals itself in finding out that which phenomena, apparently very diverse, have in common, and the results are the more brilliant, as the parallelised phenomena appear at the outset more diverse. The transference of observations from one case to another is naturally at first attended with some uncertainty, but with the repeated corroboration of the experiences in question there follows an ever-growing credibility until this transference finally attains to the rank of an empirical law of Nature.

I believe this simply means that a law of nature is exhibited by comparing different natural events and finding what is common to them. The meaning of the sentence is entirely obscured by the introduction of unnecessary words. You will see that the fault here and in similar instances, which might be quoted by the hundred, is that the translator in the endeavour to make his version sound well, knowing that the sense has been provided by the author and that he is not responsible for that, has even inverted the perverted maxim of "Alice in Wonderland," and adopted for his

guide, "Take care of the sound and the sense will take care of itself." Rather than incur the danger of falling into such bad habits let us, with Berowne in *Love's Labour's Lost*, decide to express ourselves, "In russet yeas and honest kersey noes."

In the days of the scientific revival of the nineteenth century the great expositors who wrote with such admirable lucidity did much to facilitate the introduction of science into ordinary education, for it appeared, as indeed was really the case, that the accurate habits of thought encouraged by the study of science found their expression in this clear writing, and this led many people to see that the study of science, like that of philosophy, is an education in clear thinking. But now that much of the scientific writing is so badly expressed there is danger lest the opposite conclusion be drawn, and the impression is conveyed that the studies which lead to such loose writing cannot really be conducive to accurate and clear thought.

Let me, then, in the interests of science in general, and of medical science in particular, if it is to earn the respect of the multitude, in your own interests if you wish to acquire habits of exact thought and so to become leaders in the advance of medical science, repeat my suggestion that you should by constant practice in everything that you write, by constant and critical inquiry whether its meaning is clear, cultivate the desirable quality of lucidity.

Introductory Address
ON
THE MIDDLESEX HOSPITAL OF TO-DAY AND YESTERDAY: A BIRD'S-EYE VIEW.

Delivered at the Opening of the Winter Session at Middlesex Hospital on Oct. 2nd, 1911,

BY COMYNS BERKELEY, M.A., M.D.,
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OBSTETRIC AND GYNÆCOLOGICAL SURGEON TO THE HOSPITAL, ETC.

YOUR ROYAL HIGHNESS, YOUR SERENE HIGHNESS, LADIES, AND GENTLEMEN,—Twenty-four years ago I entered this hospital as a University student and heard my first Introductory Address. What struck me then was the entire absence of any reference to the history of the place I had joined. I was told that this was the great day of the year. I remembered that at Cambridge *our* great day had been Founder's Day, on which year after year through centuries a brief history of the College had been recited and its benefactors extolled, but the lecturer on this occasion evidently did not think the new students would be sufficiently interested by some similar recital. As this deficiency has not been rectified by any of the succeeding 22 addresses I have listened to, I propose this afternoon to give you a bird's-eye view of what has happened to our hospital during the past 166 years.

FOUNDATION OF THE MIDDLESEX HOSPITAL.

Up to the year 1720 there were only two hospitals in London—St. Bartholomew's, founded in 1123, and St. Thomas's, founded in the reign of Edward VI. In 1720 Westminster Hospital was established; in 1721 Thomas Guy built his famous hospital in the Borough; in 1733 St. George's was erected at Hyde Park on the outskirts of the town; and in 1740 the London Hospital first took shape in Whitechapel Fields. It thus came about that the several parts of London were supplied with a hospital except one, and that was the district of St. Giles and Soho, a thickly populated quarter "abounding with poor objects." The inhabitants of this quarter therefore decided to found a hospital for the relief of their sick and lame, and in August, 1745, two houses in Windmill-street were acquired from a Mr. Goodge at a yearly rental of £30, the institution being christened the "Middlesex Infirmary." A year later the name was changed to "The Middlesex Hospital," and it was further decided that its government should be vested in annual subscribers of £3 3*s*., to be called "governors," which qualification obtains to the present day. It was also ordered that no pupil or apprentice should be permitted to attend the practice in the hospital without the permission and approbation of the weekly board. Accordingly, Mr. Hamilton, one of the surgeons, presented Lucas Everard Greenhead as his apprentice, who consequently became the first Middlesex student; and later, when the number of dressers, as they were now termed, increased, rules were drawn up for their behaviour, among which we find that they were not to stay in the hospital after they had finished their work, were not to swear, make noises, or embezzle the medicine.

Soon after the infirmary was started some of the lay officials got into trouble owing to its exposed position. The matron was strictly enjoined to lock the door at 11 P.M., and later was dismissed because, with the messenger, she had not acquainted the committee of several irregularities committed by others to the great disrepute of the hospital. The apothecary is stated to have "committed actions vile and enormous," the behaviour of the patients became so bad that it was proposed to give the steward the power of suspending their diet as a punishment, and the following regulations were made: "That no patient should talk to anyone in the street. That patients should not presume to talk to one another after 9 P.M. That liquors should not be brought into the hospital without leave of the steward." The number of beds when the building was first acquired is not mentioned, but they soon became very overcrowded, and as apparently two patients had sometimes been put into one bed rules were drawn up limiting the number of in-patients to the number of beds. In 1747 it was decided that 15 beds should be the standard for the future, that five of these should be reserved for lying-in cases, and that Dr. Layard should be appointed man-midwife in ordinary. One pound of pins and two pincushions were ordered for the department and a nurse hired at a salary of £8 a year.

FIRST LYING-IN HOSPITAL IN ENGLAND.

This reservation of beds for maternity cases is very interesting, inasmuch as by it the Middlesex Hospital became the first lying-in hospital in England, and, further, this department became so popular that it was both at the same time nearly the means of ruining the old hospital and also the means of getting the present one built. Apparently the weekly board must have thought the obstetric officers of those times a grasping lot, since they were very careful when apportioning the five beds to make the following minute which states that "as it was apprehended that the novelty of the scheme might in future tempt the governors of that part of the charity to endeavour to convert the whole hospital to the use of that branch only, it was agreed that a third part of the beds and no more should be applied for that purpose, leaving for the sick and lame a third part each," which agreement was then thought so equal and just that the obstetric physician declared his entire approbation and gave his honour he would never attempt in anywise to injure that part of the charity devoted to the sick and lame, nor deviate from this equal proportion then agreed to. But, alas for the frailty of human nature, two years later the obstetric physician, backed by the senior physician and abetted by the chaplain, plotted to convert the hospital into one for maternity cases only. On the plot being discovered the two physicians resigned, as also did the president, whilst the secretary, matron, steward, and messenger were discharged. Nevertheless, so anxious was the weekly board to please everyone it increased the number of beds from 18 to 24, and set aside 10 for the maternity cases. Even this, however, did not satisfy the late senior physician, who set to work to try to ruin the hospital, as did also the treasurer, who refused to receive subscriptions or account for those he had till his successor was appointed. It was then resolved that half the beds in the hospital should be reserved for maternity cases, which the late obstetric physician thought so reasonable that he agreed to rejoin the staff, giving his word of honour to be satisfied. However, a fortnight later something again seems to have upset him and he resigned for good.

INCEPTION OF PRESENT BUILDING.

The additional beds being insufficient to cope with the number of maternity cases, a room had often to be hired in the neighbourhood and so it was decided that a new hospital must be built. Our present building, therefore, really owes its inception to the popularity of the obstetric officers, maternity nurses, and the lying-in department of 159 years ago. The weekly board was also very anxious for a

new hospital as it badly wanted a board room, its meetings up to then having been held in the "Bear and Rummer," a tavern still standing almost opposite the hospital. In 1754 a piece of ground in the Marylebone Fields was acquired from Mr. Berners for a term of 999 years at the rent of 2*s.* for every foot in front of the said ground.

The piece of land in question whereon this afternoon we are gathered was quite on the outskirts of the town, and was a favourite place for snipe shooting, being separated from Tottenham Court-road by ponds and marshy lands, whilst just to the north of it was the "Farthing Pie House," the last place of refreshment for travellers before they disappeared into the country, and later replaced by the "Green Man," still standing opposite Portland-road Station, which now supplies refreshment for travellers before they disappear into the "Tube."

On June 15th, 1755, the foundation-stone was laid by the Earl of Northumberland, assisted by the vice-presidents and governors, who, after having attended the anniversary service at St. Ann's Church, walked by way of Dean-street across Oxford-street and up Newman-street to the Marylebone Fields for that purpose. A Mr. Gray had contracted to build the hospital for £2250, and during the next year or so the building committee was very hard pressed to find the necessary money. The theatrical profession came to the rescue, as it has done on so many occasions since, and David Garrick gave the receipts of two performances, choosing on the last occasion *Much Ado About Nothing* as being a favourite play with the ladies. At last in 1757 64 beds were ready for the reception of patients. The hospital is described as being a "neat, plain, and not inelegant red brick building having the decent appearance and all the accommodation one could wish in a house devoted to charity without that ostentatious magnificence which too often in a great measure defeats the humane and noble end of such pious and charitable institutions where those sums are squandered in useless decorations that ought to be employed in administering health to the sick and giving feet to the lame." Our hospital was first of all built without the present wings and was not quite so complete as the descriptions of it would have us believe, since an operating theatre had not been included. This omission was rectified four years later and one provided on the top storey.

EVENTS IN THE EARLY HISTORY OF THE HOSPITAL.

In 1757 the office of house surgeon was created, the first gentleman to hold that post being Joseph Barker. In 1762, the hospital being in a flourishing condition, it was decided to take steps for building the west wing. At this time also the weekly board made a bargain with a gentleman named Legrand, 74 years of age, wherein for a legacy of £600 it agreed to let him reside in the hospital and to provide him "with all necessaries during the time of his natural life," a questionable bargain since he lived for eight years.

In 1763, owing to the number of maternity patients, the obstetric officers decided to attend some of those women in their own homes. In 1770 the west wing was finished but only the ground floor opened. In 1774 the students of the hospital formed themselves into a medical society and asked for the use of the physician's room for their meetings. The board unanimously agreed to the proposal "provided that the society would be at the expense of their own candles." Thus arose the oldest medical society in England, which at the present day flourishes more vigorously than ever, meets in the same room, and the governors kindly pay for the electric light.

In 1777 the treasurer was directed to obtain an estimate for laying out the waste ground at the back of the hospital "either as a garden for pot-herbs, for a drying ground, or for walks for the patients to whose health such air may be conducive." Three years later the ground was ploughed and cropped with potatoes and French beans, but after five years the board gave up market-gardening as hopeless, and in 1785 poplars were planted and grass-plots sown, the collector of the hospital undertaking for the sum of £5 and the hay to look after the garden.

In 1780 the east wing was completed but remained empty for want of funds. Three years later, the finances of the hospital being still depressed, some additional wards were closed and the maternity beds were reduced from 34 to six, and they were further reduced in 1786 to two for similar reasons. In this year also midwives were appointed to attend patients in their own homes under the supervision of the obstetric physician, he being granted the sum of 5*s.* per case to defray the charge of midwife, coach hire, and other individual expenses. The same custom has obtained up to recently except that the physician did not get the 5*s.*

In 1789 Howard, the philanthropist, was constrained to severely criticise the weekly board for keeping the hospital so dirty. The board thought fit to reply in a circular which stated that the criticism was most unjust and "that they would be much honoured by another visit from Mr. Howard, who, they flatter themselves, will in a future publication expiate his ill-impression by a true description." Erasmus Wilson remarks that in anticipation of such a visit, conjoined possibly with the still small voice of conscience, great activity followed this circular, and quite sufficient was ordered to be done to prove that Mr. Howard's strictures were not without foundation.

In 1790 the wards for the male and female patients were arranged on opposite sides of the hospital, a custom that has just been changed by the inauguration of the "linked-ward system."

In 1792 the Cancer Charity, an institution of much importance in relation with the Middlesex Hospital, was founded in this wise. Mr. Howard, a surgeon of Argyll-street, appeared at the board and informed the governors that a friend wished to contribute £3000 towards establishing a fund to endow a ward for the reception of persons afflicted with this disorder. The offer was gratefully accepted, and on the death of the founder it transpired that he was Samuel Whitbread.

In 1793 a ward was set apart for the reception of French clergy driven into exile by the Revolution. Each inmate had to contribute 8*s.* a week exclusive of burial fees, nurses' wages, and bedding, which were to be provided by a relief committee. The refugees occupied the ward 14 years and on leaving gave their bedding and mattresses to the hospital as a thankoffering.

In 1796 that most important part of a hospital, the medical school, was first mooted and wards were allocated for a chemical laboratory and lecture theatre.

In 1800 our hospital was suffering severely from the effects of the war, and, owing to the great scarcity of every article of life, the treasurer requested the gentlemen of the board room table to abstain from their allowance of fresh butter, and the nurses and servants were each limited to half a pound of butter and one pound of cheese per week. The allowance of bread was also reduced to one quartern loaf in seven days for everyone in the hospital as being in strict conformity with the commands of His Majesty to his subjects in general, and linseed meal was substituted for bread in the poultices, but as the meat was often bad, the beer undrinkable, and potatoes scarce, the servants struck, and were consequently given in addition a small allowance of rice. In 1807, with a view to further economies, the remaining maternity beds were abolished.

In 1809 the board came to the conclusion that an annual dinner would conduce to the interests of the hospital, and, for all I know to the contrary, the dinner to-night will be the 104th consecutive one of its kind.

In 1812 the Samaritan Fund was proposed by Mr. Cartwright, one of the surgeons, its object being to afford temporary assistance to poor convalescent patients, to forward patients, especially cripples, to their homes, and to supply flannel, linen, and other necessaries.

In 1815 there were 179 beds in the hospital, and that the management and treatment were the best of their kind at this time is evidenced from an anonymous donation of £10 to the funds of the hospital by one who had read a review of a French traveller's tour in Great Britain as follows: "The traveller is now taken to one of the public hospitals of which he gives no very favourable account. We fear that his statement as far as it relates to one or two of these receptacles for human misery is but too true ..... but could we indeed have carried our traveller to the Middlesex Hospital he would have witnessed that benevolence of manner and that delicacy of attention exercised by all the medical attendants even to the poorest of their patients which imparts a charm to the powers of medicine and disarms sickness itself of half its anguish. The poor have feelings in disease no less than the rich, fortunately indeed for them not so tremblingly fastidious, but sufficiently acute to animate the exertions of humanity and to repress the

insolence of vulgar brutality." And what was true of the Middlesex Hospital nearly 100 years ago is, I hope, trust, and believe, true of the Middlesex Hospital to-day, and as an indication of its popularity with patients, I find in the report of King Edward's Fund, just issued, that whereas the average daily number of unoccupied beds in the 16 largest hospitals in London was 12 per cent, the average number at Middlesex was only 4·7 per cent.; and further, we have always a long waiting list, so that on one historical day this summer there were over 250 patients waiting for admission, and what perhaps was more striking still, was that the vast bulk of these patients seemed to be clamouring for operative treatment, a compliment to both our surgeons and physicians—to the surgeons for obvious reasons, to the physicians as showing that they cured the medical patients so quickly there were hardly any waiting for admission.

In 1821 the weekly board, ever ready as far as they could to prevent waste and extravagance, appointed a committee to inquire into the hospital expenditure, which reported that the consumption of drugs had increased very much because the surgeons had taken to ordering their patients medicine, and that the cost of the medicine had also increased because the physicians were fond of trying new and expensive drugs which the board did not think should be given to patients in a charitable institution. I have heard such criticism even in the twentieth century. The apothecary also had been reckless with the leeches, doling them out at about the rate of a hundred a day, so that during the year under discussion he had bought 36,100 of this annelida. The board rightly viewed such extravagance with much disfavour and ordered that, in the future, after the leeches had been used, they should be properly preserved for further applications. The amount of wine consumed seemed to puzzle the committee, which could only refer the matter to the medical gentlemen for an explanation. As the late matron had given the extra nurses meat in lieu of their wages and had doubled its supply to the regular nurses, the committee was not surprised that the amount of this commodity had likewise increased.

In 1824 several other wards were opened and the total number of beds increased to 200.

In 1828 London University, now known as University College, was established in Gower-street; thereupon, and during this year and the next, repeated overtures were made to the governors of the Middlesex Hospital for amalgamation, and, as our board was then in need of funds, the University offered to subscribe £3000. The governors, however, would have none of it, first of all, because the founders of the University had advertised in the *Times* suggesting that Middlesex Hospital was affiliated to it; and, secondly, the governors thought that if they joined an unsectarian university they would lose a large number of subscribers. In 1834 the wings of the hospital were extended some 30 feet, thus increasing the number of beds to 240.

INSTITUTION OF THE MEDICAL SCHOOL.

1835 may be regarded as the second most important date in the history of the Middlesex Hospital, the chairman at the annual dinner announcing that it had been decided to build a medical school on the ground belonging to the hospital. The staff had pointed out that until the celebrated school of medicine in Windmill-street had been eclipsed by London University building its own hospital there had been no lack of pupils, but that now the number of pupils had seriously decreased, "that hospitals by furnishing the means and materials of medical education were capable of yielding indirect and incidental advantages to the public far outweighing in extent and importance the personal benefits they offer to the direct objects of their charity," and that "through the hundreds of young men who were taught in the hospitals the great consolation to be derived from judicious medical and surgical aid is afterwards extended to thousands in all parts of the country and in every rank of society. It is not, perhaps, sufficiently recognised that the judgment and skill to which every man in periods of sickness and danger is glad to confide his life and the lives of those most dear to him have been acquired in the first instance in the wards of a hospital." Further, a medical school attached to a hospital is of the greatest advantage to the patients themselves, since "it surrounds the medical staff with a crowd of watchful, inquiring, and often very highly intelligent observers who expect an explanation of the various diseases they witness and a reason for the treatment applied to them"; and yet with full knowledge of all this we have recently had ill-advised, though doubtless well-meaning, people advocating successfully that the medical schools must not receive financial aid of any kind from the hospitals.

FURTHER DEVELOPMENTS.

In 1838 the operating-theatre was transferred to its present position, the space thus left vacant being converted into a ward now known as "King's Ward." Another indication of the debt we owe to the obstetric side of this hospital is instanced in the foundation of our museum, the nucleus of which consisted of specimens, some 660 in number, collected by the then obstetric physician and acquired after his death in 1839. In 1840 the porch of the hospital was built at a cost of £100, and four years later the out-patient department was enlarged by advancing the ground floor of the east wing to the railings.

In 1843 a charter of incorporation was granted to the hospital through the exertions of Mr. William Tooke, M.P., the honorary solicitor to the hospital, thus once and for all surmounting a very serious disadvantage the hospital had experienced on several occasions. In this year, also, the office of surgeon-dentist was created and Sir John Tomes was elected to the post, so that the Middlesex Hospital started the first dental department in London, which formed the chief place for study in this branch of medicine until the dental hospitals were founded.

In 1848 the accommodation in the hospital was increased by 55 beds, fireproof staircases were substituted for those already in the building, and a laundry was built underneath Bird ward.

In 1855 the Middlesex Club was founded by Dr. Tom Taylor to assist old Middlesex men, 50 members joining. The members have met every year since, and at its jubilee dinner the chair was taken by one of the founders, Mr. Thomas Nunn, who died three years ago, mourned by every Middlesex man who had had the privilege of his acquaintance. The club is the oldest of its kind in London, and its great success is due to the untiring efforts of Mr. Andrew Clark, honorary surgeon to the King, who has been treasurer for the last 29 years.

In 1856 the office of dean was created, the first occupant of the post being Dr. Temple Frere.

During the few years prior to 1869 the nursing department had come under the notice of the board, with the result that it was improved and reorganised, and part of the improvements consisted in the building of a nurses' home in Cleveland-street, which was opened by Her Royal Highness Princess Mary of Teck. At this time Miss Thorold was appointed lady superintendent of nurses, and for the next 36 years she devoted her life to the benefit of the patients and to the advancement of the nursing profession. The nursing home was extended in 1878 and again in 1904, when the block of buildings adjoining the residential college was opened.

In 1875 an additional storey was added to the Medical School, which up to then had remained in the same state as when it was first erected. Five years later a new lecture theatre was built and the dissecting room enlarged. In 1884 extensive alterations were made in the out-patient department, the opening ceremony being performed by Her Royal Highness the Princess Christian of Schleswig-Holstein.

In 1887 the school buildings underwent a remarkable extension, the present block, together with a residential college, being erected on the east side of the garden. In 1890, owing to the generosity of Miss Leicester, our chapel was built, and thus was fulfilled an object very dear to the heart of the late Mr. George Lawson, who in 1882 had initiated the idea with a promise to build the chapel could a site be found. Owing, however, to the expense of rebuilding elsewhere the laboratories, situated upon the only site available, the matter had hung fire till Miss Leicester's offer enabled Mr. Lawson and others to devote the money they had promised for the chapel to the laboratories. The internal decorations were mostly defrayed by the Ross Memorial Fund; by the late Kenneth Lawson, a former house physician, son of Mr. George Lawson, who left the munificent sum of £500 for that purpose, and by Mr. Bland-Sutton. The Princess May Wards for Children, which we owe to the loyalty of an old student, were opened in

1892 by Her Royal Highness the Duchess of York, now our most gracious Queen.

A convalescent home was first contemplated by the weekly board in 1877, but, owing to lack of funds, the matter had been allowed to drag on without any active steps being taken. In 1891, however, an offer of £500 from Mr. Frank Debenham, a member of the weekly board, towards the erection of the home, stimulated the authorities to greater exertions, and in 1893 the site at Clacton was purchased. Before the completion of the building in 1896 a munificent legacy by Mr. Harry Spicer allayed all anxiety as to how the expenses of upkeep were to be met. The value of this home to the patients and hospital cannot be over-estimated, for not only has it greatly assisted in restoring to health large numbers of men, women, and children, many of whom had never before experienced the benefit of sea air, but also by receiving patients at an earlier date than that on which they can be sent home, it has increased the number of beds available for serious cases in the hospital, and thereby is of the greatest assistance to the poor in our immediate neighbourhood.

In 1895 the operating theatre was rebuilt and the opportunity was taken to augment this department by erecting an additional theatre, sterilising room, anæsthetic room, and rooms for the surgeons and nurses.

In January, 1900, the female cancer patients were removed to the new wing in Nassau-street, a building with accommodation for 36 patients, nurses, and research laboratories. The ground had been acquired from Mr. C. H. Berners, a descendant of the lessor of the original site to the hospital, and the money for the building had been collected during the previous six years, his late Majesty, King Edward VII., when Prince of Wales, having with his usual generosity presided at a dinner in 1894 at which was collected over £9000, £1000 of this sum being contributed by Mr. Samuel Whitbread, M.P., great grandson of the founder of the charity.

In 1901 the laundry was removed to Hendon and the kitchen to the top of the hospital, an improvement which gave much satisfaction to the medical staff since the kitchen was situated under the board room and to the patients in Bird ward since the laundry was underneath them; for the odours connected with washing and cooking, though appropriate enough in their own surroundings, seemed to be out of place in a sick ward and in a room where grave debates were of daily occurrence. At the same time the opportunity was taken of extending the East Wing towards the north, so that Helena and Seymour Wards were enlarged, and the Gynæcological department was remodelled and provided with an operating theatre.

In 1904 Mr. Edmund Dresden left us £32,000, the income to be employed in assisting poor and needy in-patients on their discharge from the hospital.

The year 1905 was a very anxious one for our medical school, the hospital authorities having been forced to withdraw from it all financial aid owing to the action of King Edward's Fund, which intimated that it would not make grants to a hospital which used any part of its general funds towards its school expenses; and it looked at one time as if our school would be ruined, but chiefly owing to the strenuous advocacy of Sir Henry Morris, who also gave £1000 to form the nucleus of an endowment fund, it was saved.

In 1908 part of the fourth storey of the east wing was remodelled, and in the place of two small wards and some bedrooms a maternity department was built consisting of two wards, the usual offices, a theatre, and a baby-washing room. The cost of this attractive addition to the hospital was borne by the Annie Zunz trustees, and for the suggestion of again admitting maternity patients we are indebted to Sir James Kingston Fowler, who forcibly impressed upon the board the great advantage to our hospital and school in so doing. Since these wards have been opened a number of our own nurses have been trained for the State examination of the Central Midwives Board and not a single one has failed.

The next year the trustees of the Barnato bequest, a memorial to the late Mr. Barney Barnato and Mr. Woolf Joel, elected to establish the Barnato-Joel Charity in connexion with our cancer department. For this purpose a magnificent building, containing every modern convenience for the well-being and comfort of the patients, is being erected adjacent to our own cancer wing for the reception of 43 in-patients. The building includes an out-patient department, a nurses' home, spacious laboratories for the investigation of cancer, and an electrical and radium institute. Under the authority given to them the trustees have delegated the actual management of their charity to the weekly board. This splendid addition to the cancer department is the most memorable event in its history since its foundation. It must be remembered that the funds of the Barnato-Joel Charity and our own cancer charity are kept quite separate from those of the hospital and have nothing to do with it.

Thirty-three years ago one might have seen a pale, thin, and serious-looking lad with ambition stamped on every feature spending most of the day perambulating between St. Mary's Hospital and our own. His coat was tightly buttoned, one hand clasped over his breast pocket, and he seemed to be undecided, but at last his mind was made up, and on arriving once more at the Middlesex Hospital he entered its portals and asked to see the Dean. After a searching cross-examination as to the advantages to be gained by joining the school, and as to the lowest terms upon which it was possible to join it, approval was signified, the lad became a "Middlesex man," and paid on the spot for the privilege in coin of the realm which he carefully counted out of a bag to the amount of £90. In October, 1909, one might have seen enter the secretary's office a man whose appearance was mellowed by time. He had drunk deep in the waters of success; ambition was satisfied. Drawing from his pocket £1000 in cash he now asked the assistant secretary to count it. This was the erstwhile lad's thankoffering for being a "Middlesex man," and thus to John Bland-Sutton we owe our recreation-ground, the want of which had been felt for so many years and the absence of which had deterred so many students from joining the hospital.

In 1910 an application was made to the weekly board by one of our students to provide an asylum for some refugees from the Zoological Gardens. The board, with the precedent of the Medical Society before it, agreed to allocate the hospital garden to six squirrels, "provided Mr. Poynder would be at the expense of the nuts." The squirrels, which are quite tame and afford great amusement to the patients, have been accompanied the last few days by others several sizes smaller than themselves.

The latest change I have to notice is that known as the "linked-ward system." The weekly board in its praiseworthy endeavour to decrease the hospital expenditure has been satisfied that by having the male and female wards of each officer adjacent instead of on opposite sides of the building, the cost of upkeep will be materially decreased. It therefore directed the medical staff to make this change. Remembering the part the obstetric department has played in the history of our hospital it is interesting to note that this change could not have been affected without the consent of the obstetric surgeon or his resignation, since this scheme is both destructive and constructive, for to give the physicians and surgeons linked-wards, the only perfect link in the hospital, the obstetric and gynæcological department has been rent in twain and destroyed for ever, and I trust at the quincentenary introductory address of our medical school the future lecturer will remember that this great change was brought about by the self-abnegation of the obstetric officers.

This, then, is a brief outline of what has happened to our hospital since its foundation, and now a few words about some of the men who have enabled all this to be accomplished.

THE LATE PRINCE FRANCIS OF TECK.

The most important member of our hospital is the chairman of the weekly board, and just before I joined Major Ross, the best chairman the hospital had ever possessed and who had occupied that position for 21 years, died. Since then the fortunes of the hospital have been ably guided by Lord Sandhurst and Lord Cheylesmore among others, and in the late Prince Francis of Teck the hospital had in many ways the greatest chairman of them all. His attributes were such that, had he been born in any other walk of life, he must have risen to great distinction and a very high position. His late Serene Highness was versatile to a degree, a soldier who had served his country faithfully and well in India, Egypt, and South Africa, a keen sportsman, a first-rate man of business, possessed of great common sense, and of a large-hearted sympathy with those in distress. He

gave of his best for the welfare of this hospital, an object which I know was dearer to his heart than any other. Those of us who had the privilege of his acquaintance were always struck by his cheerfulness, great courtesy, his mastery of all the details of hospital management, his personal interest in every department, the accuracy of his judgment, and the soundness of his advice, which was always at the disposal of any who liked to ask for it. To Prince Francis we owe the provision of the maternity department, the conception of the scheme for linking the Barnato-Joel Memorial with our cancer charity, and the liquidation of the debt of £20,000 which was due to our bankers when he became chairman. In connexion with his grasp of detail and business capacity Mr. Joel told us at the laying of the foundation-stone of the Barnato-Joel memorial that the trustees had had many schemes put before them for their consideration, but that the proposition of Prince Francis was so business-like they had no hesitation then and there in acceding to his wishes.

The late Prince, if he undertook to do anything, did it with all his might; half measures were foreign to his nature; playing with charity was his abhorrence. It therefore came about that when he offered to clear off the hospital debt he set to work in such a determined way that in three months he had accomplished this great and self-imposed task. What it meant to him and how hard he worked few will ever know. He spent days and weeks at this hospital, signing, writing, dictating letters, and interviewing people in all grades of society, from the old flower-woman who gave him 5*s*. to the noble lord who gave him £500, and not only did he work whilst at the hospital, but also when away from it, at his home, when visiting, anywhere in fact, and he told me that he was never satisfied unless he wrote 30 letters each week-end. For those working at the hospital his presence was a source of never-ending stimulation and encouragement; it was impossible not to try to do one's best with such a man at the helm. Everyone knew they had only to perform their duties efficiently to have his support through thick and thin.

Perhaps the Prince's greatest attribute was his sympathy with the poorer classes. If he could in any way alleviate their lot he did so, and I often think that this was the reason why he took up hospital work. He knew what illness means so often in the homes of the poor—absence of suitable and perhaps sufficient food, of proper medical attendance, of good nursing, of comfort, and of all that goes to lessen a little the awful misery of illness. He knew that in a well-managed hospital the poor are on the same plane as the rich, everything that science and knowledge can bring to their aid being at their disposal, together with efficient nursing and good food. He realised that to increase the scope and efficiency of the hospitals was to lessen the misery and to lighten the sorrows of the poor, and had he lived he would undoubtedly have become our greatest authority on hospital management and work. Genial, popular, and kind, his late Serene Highness will ever be remembered by us all with esteem and gratitude as "the poor man's friend."

The first President was the second Duke of Portland, who after a short term of office retired owing to the trouble in the obstetrical department. He was succeeded by Hugh, Earl (afterwards Duke) of Northumberland, and since then this office has been filled by the duke's descendants to the great good of the hospital, which is indebted to them for much generosity and willing assistance.

THE MEDICAL STAFF.

Of the medical staff time does not permit me to say much. The Middlesex Hospital during the 166 years of its existence has been fortunate in counting among its physicians and surgeons some of the most noted men of their day. Among the physicians were Charles Morton, who became principal librarian of the British Museum; Henry Hinckley, for 17 years treasurer of the Royal College of Physicians; Richard Warren, physician to George III.; Hugh Smith, who was also a City alderman and wrote a treatise appropriately enough on "blood letting"; Sir Lucas Pepys, the first Middlesex physician to attain the dignity of President of the Royal College of Physicians and the honour of a baronetcy; Sir Francis Milman, President of the Royal College of Physicians; John Latham, President of the Royal College of Physicians and physician to George IV., who in 1791 published a pamphlet entitled "A Plan of a Charitable Institution to be Established on the Sea Coast," thus anticipating the convalescent home at Clacton; Sir Henry Halford, physician to four Sovereigns, and for 24 years President of the Royal College of Physicians; Sir Thomas Watson, born in 1792. His published lectures, the result of 17 years' work at our hospital, are unique in their lucidity, accuracy, and originality, and have been compared to the works of Sydenham; whilst so scholarly was his style that he was known, according to a presidential address in the Transactions of the Royal Medical and Chirurgical Society, as the Cicero of English medical literature. He was five years President of the Royal College of Physicians, and died at the age of 91. His son, Sir Arthur Watson, was vice-chairman of the weekly board for some years. Henry Southey, brother of the Poet Laureate; Francis Hawkins, physician to the household of William IV. and Queen Victoria and 29 years registrar of the Royal College of Physicians; Sir John Burdon Sanderson, later Regius professor of medicine at Oxford; William Cayley, a physician beloved by all and who served the hospital with unswerving devotion for 35 years; and Sir Richard Douglas-Powell, physician to three Sovereigns and for five years President of the Royal College of Physicians, both the latter, though retired from the staff, are happily still with us.

Of the surgeons in the early years of the hospital's existence but few particulars are available. Later, and most noted of our surgeons, was Sir Charles Bell, for ten years a colleague of Sir Thomas Watson, so that for a decade there worked together as physician and surgeon at this hospital two of the brightest ornaments we have ever had. He was elected to the staff in 1814 and was the founder of our medical school. In a brilliant character sketch Stephen Paget describes him as having "all the gifts of the gods; he was versatile, emotional, practical, urbane, a lover of music, touched by every sight and every sound in the streets, now exalted, now depressed, and enraptured alike by solitude and by a crowd." In a letter to his brother concerning his election to the staff Bell writes: "They say I have had the wit to win over Whitbread or to bribe him, that I have bribed all the medical men of the hospital, that I am an anatomist, that I have a large class, and therefore the hospital has taken me up. The medical men of the hospital say they have lived as a family and expect me to be a loving brother of the community;" and in a later letter describing his success by a majority of 265 votes he remarks that the senior physician, Dr. Gower, was so pleased with the result that he was discovered, thinking himself unobserved, "dancing a reel in the board room." Bell, one of the greatest surgeons and physiologists England ever had, resigned after 24 years' devoted service to become professor of surgery at the University of Edinburgh. He was succeeded by his brother-in-law, Alexander Shaw. Following these we have had:—Moncrieff Arnot, twice President of the Royal College of Surgeons, a very plain-spoken but kind-hearted man, who on one day visiting his wards was stopped by a patient with a fractured leg, saying, "Oh, Mr. Arnott, I have such a sinking in the stomach." "Now, my man," said Arnott, quickly discounting the alleged symptom, "why don't you say you want another pint of beer?" Campbell de Morgan, a pioneer in antiseptics and a great advocate for the thorough removal of cancer. Sir William Flower, Director of the Natural History Museum. John Whittaker Hulke, F.R.S., who died in the second year of his Presidency of the Royal College of Surgeons from pneumonia acquired through coming to the hospital on a snowy winter's night to perform an urgent operation which a sense of duty forbade him give to his junior. George Lawson, oculist to Queen Victoria, who worked 22 years at this hospital attending to the surgical ailments of the patients and relieving their physical necessities; his life was one long record of unostentatious benevolence. Charles Leopold Hudson, one of the most brilliant students the hospital ever had, and at the time of his deplorable death assistant surgeon. He started the Students' *Journal*, and was responsible for the amalgamation of the sporting clubs, which has met with the great success he always prophesied. And Sir Henry Morris, now retired from active work on the staff, thrice President of the Royal College of Surgeons of England, and who, quite apart from all else he has done for the profession and humanity, will be remembered always as the first surgeon to perform the operation of nephrotomy.

Of resident medical officers there have been many. They were at first called apothecaries, and our hospital has a lot

to thank them for. The most noted of them was Edward Ashby Fardon, who spent the whole of his medical career in this hospital, and was for 28 years its resident medical officer, during which time he was intimately associated with all the reforms and improvements then carried out, many of which he initiated. The welfare of our hospital was his first object in life, and he died in its service.

THE POST OF SECRETARY.

Of the secretaries to the hospital history relates but little. Some of them left because they were married, some were discharged because they were not, some resigned because they were clergymen, others had to resign because they were not clergymen, for at one time the offices of chaplain and secretary-superintendent were combined; some retired from ill-health, some were expelled for plotting against the authorities, one was dismissed for late habits and a propensity for erasing his name from the night-book, another was arrested on the hospital premises, a third when dealing with the hospital accounts had such very elementary ideas of *meum* and *tuum* that he left to improve his education, and a fourth opined that "his habits were not such as the governors would deem suitable in the situation of secretary." Whether in the main they were happy or unhappy we know not, but at any rate there was one discontented with his lot, for on being asked what he would sooner be if his wish could be gratified replied "a golden carp swimming about in a lake of the finest champagne with the beautiful fluid running in at my mouth and out of my gills every second of my life." Of former secretary-superintendents, Alexander Shedder did by far the most for the hospital, working here for 24 years.

Up to now, in dealing with the people who have helped to make this hospital, I have for obvious reasons mostly mentioned those who are dead or who have retired, but it is impossible thus to pass over the present secretary-superintendent. He entered the hospital on Jan. 1st, 1878, as a clerk, and for the last 33 years one might truly say that every day of his life he has been working in some way or other for its welfare. There has been no eight hours' day for him. As a house surgeon 20 years ago I have often, when going to the wards for some urgent case at 12 or 1 o'clock in the morning, seen the office lights burning and the secretary in his shirt sleeves surrounded by huge ledgers. This year, called to the hospital at 1 A.M. on a similar errand, I have seen the office lights still burning and the secretary still working in his endeavour to collect funds for the hospital, and I was informed that this had been a nightly occurrence for months.

The functions of a secretary-superintendent are manifold, the two principal being, perhaps, the collection of funds and the limiting of expenses. During the present secretary's term of office close upon one million pounds sterling have been spent on relieving the patients, keeping the hospital fabric in repair, and extending its buildings. That takes some collecting! And in the report of the King Edward's Fund for 1909 the average cost per bed at the Middlesex Hospital was the lowest of any of the great hospitals, whilst in the report for 1910 results almost as good have been obtained, and our average cost per bed is stated to be over £7 less than in a hospital more than twice our size which has all the advantages in buying an increased number of beds necessarily gives; this takes some managing! No one deserves more of Middlesex—nay, of the community—than F. Clare Melhado, whose monument is already erected in the large number of buildings that surround this garden.

INADEQUACY OF THE OUT-PATIENT DEPARTMENT.

Every year at our annual dinner the Broderip scholar, the most learned of our students, when returning thanks on their behalf, will ventilate a list of grievances. This custom has always appeared to me to have much to recommend it. Private representations are notoriously often of very little use, since the request is either met with a direct negative or is received with the honeyed phrases of apparent sympathy only to be forthwith relegated to the dust and limber of the forgotten. On the other hand, publicity will often work wonders, and I have known many a useful suggestion thrown out by a Broderip scholar bear fruit, not perhaps at once, but after the authorities have allowed the matter to undergo unconscious cerebration. It has occurred to me that this custom of the Broderip scholars might very well be followed by the lecturer of the day who is not likely to often have such a chance again of ventilating any grievance he may have personally or on behalf of his colleagues. There will be some members of this audience saying to themselves, "I wonder what grievances the medical staff of the Middlesex Hospital can possibly have." Well, ladies and gentlemen, I must not let you into all the secrets, but, at any rate, we have one grievance, and that a most pressing one, which is the entirely inadequate accommodation available in the out-patient department. This hospital may now be said to be practically complete and up to date except for this. The time has come when we must have a new out-patient department, both for the sake of our patients and for that of our colleagues who have to spend so many hours there every day. Go round to the surgery, the consulting-rooms, corridors, and waiting-rooms this afternoon and see for yourselves; the sister-in-charge will gladly show you. Then imagine that, on an average, at least 500 patients, and on Tuesdays very often 700, are examined and treated every day, that all the serious accidents are first brought there, that all patients for admission have to be seen there first, and that the dispensing for the whole hospital is done there. You will deem it impossible in such a small and cramped space; in fact, there is hardly room to breathe, and it would be impossible if it was not for the loyalty of the staff working under such surroundings and for the fact that the patients are so attracted by the popularity of the hospital that they are prepared to put up with an amount of inconvenience which, under other circumstances, they would not tolerate for a moment. As the sister-in-charge said to me recently, "It's bad enough any day, but on Tuesdays it's something awful." The room set aside for dental work is somewhat larger than a rabbit hutch, and in a short time, in spite of every means taken to ventilate it, the air becomes so vitiated that the dental surgeon tells me he invariably feels ill for the rest of the day after he has finished his work there, and every now and again he loses the services of the nurse on duty from fainting. Working in the out-patient department is not a healthy occupation anyhow; many a man has ruined his health, many a man has lost his life working there. I wonder how many of you have any idea as to what a man has to do before he becomes a physician or surgeon to out-patients. Let me lift the veil a little, you shall perceive a mode of life that is not riotously healthy.

You will see a young man working, always working at the hospital most of the day, and at home or in lodgings up to late at night, with but scant holidays for at least five years, in order to take a high place in his qualifying examination. You will then see him filling the various resident posts that a hospital has to offer, unsalaried posts. Later on you will see him working for one of the higher diplomas, without which he is not eligible for a position on the staff. During this time he has to pay for his board and lodging. Having passed this most difficult examination, you will see him, perhaps, as registrar, a position which necessitates his presence at the hospital six days of the week, which entails a great amount of work, and which is in every way a very exacting occupation. The salary for this varies; at our hospital it is £40 and a free lunch. Roughly, therefore, after about eight years of very hard work, our prospective candidate commences to earn £40 a year. His work is of such a nature that it is impossible for him to earn a living at private practice; he therefore has to look about for some other means of subsistence, such as that of "coaching" students for their examinations, and what work that entails none but a "coach" will ever know. I had 12 years of it, and it is certainly the hardest job that I can imagine, working day after day often up to the early hours of the morning endeavouring to get a small number of men to assimilate a large amount of knowledge, realising all the while full well that whether you obtain any more students depends entirely upon how the present ones prosper in their examination. The time at last arrives when there is a vacancy on the staff; there are sure to be a large number of candidates; only one is chosen, and perhaps it is not the registrar, but we will say it is. His expenses suddenly rise to an alarming degree, he has to take rooms or a house in some particular neighbourhood with the knowledge that, unless he differs in a marked degree from those who have gone before him, he will have to work hard, day in day out, probably without proper holidays, for at least seven years more before his receipts will be equal to his expenditure—that is to say, if he has passed his examinations and obtained the various posts at the first time

of asking, in about 18 or 19 years after he is qualified our friend may be earning enough to pay his house-rent and expenses. Is there any other walk of life in which *such* work is remunerated so inadequately as this? I think not. And then you must remember that with all this hard work there is the anxiety to some of the uncertainty as to whether the next butcher's bill can be paid or not. What with working in the out-patient department day after day for many years, teaching and lecturing to the students, writing papers for learned societies, perhaps undertaking research work, and many other duties associated with his position, no wonder the health at times gives way under the strain. Those who have to work year after year in our out-patient department incur over and above the ordinary risk to their health a definite risk due entirely to the size and nature of the building. This is no fancy, it is a solemn fact. Our present department did very well for the time it was built in 1886, when the yearly number of patients was comparatively small. To-day it is absolutely inadequate with yearly attendances of 141,529. A new out-patient department would mean greater comfort and privacy to the patients and less waiting, and time to many of them is money indeed. The work could be more efficiently carried out, the students would have better opportunities for learning, and it would be incalculably better for the health of everyone concerned.

If I were delivering this address in New York or Chicago I should have in all probability to-morrow morning an offer from some public-spirited millionaire to build the Middlesex Hospital a new out-patient department. Cannot I persuade someone in England to do this for us? I cannot imagine a finer memorial to anyone—a memorial that would not only benefit the patients, but also would be of inestimable advantage to those who spend so much of their lives in relieving the out-patient sick and lame.

CONSUMPTION AND ORDER OF BIRTH.*

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WHEN holding a resident post at the Crossley Sanatorium in 1906, the present writer observed in the patients' case sheets, which showed ordinal position in the family, a large number of entries of eldest-born children; and from this observation conceived the idea that clinical pulmonary tuberculosis might affect such persons more than others. Wishing for expert mathematical opinion on the point, he forwarded the material, mentioning[1] the observation made, to Professor Karl Pearson. The conclusion[2] this distinguished mathematician reached was that both first- and second-born offspring appear subject to consumption at a very much higher rate than younger members of a family.

What follows is an independent examination of fresh evidence bearing upon this matter, and falling under three heads—material, literature of the subject, and conclusions.

A. MATERIAL.

Sources of information suitable to the purpose are, however, very scarce. The shortcomings of medical literature as regards the study of possible pathological inheritance have been much commented upon lately. Author after author records cases of consumption occurring in one or more generations, but until recently no one appreciated the advantage to be gained by giving every available particular. On the side of genealogy and heraldry there is indeed a huge literature, but of the many works to be found at the British Museum, seemingly but one (G. E. Cokayne's "Complete Peerage") mentions causes of death, and even this authority disqualifies itself for the present purpose by not stating absolute order of birth. We learn that such and such an individual was "eldest son" or "third daughter," but not which *child*. Besides, still-births are not mentioned, let alone miscarriages. In fact, all the existent material seems to be medical, and to consist of two works by Brehmer, three by Riffel, and some pedigrees collected by the present writer, a few of which last are either in the hands of workers in the Galton Eugenics Laboratory or have already been published in their "Treasury of Human Inheritance."

I. *Brehmer's Cases.*[3]

In two† books Brehmer gives 500 odd cases of consumption, and in 494 out of the 500 states exactly both the size of family and the patient's position therein. The particulars given are, however, not enough to construct pedigrees from. The cases are grouped into eight rather recondite classifications of this author's devising, but although each set of cases is selected, yet in sum the selection becomes largely neutralised. The present purpose is affected, however—because a population made up of large families will obviously show fewer elder-born than will a population made up of small ones—in two of the classifications which relate to specially large families. These two will be also separately considered. And now to the result of analysis, premising that it is satisfactory to note that Brehmer (who omitted to count up his results) did not affirm elder-born incidence of consumption: his general impression was that in certain instances scrofula affected the earlier offspring, and that in large families the later-born were likely to be consumptive, especially the sixth. It has been said that we are given the size of the family and the patient's order of birth; from these data the following simple calculation‡ may be made (Table I.):—

TABLE I.

Order of birth.	Subjects.	Phthisical patients.	
		Expected.	Actual.
1st	494	73·1	90
2nd	478	70·8	80
3rd	453	67·1	67
4th	412	61·0	57
5th	355	52·5	37
6th	298	44·1	49
7th	238	35·2	32
8th	187	27·6	23
9th	140	20·7	17
10th	102	15·1	9
11th	68	10·0	15
12th	50	7·4	7
13th	28	4·1	1
14th	14	2·0	1
15th	8	1·1	3
16th	4	0·5	0
17th	2	0·2	0
18th	2	0·2	0
19th	2	0·2	1

Total number of actual patients, 494.

It will be seen that instead of an even distribution of consumptives throughout these families, which was to be expected—Pearson, with his notable statistical acumen specially trained to this sort of problem, could conceive of no lurking fallacy here—instead, then, of an even distribution, there is distinct excess amongst first- and second-born. And the data from which this result emerges include, as stated, two sets of especially large families, which will naturally show relatively fewer elder-born consumptives, and as a fact show hardly any, as seen in Table II.

Brehmer's case-histories thus reveal, unknown to their author, an especial incidence of consumption on first, and to a less degree on second, born children. There is also excess of consumption amongst the sixth-born.

II. *Riffel's Records.*[4]

These—records of several generations of the populations of South German villages—are vastly larger and fuller than the preceding, affording thus scope for much more detailed analysis. But first of all note must be taken of some severe

* This refers to first-, second-, third-born, &c., of one *mother*

† More than nine-tenths of the material is in one of them.

‡ Probably no material exists, as yet, which is at once large and exact enough to warrant the highly desirable detailed inferences obtainable by mathematicians, and the many sub-relationships to be searched for by the medical observer. But it requires no high mathematics to determine special incidence relating to order of birth, nor did Pearson employ any when examining this point in "A First Study of the Statistics of Pulmonary Tuberculosis."

TABLE II.

Order of birth.	Subjects.	Phthisical patients.	
		Expected.	Actual.
1st	146	15·7	2
2nd	146	15·7	3
3rd	145	15·6	5
4th	143	15·3	0
5th	142	15·2	3
6th	139	14·9	40
7th	122	13·1	25
8th	107	11·5	22
9th	86	9·2	13
10th	65	6·9	8
11th	44	4·7	12
12th	33	3·5	7
13th	19	2·0	1
14th	9	0·9	1
15th	5	0·5	3
16th	2	0·2	0
17th	1	0·1	0
18th	1	0·1	0
19th	1	0·1	1

Total number of actual patients, 146.

criticisms passed upon Riffel by Cornet in the latter's well-known work.[5] What Cornet censured, however, was none of the publications treated of here, but a smaller, earlier one.[6] In this he described many inaccuracies, but neglected to give chapter and verse for them. Riffel replied[7] that, excluding some obvious printer's errors, what Cornet took for discrepancies merely arose from the fact that the same Christian name often occurred repeatedly in a family. The arrangement of this early work is not such as to make it easy to decide which is right; but its later, amplified form ("Weitere Pathogenetische Studien"), and the other two works mentioned, admit of several tests being applied.

Tests of validity of Riffel's records.—One turns first, of course, to the distribution of the whole population according to family order of birth. It comes out as in the following table (III.):—

TABLE III.

Erblichkeit und Infektiosität.	Weitere Pathogenetische Studien.	Schwindsucht und Krebs.	Order of birth.
Per cent.	Per cent.	Per cent.	
795 (20·1)	529 (16·3)	553 (16·3)	1st
727 (18·1)	478 (14·7)	530 (15·7)	2nd
627 (15·9)	477 (14·7)	481 (14·2)	3rd
514 (13·0)	436 (13·4)	421 (12·4)	4th
396 (10·0)	370 (11·4)	358 (10·6)	5th
299 (7·5)	290 (8·9)	304 (9·0)	6th
214 (5·4)	234 (7·2)	240 (7·1)	7th
143 (3·6)	154 (4·7)	179 (5·3)	8th
91 (2·3)	105 (3·2)	127 (3·7)	9th
61 (1·5)	69 (2·1)	81 (2·4)	10th
32 (0·8)	43 (1·3)	46 (1·3)	11th
21 (0·5)	21 (0·6)	27 (0·8)	12th
10 (0·2)	14 (0·4)	12 (0·3)	13th
4 (0·1)	7 (0·2)	6 (0·1)	14th
2 (0·05)	3 (0·09)	5 (0·1)	15th
2 (0·05)	1 (0·03)	2 (0·05)	16th
1 (0·02)	1 (0·03)	1 (0·02)	17th
1 (0·02)	1 (0·03)	0 —	18th
0 —	1 (0·03)	0 —	19th
Average size of family 4·8	6·2 (fertile marriages only)	5·4	

In the above it will be seen that the gradations in the successive numbers are fairly uniform, and that in the two latter records there is close general correspondence with the following figures for New South Wales industrial families collected by Powys[8] (Table IV.):—

TABLE IV.

Order of birth.	Per cent.	Order of birth.	Per cent.
1st	7670 (16·5)	9th	1927 (4·1)
2nd	7003 (15·1)	10th	1405 (3·0)
3rd	6184 (13·3)	11th	908 (1·9)
4th	5442 (11·7)	12th	546 (1·1)
5th	4708 (10·1)	13th	311 (0·6)
6th	3986 (8·6)	14th	167 (0·3)
7th	3266 (7·0)	Over 14	209 (0·4)
8th	2593 (5·5)		

Average size of family (fertile marriages only) 6·05.

Here, again, we get in families of similar average size and social status about 16 per cent. of the population eldest-born children.

Secondly, one may examine the number of twin births given in these records, for twinning is known to occur about once in 80 births. In round numbers, twins come in these three investigations respectively once in 111, once in 100, and once in 83 births. The records are certainly not perfect—perfect ones of such dimensions it would be nigh impossible to get, so that this is a fairly satisfactory result. Then the deaths from trauma are far more frequent, as one would expect, among men than among women. Pearson, editing a work of Pope's[9] in which were used "E. & I." and "S. & K.," has remarked that phthisis seems exceptionally rife in this material. It must be remembered that the way of life of these communities (described with unflinching Teutonic frankness) was grossly insanitary. The phthisis death-rate cannot be reckoned because, as already stated, the material is not the contemporary populations of these villages, but the contemporary populations *plus* a good many of their forbears; but in proportion to all deaths the deaths from phthisis were not over-frequent. Thus, in "E. & I." they form 6·2 per cent., in "W. P. S." 7·4 per cent., and in "S. & K." 8·7 per cent. of all deaths mentioned. Now in 1893 the general death-rate for England and Wales was 17·6, and the phthisis death-rate 1·3, to 1000 persons living.[10] This would make the deaths from phthisis 7·3 per cent. of all deaths. And, according to Mr. Garland,[11] in the Ancient Order of Foresters, for the quinquennium ending 1901 the deaths from phthisis were among members 15·1 per cent. of the total deaths; among wives and widows of members 13·2 per cent.; while in the Hearts of Oak Society in 1903 and 1904 deaths from phthisis formed over 17 per cent. of all deaths.

As a last numerical test, although this argument may savour of prolepsis, we may take the incidence of the few cases of insanity mentioned; for, as will be described later, insanity has also been claimed to pick out the elder-born for its victims. In "S. & K." and "E. & I." taken together the incidence is shown in Table V.:—

TABLE V.

1st ... 7 in 1348 (0·5%)	5th ... 2 in 754 (0·2%)	9th ... 1 in 218 (0·4%)
2nd ... 2 in 1257 (0·1%)	6th ... 1 in 603 (0·1%)	10th ... 1 in 142 (0·7%)
3rd ... 0 in 1108 —	7th ... 0 in 454 —	11th ... 0 in 78 —
4th ... 0 in 935 —	8th ... 0 in 322 —	12th ... 0 in 48 —

The value of the above calculation is slight, but nevertheless, allowing for the disturbing influence of small totals in the tenth and later born, it shows eldest-born excess of insanity.

What is, perhaps, more important is the general impression these works make upon the reader, and the estimation in which their author is held in his own country. As regards the first point the verdict is favourable. There are rather many mistakes, but such as would arise from careless reading of the proof sheets and from the formidable nature of the task, while many details are given the actuality of which seems evident. During the period of production of these essays the author seems, too, to have risen to a professional position of some distinction in his native district. That his work has found admirers among other physicians Cornet himself attests, and this was the case so recently as at the 1910 Congress of German practitioners specialising in tuberculosis. Riffel's work may, then, allowing for large unavoidable limitations, be taken as valid.

Inter-comparison of Riffel's three publications.—That there must be such limitations will be obvious to anyone who will

picture to himself the task of accounting for most of the persons born during the last hundred years in even a small village; of getting to know respecting each one his or her parents; date of birth; illnesses, marriages, and children; and date, age, and cause of death. In the present instances the task was, on the one hand, helped by close personal local knowledge and by access to official registers; on the other, hindered by emigration of villagers, which (to North and South America especially) seems to have been frequent. It is useful, then, to ascertain in which of the records these difficulties counted for least, and Table VI. (of percentage frequencies in all births) may do something to show this:—

TABLE VI.

—	Deaths from—					Cases of—	
	Phthisis.	Pneumonia.	Cancer.	Typhus.	Trauma.	Twins.	Still-births and miscarriages.
S. & K.	5·9	2·1	0·5	0·7	0·8	1·2	4·0
W. P. S.	4·5	1·6	1·1	1·1	0·2	1·0	(not given).
E. & I.	4·3	1·1	0·5	0·8	0·2	0·9	2·0

It will be seen that "E. & I." shows slight general inferiority to the other two; and, as we have already seen, the average size of family in this record is 4·8, which for the industrial class seems low, and is certainly lower than that in "S. & K." "E. & I." is, too, the earliest published of the three by nine years. It seems fair to conclude that it must be given less weight than the others.

Incidence of phthisis in Riffel's records according to order of birth.—It has been mentioned that, owing to the nature of the material, it is impossible to give a death-rate from phthisis reckoned in the ordinary way. What will be done first, therefore, is to state percentage frequencies of deaths from phthisis in all the births, thus (Table VII.):—

TABLE VII.—*Schwindsucht und Krebs.*

Order of birth.	Subjects.	Phthisis. Deaths.	Phthisis. Per cent.
1st	553	41	7·4
2nd	530	32	6·0
3rd	481	27	5·6
4th	421	28	6·6
5th	353	21	5·8
6th	304	20	6·5
7th	240	11	4·5
8th	179	10	5·5
9th	127	5	3·9
10th	81	3	3·7
11th	46	2	4·3
12th	27	2	7·4
13th	12	0	—
14th	6	0	—
15th	5	0	—
16th	2	0	—
17th	1	0	—
Total	3373	202	5·9

It will be seen that only the twelfth-born, where the numbers are very small, have proportionately as many deaths from phthisis as the first-born. In subsequent calculations the table just given can be abbreviated, as in none of the records do cases of phthisis occur later than the twelfth-born. Table VIII. represents similarly percentage frequencies, in all births, of deaths from phthisis in "W. P. S."

Here the first, third, fourth, sixth, and seventh born have more than the general average (4·6 per cent.) of deaths from consumption. The seventh-born has the highest percentage of all, but if this table and the preceding one be taken together, first-born children show a larger proportion of consumption than any of the rest. In "E. & I." we come upon the first (and only) record which clearly does not show this (Table IX.).

TABLE VIII.—*Weitere Pathogenetische Studien.*

Order of birth.	Subjects.	Phthisis. Deaths.	Phthisis. Per cent.
1st	529	28	5·2
2nd	478	19	3·9
3rd	477	23	4·8
4th	436	21	4·8
5th	370	17	4·5
6th	290	14	4·8
7th	234	13	5·5
8th	154	6	3·8
9th	105	3	2·8
10th	69	2	2·8
11th	43	1	2·3
12th	21	1	4·7
Total	3206	148	4·6

TABLE IX.—*Erblichkeit und Infektiosität.*

Order of birth.	Subjects.	Phthisis. Deaths.	Phthisis. Per cent.
1st	795	30	3·7
2nd	727	36	4·9
3rd	627	30	4·7
4th	514	22	4·2
5th	396	20	5·0
6th	299	11	3·6
7th	214	11	5·1
8th	143	3	2·0
9th	91	1	1·0
10th	61	4	6·5
11th	32	0	—
12th	21	2	9·5
Total	3920	170	4·3

But granting that the two more reliable records ("S. & K." and "W. P. S.") show eldest-born incidence of consumption, there remain a good many fallacies to be excluded. The first that will be taken has already been indicated. Even in the best of these records there are many persons whose fate, for one reason or another, is quite uncertain. To deal with this difficulty one may compare the relative incidence of the disease as before—that is, according to position in the family—but amongst those subjects only who are accounted for, that is among all the stated deaths. The result of this examination of the data is in close correspondence with the preceding: "S. & K." shows consumption most rife amongst the eldest-born—11·5 per cent., as against a general average of 8·7 per cent., and a second highest percentage of 9·6 in the fourth-born. "W. P. S." gives general average 7·4 per cent., highest percentage 9·2 in the seventh-born, next highest 8·2 in eldest-born. The two together again show eldest-born the highest of all. "E. & I." again shows the eldest-born below the general percentage.

The second fallacy to be mentioned is not so obvious, but, as will be seen later, it has been imputed by a critic.[12] It is this. Put the case that infantile mortality is especially low in eldest-born children. Then more eldest-born than other children will grow up to adolescence and adult life. The adolescent and adult population will thus come to contain an unduly large proportion of eldest-born; and as consumption is a disease mainly of these ages, consumptives will show an unduly large proportion of eldest-born likewise. To test for this possible fallacy one must limit the material to those who die at adolescent or adult age. The result is, however, entirely negative. "S. & K." gives, in deaths at 18 years § of age and upwards, in the first-born deaths from phthisis 24·1 per cent., which is the highest except in the case of the twelfth-born, whose numbers are very few. "W. P. S." shows, when examined similarly, the first-born proportion highest of all. In "E. & I." the effect of such analysis is to bring the percentage of deaths from phthisis in the first-born column above the general percentage.

But a further procedure which seems desirable is to see what happens in the case of other adult diseases, to see if these, too, are given more frequently in the first-born; for it

§ Osler gives 18 years as the lower limit of the usual age period of phthisis.

is conceivable that the distinctive position of eldest of a family might cause all details respecting him or her to be better remembered. The chief of the other causes of death here recorded, which affect adults, are pneumonia, typhus, cancer, and trauma. The percentages of deaths from each of these four causes have been worked out in each of the three records ("S. & K.," "W. P. S.," and "E. & I.") in the three ways used and just described in the case of phthisis—that is, on all births, on all deaths, and on deaths at 18 years and upwards. In none of the resulting 36 tables does the highest percentage occur with the eldest-born, although in the case of cancer there is some approach to this condition of things. Such an array of figures would be too much to quote in an article of this length, but the following contrast may be given (Table X), using the two records "S. & K." and "E. & I." together, and reckoning the percentages on the first basis, that of all births:—

TABLE X.

Deaths from—	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
Phthisis	6·3	5·0	5·2	5·7	5·2	5·7	5·0	4·8	3·4	3·3	3·3	6·2
Pneumonia ...	1·8	2·5	2·0	1·5	1·3	2·1	2·1	1·8	0·8	2·6	0	0
Typhus	1·2	0·7	1·2	0·7	0·5	1·3	0·4	0·6	1·7	1·3	1·1	0
Cancer	1·2	0·8	1·1	0·9	0·4	0·5	0·6	0·3	1·2	1·3	0	0
Trauma	0·1	0·7	0·6	0·4	0·6	0·5	0·6	0·9	0·4	0	0	2·0

It would, not, therefore, seem to be the case that the especial liability to consumption of the first-born in these two records can be explained on the ground of fuller details of all kinds being given for them, or their greater vulnerability to disease in general.

Before leaving Riffel's notable work one might say that, like Brehmer, he confined himself to comment upon individual or a few cases. He did no computing; and his sole remark connected with position in the family is to the effect that the eldest child or elder children of hereditarily tainted parents escapes or escape consumption. ("W.P.S.," Text, S. 58.)

III. *Own Pedigrees.*

The last source of material is records of sanatorium patients. They relate to sputum-positive cases only, and in many instances information was obtained from parents or other relatives as well as from the patients themselves. What will be used here are the particulars concerning the patients and their brothers and sisters. The record is thus fuller than that of Brehmer, for a complete history as regards consumption is obtained of each family, using that word in the restricted sense of childship, or a series of children born of one mother. My material is, on the other hand, scanty as compared with Riffel's, for it is confined to phthisical families and to one generation, and takes no count of diseases other than consumption.

And here one may protest against the obscurantist argument that it is not justifiable to put down a person as free from consumption unless that person's lungs have been found tubercle-free on the post-mortem table. Were the subject of discussion pulmonary tuberculosis, in the wide sense, then this objection would be valid; but consumption is only those degrees of pulmonary tubercle which become clinically evident. The person who, dying by violence, is found to have a scar at one pulmonary apex, has in the practical problem of tuberculosis no importance at all. For practical purposes, too, lay statements as to deaths of relatives from consumption may surely be accepted to a large extent. Most persons now have a knowledge of what was on the death certificate of a son or sister or brother. But there is, of course, no need for this allowance as regards the patients themselves, for, as already stated, they were fully verified cases of pulmonary phthisis. Their distribution in order of birth works out as in Table XI.

As in Brehmer's material, there is considerable excess of consumption among first and second born. There is also excess amongst fifth born.

If one adds the cases of consumption amongst the patients' brothers and sisters the results are practically the same (Table XII.).

TABLE XI.

Order of birth.	Subjects.	Phthisical patients.	
		Expected.	Actual.
1st	263	41·5	53
2nd	259	40·9	47
3rd	246	38·9	41
4th	222	35·1	30
5th	190	30·0	38
6th	160	25·3	22
7th	118	18·6	16
8th	88	13·9	8
9th	55	8·6	5
10th	31	4·9	2
11th	20	3·1	1
12th	5	0·7	0
13th	2	0·3	0
14th	1	0·1	0
15th	1	0·1	0
16th	1	0·1	0
17th	1	0·1	0

Total of actual patients, 263.

TABLE XII.

Order of birth.	Subjects.	Phthisical cases.	
		Expected.	Actual.
1st	263	55·8	78
2nd	259	54·9	61
3rd	246	52·2	56
4th	222	47·1	46
5th	190	40·3	42
6th	160	33·9	29
7th	118	25·0	20
8th	88	18·6	11
9th	55	11·6	6
10th	31	6·5	2
11th	20	4·2	1
12th	5	1·0	1
13th	2	0·4	0
14th	1	0·2	0
15th	1	0·2	0
16th	1	0·2	0
17th	1	0·2	0

Total of actual cases, 353.

If, to exclude a possible fallacy before mentioned, the distribution of consumption in order of birth is taken among subjects only of 18 years of age and upwards, there is still considerable eldest-born excess (actual 75, expected 60 5) and some second-born excess.

The main examination of material is now finished, and the result may be stated very shortly. Five sources have been analysed, and of these five, four agree in showing that consumption has preference for first- and second-born children. The next step is consideration of the scanty, but interesting, literature of the subject—the literature of what may be called the *pathological aspect of primogeniture.*

B. LITERATURE.

I find no observation previous to my own of eldest-born incidence of consumption. Brehmer's and Riffel's already noted opinions seem the only investigation the subject had received. As to other characters of the first and earlier born, Sir A. Mitchell,[13] among 443 idiots and imbeciles found 138 first-born, or 31·1 per cent. Excluding a large contingent of illegitimate children, who are, of course, disproportionately often first-born, and confining his observations to cases in which only one idiot, and that a congenital one, occurred in a family, he concludes again that "idiocy is more likely to occur among first and latest pregnancies

than among others," since "of *all* the children born in Edinburgh and Glasgow in 1855, 22·8 per cent. were first pregnancies, while of the 85 idiots 33 per cent. were first pregnancies." The first figure in the second quotation seems high, and indeed Langdon Down [14] claims liability to idiocy among primiparous children because 24 per cent. of the 2000 idiots (illegitimate largely excluded) examined by him were first-born children. But Down gives the average size of family (6·91), and also the percentages of idiots who were second-born, third-born, &c. From these data it may be concluded that 24 per cent. was an excess; for, as we have seen in the tests applied to Riffel's work, even in populations with a smaller average size of family the percentage of first-born children to be expected is but 16 or so. He also found that 40 per cent. of idiots born in a state of suspended animation were primiparous children, and invokes as a cause of both phenomena the "exalted emotional life" of newly married couples and the increased difficulties of a first parturition.

Matthews Duncan [15] found that first-born children in Scotland are shorter and lighter than others, but traces this to the influence of early age of the mother. Elsewhere he gives the following summary: "Among Mitchell's 443 idiots and imbeciles 138 were first-born; among Wilbar's 675 there were 191 first-born; among 100 of Beach's, 20; among 2000 of Down's, 480. Or among 3218, 829, or about 26 per cent., were first-born, and presumptively born of young mothers." Voisin [16] has a remark that among the children of an alcoholic father the first is often an idiot, and the second only imbecile. Winter [17] states that 30 out of 54 Irish and Irish-American criminals were eldest-born; there were 9 second, 11 third, 1 fourth, 2 fifth, and 1 sixth born. He connects this with "the theory that first-born children are liable to the greatest number of accidents during birth." Moll [18] gives the following opinion of a patient, a man of considerable intellectual culture: "X. behauptet, er hatte gefunden, dass gerade bei Erstgeborenen sich homosexuelle Neigungen finden." He himself thinks that it is more often in youngest children, but that this is very little more than coincidence.

Carman,[19] after examining 1507 Michigan school children, says that, in general, sensitiveness to pain decreases in order of birth. Strength of grasp remains the same with boys, while it varies with girls. Wells,[20] studying data furnished by trained observers and by teachers of school children in California, gives curves showing, with minor sex differences, first-born children superior to others in weight, height, association time, discrimination, voluntary motor ability, natural mental ability, neatness, and deportment. Macdonald [21] stated that of 53 university students the first-born were more sensitive to pain than the second-born.

Dugdale is quoted by Havelock Ellis [22] as finding that the first-born child tends to be a criminal. This last author seems the first to have been struck with the multiple abnormal tendency of the eldest child, and also to have added to the number of abnormalities those of great talent and genius—for Galton's study of eminent English scientists speaks of oldest or only *sons*, not eldest children. Here it is stated, too, that brothers and sisters dead in infancy are often excluded (at any rate in reckoning average size of family), and this defect is hardly likely to be absent either from Havelock Ellis's material, which is lives from the "Dictionary of National Biography." However, after guarding against some fallacies, Ellis pronounces for decisive results in favour of "special liability for eldest and youngest children to be born with intellectual aptitudes." Ballantyne [23] collects from medical literature the following 23 cases of congenital diaphragmatic hernia, in which order of birth was stated: 1st, 5; 2nd, 7; 4th, 5th, and 6th, 2 each; 8th and 9th, 1 each; order uncertain, but not first, 3.

We now pass to the work of the biometric school, which in this, as in one or two other points, has recently been curiously confirmative of conclusions previously reached by the much, and only in some respects justly, censured writers on the subject known as degeneracy. It begins with a paper [24] by Beeton and Pearson on the inheritance of the duration of life, studied in pedigree records of Quakers. The authors find that "the elder adult sister and adult brother live on an average four years longer than the younger adult sister or brother." An elder brother or sister was "one who might have been born one year or 20 before the younger brother or sister"—a description from which one is not warranted in deducing that the "elder brother or sister" was also the eldest of his or her family, although from subsequent references by Pearson to this paper this would seem to have been often the case.

Next comes the already mentioned study [2] by Pearson of material concerning consumptives collected by the present writer. Next, Heron's study [25] of Dr. Urquhart's 331 family trees of lunatic asylum patients, in which he found excess of insanity amongst the four eldest, and deficiency in the remainder. Pearson in his Boyle lecture [26] quoted the last two findings—namely, that the elder-born are more liable to pulmonary tuberculosis and insanity—and, on the authority of Dr. Goring, added a third, criminality. In two of the instances, then, as has been now seen, the biometricians might have strengthened their case by quoting previous literature. The statistics relating to criminals show excess amongst the first three born, and in the case of the eldest of all it is very marked—viz., expected number of criminals 58, actual number 120.

The conclusion drawn by Pearson, that the eldest-born is generally inferior, elicited a reply from Von den Velden,[12] who took the tuberculous families in Riffel's "Weitere Pathogenetische Studien" and "Schwindsucht und Krebs," and made out that while in them there were certainly more deaths from consumption amongst the three first-born than in the remainder, yet this was due to smaller infantile mortality. This point I have alluded to before. The slight difference described is not enough to account for the much bigger difference in deaths from phthisis, and, moreover, using a much larger material, I have tested for this fallacy with negative results. Finally, Pearson in a letter to the lay press has described eldest-born incidence as characteristic of albinism.

There remain two more medical observations to be mentioned, that of Davidson,[27] who found 10 out of 19 cases of congenital pyloric stenosis to be eldest children; and that of Hunter,[28] who among idiots and their parents described specially heavy incidence at either end of the family. Popular sayings it is not worth while to go into. One or two authors have described abnormalities as especially frequent in bastards, who are likely to be often first-born, and Galton's well-known conclusion as to the relative sterility of heiresses perhaps similarly calls for mention. Pedagogical literature on only children, like Neter's "Das einzige Kind," deals with characteristics referable to a solitary upbringing, and Friedjung [29] invokes much the same cause for the neuropathic and digestive disturbances he found in these subjects.

This is the chief literature of the subject, and, although scanty, it favours Havelock Ellis's supposition of a tendency to multiform abnormality on the part of the eldest child; perhaps second- and third-born children should be included also.

C.—Further Analysis and Conclusions.

There is proof, it is claimed therefore, that consumption has preference for the eldest-born. What further can we learn as to this predilection?

Unfortunately, such inquiries cannot be pushed very far as yet, owing to the want of material. Thus respecting the exact amount of increased risk of developing phthisis that an eldest child runs, no direct data exist from which to calculate. For these the investigator must await records on the scale of Riffel's, but with the blanks much more often filled in. As matters stand, we may say that *whereas in 1228 consumptives* (494 upper middle-class Germans; 353 middle- and lower-class inhabitants of Lancashire, London, and Northumberland; and 381 mainly lower-class Lancastrians) *one should find 196 eldest children, one actually does find 281—i.e., eldest-born consumptives are in excess, say, 40 per cent.*

Has sex any influence—that is, are these first-born consumptives preponderantly male or female? Taking the proportions of male first-born consumptives and female first-born consumptives to, respectively, all male and all female consumptives, Brehmer's record and my own pedigrees show hardly any difference for sex. Riffel's two last works give a slight male preponderance. According to the present evidence, then, the influence of sex is slight, if any.

As to infection, can the greater liability of primiparous children be explained by greater exposure to infection from a parent or other relative? If so, the eldest-born consumptives should come mostly from phthisical parents. The material suitable here is Pearson's study, where the point

received notice, Brehmer's cases, for he gives "hereditarily tainted" families separately, and my own pedigrees. Taking these three sources together the result comes out (Table XIII.):—

TABLE XIII.

Order of birth.	With phthisical parent.			Without phthisical parent.		
	Consumptives.			Consumptives.		
	Expected.	Actual.	Excess.	Expected.	Actual.	Excess.
1st	47·8	74	54%	148·2	207	39%
2nd	46·7	53	13%	143·4	167	16%

Thus the issue of phthisical parents shows the greater eldest-born excess; and although there is the fallacy to be considered that phthisis in a parent will be better remembered by an eldest-born child, yet it seems reasonable to suspect the influence of infection here. But families without phthisical parents also show a distribution of phthisis widely departing from the normal.

Have elder-born consumptives any marked characteristic? Of 141 of my last cases I have full case sheets. The number is far too small to warrant inferences as to peculiarity in the course or extent of the disease, but it may be noted that among these 141 there are one patient with diabetes mellitus, three who suffer from hay fever, and three the subjects of congenital xerodermia. Now, the diabetes case is an eldest child; two of the hay fever patients are likewise, whilst the remaining one is second-born; and two of the ichthyotics are eldest-born. Yet the first- and second-born of these 141 only number 58, and the first-born alone only 28.

This would seem to point to the conclusion that the tendency of the eldest-born to become consumptive is an innate tendency, and the hypothesis is strengthened if we appeal to the literature of the subject. Lunatics and idiots are certainly very liable to consumption, and, as has been seen, it is exceedingly likely that they are disproportionately often eldest-born. Again, if faulty upbringing by inexperienced parents is to be made responsible for consumptive elder children, it must also be made responsible for elder-born criminals, lunatics, idiots and perhaps men of genius, which would render an ordinary human responsibility sufficiently formidable. The existing evidence negatives the view that infection is the sole cause; besides, where does infection come in in the other special classes just named?

Innate tendency to consumption, a soil intrinsically suitable to the tubercle bacillus, phthisical predisposition original and autochthonous, not the result of weakening by other disease, is an idea which has always had support. Bacteriological work may have limited the influence to be properly assigned to it, but an exclusive reliance upon bacteriological arguments has often been proved dangerous; while such theories of the *habitus phthisicus* as stenosis of the upper thoracic aperture, which has considerable vogue in Germany, as the frequency in consumptives of small heart, of a condition of underweight, of supernumerary nipples, and of nasal defect—the evidence as to which last I have given elsewhere—have never been confuted. Eldest-born incidence might unite all these as coördinate degenerative manifestations; and eldest-born incidence, it may be noted, is absolutely proof against the objection, first advanced by Cohnheim, that the *habitus phthisicus* is a result of an already existing tuberculous infection.

Practical applications must as yet be briefly dismissed. There is an obvious bearing upon prophylaxis and upon life and sickness assurance. It may be that the age of nubility has been under-estimated; it may well be that the present limitation of families is a greater evil even than is supposed. But we need to know more of the eldest child's characteristics before speaking positively. The study of the soil, even though it has less therapeutic promise, must not be so overshadowed by the study of the seed. Galton's wise words need marking: "I doubt whether the unaided apprehension of man suffices to distinguish between the frequency of what occurs on an average four times in ten events and one that occurs five times. Much grosser proportions have been wholly overlooked by doctors."

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NOTE ON TWO CASES OF TUMOUR OF THE PREFRONTAL LOBE IN CRIMINALS;

WITH REMARKS ON DISORDERS OF SOCIAL CONDUCT IN CASES OF CEREBRAL TUMOUR.

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IN the discussion of the mental symptoms produced by new growths in the brain comparatively little attention has been directed to the occurrence of disorders of social conduct, and hardly any reference to the subject is to be found in medico-legal literature. On this account it may be of interest to record the two following cases of brain tumour in which such conduct symptoms appear to have been amongst the earliest indications of the impairment of mental function. The first case came under my personal observation; for the notes of the second case I am indebted to the courtesy of Dr. P. R. Mander, medical officer of H.M. Prison, Pentonville, and lately medical officer at H.M. Prison at Stafford.

CASE 1.—A man, aged 40 years, convicted of larceny in September and sentenced to seven days' imprisonment, and convicted of a like offence in December and sentenced to one month's hard labour. Family history: Father drowned accidentally; mother died from a "paralytic stroke"; maternal aunt stated to have died from "brain disease." Nothing else of note. Previous history: Apparently of normal intelligence as a boy; on leaving school was apprenticed to a plumber, but after a short time ran away and worked his passage to Australia; not prospering there, nor in California, where he went subsequently, he returned to England 15 years ago and finished his apprenticeship. He never did much at his trade, and of recent years got his living mainly by casual labouring jobs. Lately he seemed disinclined to make much effort to get or to retain any sort of work. He married 12 years ago and has had three children, all living and healthy, the youngest three years of age. No history of alcoholism or of lead poisoning; he says he had syphilis 18 years ago.

Circumstances of criminal offences.—Up to the time of his first conviction in September the man had borne an excellent character for honesty. In the month of August he went into West Ham Workhouse, and on Sept. 3rd absconded, taking with him a pair of men's boots. He was traced to a lodging-house, and the boots were discovered concealed in a yard at the rear of the premises. To the police who arrested him he offered no explanation of his conduct, but he told his

wife that he had taken the things because he thought "she might want a pair of boots" (the boots were men's). For this theft he was sent to prison for seven days, and served his sentence without any incident occurring to attract attention to his physical or mental condition. On his release he got some money from his relatives and took a room in a lodging-house, making shift to keep himself and his family by casual work and by what his friends could give him. During this time his wife observed nothing unusual in his demeanour; he had always been rather reserved and taciturn, and he showed no change in this respect. He appeared, however, a little more irritable than heretofore. His health seemed good, but he complained occasionally of dizziness. On Dec. 14th he went out early in the afternoon, and passing by an outhouse where some building materials were lying he went in, took a quantity of lead piping, and proceeded to conceal it by wrapping it round his body under his coat. It was broad daylight at the time, and several men were at work close by; they called a policeman, to whom the man said, "I went into the place and saw it there, and thought I was entitled to it." When charged at the station he remarked, "I know I've done wrong."

Prison history.—On reception the man appeared in good health, and was employed in making coal-sacks; he learned the work rather slowly, taking about five days to pick up the necessary skill which is acquired by most intelligent prisoners in some three days, but after this initial difficulty he did his task satisfactorily. In all other respects, also, he adapted himself to the special conditions and routine of prison-life. On Jan. 1st a complaint about his eyesight led to the discovery that he had intense double optic neuritis. No history of headache, vomiting, or fits could be elicited, but the patient said he suffered occasionally from slight vertigo. Speech appeared rather deliberate (but this, according to information given later by his wife, had always been the case); articulation was distinct. The tongue was protruded straight and was not tremulous. The pupils were equal, regular, and normal in reactions. Gait and motor power generally appeared normal; knee-jerks were increased on both sides. Sensation on face and hands, roughly tested, was normal. Stereognostic sense was normal. As regards mental functions, there was an absence of all evidence of intellectual disorder; the patient gave a perfectly clear and coherent account of his antecedents, the accuracy of his statements being confirmed in all particulars by subsequent inquiries; his memory for recent and remote events was quite good; his orientation in time and place was excellent; he did simple calculations correctly. Emotionally he appeared somewhat apathetic; he seemed quite indifferent to the disgrace and discomfort of imprisonment, and when warned as to the grave condition of his health and the immediate risks to his vision he received the information with an incredulous smile. Beyond this indisposition to accept unpleasant ideas, he showed nothing that could be regarded as morbid optimism; his account of his past and his estimate of his capacity and his prospects in life did not reveal any lack of critical sense. A more detailed examination of the nervous system was unfortunately deferred and was never made, for two days later the patient was found dead in bed. He had got up to pass urine about an hour before, and had spoken in his usual manner to the nurse.

Necropsy.—The organs of the thorax and abdomen were healthy and the body was well nourished. In the brain a large tumour was found infiltrating the left frontal lobe and visible superficially as an oval mass lying obliquely from the anterior pole of the hemisphere to a point close to the junction of the prefrontal sulcus with the fissure of Sylvius. The long diameter of the mass measured 69 mm., and the transverse diameter at its broadest part 50 mm. The growth had destroyed the cortex over nearly the whole of the inferior and over a large part of the second frontal convolutions, and extended deeply into the white matter. The dura mater was non-adherent and was normal in appearance. Microscopically, the tumour was found to be a small-celled sarcoma with very slight development of stroma; in its deeper part it had undergone some degree of calcareous degeneration.

CASE 2 (communicated by Dr. R. P. Mander).—A man, aged 57 years; bridle-cutter. Nothing known of family history. First convicted (vagrancy) in September, 1905. Within the next 11 months was in prison five times for the like offence and once for drunkenness. Died in August, 1906, while serving a sentence of one month's imprisonment.

Prison history.—During his first four terms of imprisonment nothing special was observed about the man's health or conduct. He conformed to the prison routine and did his work satisfactorily. On his fifth conviction, in January, 1906, it was noticed that he had deteriorated mentally; he seemed rather inert and apathetic, and was untidy in his dress and person; he did not answer the school tests nearly as well as on his first admission to prison; he wetted his bed frequently. Despite this appearance of dulness, his memory was fairly good and he talked rationally and coherently. He made no complaint of headache, or indeed of anything, and there was an entire absence of the ordinary symptoms of brain tumour. Speech, motor power, and sensation were normal. Pupils were equal and reacted normally. There was no optic neuritis. Knee-jerks were not modified. On account of his mental condition he was sent to the workhouse at the end of his sentence, but did not stay there long, and was soon back in prison, serving a sentence of seven days in May, and being again convicted in July, 1906, his mental and physical condition at this time appearing much the same as noted above. On the morning of August 9th he was found in a semi-conscious condition in his cell. There was some rigidity of the right arm and right side of face. Pupils were equal; temperature normal; pulse strong and regular; knee-jerks brisk. He was able to swallow fluids. He passed urine under him. During the morning he was restless, continually moving his arms and legs, but taking no notice of anyone. Some hours later pupils became unequal, the face flushed, and pulse became bounding. Then twice in quick succession the face and neck became deeply congested and paled again, after which the pulse gradually stopped.

Necropsy.—Except for some pleuritic adhesions on the left side and some slight evidence of atheromatous degeneration in the aorta, the organs of the thorax were healthy. The abdominal organs were also normal. There was no evidence of syphilis or of alcoholism. In the brain a tumour was found infiltrating the anterior part of the right frontal lobe. It was about the size of a small orange and was of fairly firm consistence. The membranes were thickened over the growth and were firmly adherent to it. There was an area of softening along the posterior margin of the tumour.

Remarks.—Cases of cerebral tumour with an absence of obtrusive mental and physical disorders have, of course, been very frequently recorded; and it is quite natural that, as a mere result of chance, some cases of this sort should be met with amongst prisoners. There is some reason, however, to think that the condition is more common in criminals than would be explained solely on this view. As evidence on the point it may be noted that during the last ten years in the local prisons in England and Wales as many as nine deaths were attributed to brain tumour; and it may be added that five of these cases occurred in three prisons where it is the regular practice to ascertain the cause of death by post-mortem examination. In these three prisons during the period named brain tumour accounted for 4 per cent. of the total mortality, which is a rather high proportion when it is borne in mind that cases of this disease with distinct physical or mental impairment would not be likely to be sent to prison, or, if sent, would not be detained. Whatever be the significance of these figures—and they are, of course, far too few to lay any stress on them—it is at all events clear that disorders of social conduct may occur in the early stages of cerebral tumour, and may apparently be due, as in the cases reported in this paper, to the affection of the brain. In the majority of instances, no doubt, the offences committed in these circumstances are of a trivial sort, and it is perhaps for this reason and because of their precocity, rather than because they are really rare, that so little account is made of them in the literature of the subject. They are, however, in many ways very instructive as throwing light on several points of importance in the relation of crime to organisation, and on that account a short consideration of their characteristics may be of interest.

The first point to be noted in this connexion is that conduct symptoms in brain tumour are generally independent of, and appear earlier than, evidences of intellectual disorder. Here, as in other forms of mental enfeeblement, manifestations in the sphere of impulse and feeling precede the involvement of thought. This fact is illustrated in Case 1, and it is clear in most of the clinical histories

in which any reference is made to the emotional tone and the nature of the impulses. As regards the social quality of conduct in the disease the recorded cases are too few to furnish direct evidence, but it may be inferred from the greater prevalence of the moods of indifference and optimism that the most common sort of delinquency will be either acquisitive or parasitic, as in the two observations reported in this paper. Crime in cerebral tumour would thus show a close correspondence with crime in general paralysis,[1] and in this connexion it is interesting to note how exactly the thefts committed by the patient in Case 1 recall, in their method and in the culprit's attitude towards them, the impulsive larcencies of a general paralytic in what Legrand du Saule has aptly termed the medico-legal stage of the disease. In a case of cysticercus of the brain[2] I have observed petty thieving with the same puerile characteristics as an initial evidence of mental disorder in a patient previously honest and intelligent. The resemblance to general paralysis may be noted also in cases of cerebral tumour with aggressive tendencies; in both diseases such tendencies are usually attributed in the clinical histories to emotional instability and loss of inhibitory control. In addition to such cases there are also instances, though very much rarer, where impulses of violence appear to be related to a persistent affective state. A very remarkable case of this sort has been reported in a preliminary note by Dr. R. Cunyngham Brown of H.M. Convict Prison, Parkhurst, who has kindly allowed me to refer to the clinical history. The patient, who was stated by the police to be a heavy drinker, murdered his wife; while awaiting trial, he complained of visual and auditory hallucinations, and developed a persecutory delirium; after a period of remission the persecutory symptoms recurred with increasing mental confusion and apathy, and the patient died some 17 months after the date of the crime. At the post-mortem examination a large tumour was found infiltrating the right temporo-sphenoidal lobe. So far as I am aware, this is the only case on record of actual homicide in this disease. Cases with suicidal tendencies appear to be much more frequent, and suicidal attempts are mentioned in a large number of clinical histories. Probably in most instances, as Clouston[3] remarks, these attempts are due to intensity of suffering and to despair, and are not, therefore, really the expression of a morbid affective state. Sometimes, however, direct suicidal impulses are observed, mainly, of course, in cases with melancholic depression, and it may then happen that the coexisting enfeeblement of mind gives a special character of fatuousness to the suicidal act, exactly as occurs in general paralysis. A characteristic instance of this kind has been recorded by Siemens,[4] in which the patient, a woman just past the climacteric, with a sarcoma affecting the ascending and first frontal convolutions, developed persecutory ideas and tried to drown herself, but called for help as soon as she got into the water. Actual suicide, however, appears to be a very rare occurrence in cerebral tumour; I have only found one case mentioned in the literature of the disease (a case reported by Rey[5]); and in a series of 1700 post-mortem examinations of suicides recorded by Pilcz[6] new growths were found in the brain in only three cases. Though sexual excitement is often mentioned in the clinical histories, I do not know of any instance in which the symptom led to criminal conduct.

The affective tone and the character of the impulses, like the other complex mental symptoms of cerebral tumour, seem to be quite independent of the site or nature of the growth. As Schuster[7] has shown in his elaborate statistical study of this question, tumours alike in histological character and affecting the same region of the brain may give rise to the most varied manifestations in impulse, feeling, and thought. And the recent figures of Pfeifer[8] support the same view. From this fact we may probably infer that in cases of tumour, as in cerebral enfeeblement from other causes, the character of conduct is determined, not by the brain lesion, but by the state of the organic life, "in which the emotions and the will are rooted" (Maudsley). This is what we find also in the study of crime in alcoholism[9] and in general paralysis, and in all likelihood it holds true as well of the conduct disorders in old age. In alcoholism where there is ordinarily a more or less marked impairment of visceral function, the affective tone which reflects this function is pessimistic, and there is a special tendency to impulses of repulsion, of antagonism to the environment—impulses which find extreme expression in the suicidal and homicidal acts so frequent in the alcoholic. This persistent visceral disorder appears, in fact, to be of somewhat similar nature to the organic changes which, occurring in a healthy individual as the reflex result of unpleasant stimuli, give rise to the depressing emotions, so that in alcoholism the organism is, as it were, constantly attuned to the impulses which belong to these emotions and which are indeed fundamental factors in their constitution. In general paralysis, on the other hand, the organic stimuli which go to form the cœnæsthesis are ordinarily normal, and the affective tone is accordingly optimistic with impulses of attraction, of acquisitiveness. And as the organic condition in cases of cerebral tumour is also ordinarily healthy, the emotional tone and the impulses will for the most part be like the emotional tone and the impulses of the paralytic. And confirmation of this view may frequently be found also in exceptional cases of either disease. Thus in the relatively rare instances of melancholic depression in general paralysis, the emotional state may very often be found to be associated with the presence of some cause likely to interfere with the healthy activity of the organic life, in some cases with senile changes, in others with intoxication by alcohol[10] or by lead.[11] And so, too, in cerebral tumour; taking, for instance, the observations already mentioned, we find that in Rey's case of suicide the patient was 74 years of age, Dr. Cunyngham Brown's homicidal criminal was a heavy drinker, and Siemens' suicidal patient was at the menopause.

The conclusion to which we are led is, then, that the cerebral lesion is related to the disorder of conduct only in so far that by reducing the intellectual life it increases the predominance of the affective life and diminishes control over the organic tendencies, allowing impulse to issue more readily in action. The disease has, therefore, no direct influence on the affective tone or on the character of the impulses; and we could hardly, indeed, imagine it exercising any such influence without admitting a localisation of the feelings for which physiology affords no sort of warrant. The farthest limit to which we can go in this direction has been clearly indicated by Dr. Mott[12] in his recent valuable lectures on the physiology of the emotions. He points out that the only evidence, clinical or experimental, which tends to show a connexion of any special region of the brain with emotion is that which indicates the possibility of the optic thalamus being "the great subconscious centre for the elaboration and coördination of sensory impressions and those brought by the special senses from the material world around." On this view we could conceive that a lesion affecting the thalamus might give rise directly to those diffused peripheral changes which we feel as an emotion, but we cannot in any other way, or with regard to any other part of the brain, imagine a diseased condition of that organ being *per se* the cause of a definite affective state. It is not, therefore, in the condition of the brain that we are to look for the source of morbid feeling and conduct in such instances as we have been considering, but in the activity of the visceral functions, in "these organic effects of the physiological consensus of organs which determine at bottom the play of the affective nature" (Maudsley).

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H. M. Prison, Holloway.

WIGAN INFIRMARY OUTDOOR DEPARTMENT.—At the Wigan Infirmary 10,000 patients are treated annually. The mayor, Mr. Sam Wood, during his four years of office, has tried various devices to raise £10,000 to erect and equip a new out-patient department, but he has succeeded in securing less than one-third of this sum. On Sept. 23rd a money-raising scheme took the form of a carnival procession through the principal streets with a "Pageant of Empire" at the Central Park, but it is to be feared that the rain counteracted the expected pecuniary benefits

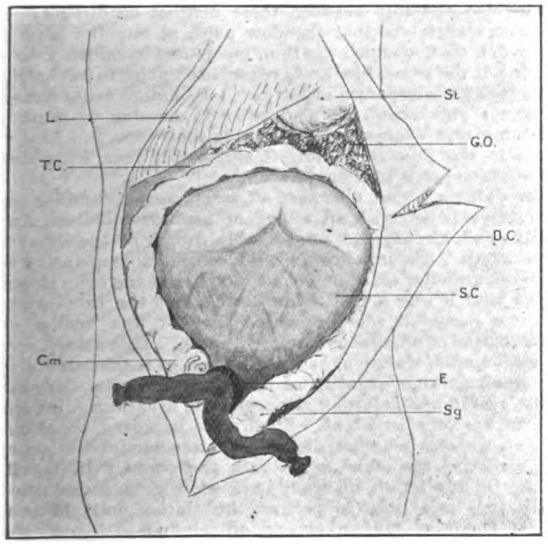
STRANGULATION BY VOLVULUS IN AN ABNORMAL SAC LYING WITHIN THE GENERAL PERITONEAL CAVITY.

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PROFESSOR OF SURGERY IN THE UNIVERSITY OF LEEDS; SURGEON TO THE LEEDS GENERAL INFIRMARY.

THE subject of the condition described below was a man, aged 46, who was admitted to the Leeds General Infirmary on August 3rd, 1908, in a moribund condition, and who died without any operation having been performed. He had been under the care of Mr. W. W. Walker of Batley with symptoms of acute intestinal obstruction which had begun five days before, and had resolutely refused to come into the infirmary till the day of admission. There had been no preliminary warnings of intestinal trouble previous to the sudden onset of acute symptoms.

When the abdomen was opened at the necropsy a very unusual and interesting state of its contents was disclosed. Occupying the mid-region of the cavity was a large rounded cyst or sac, through the semi-transparent wall of which distended coils of bowel could be seen. The upper coils were large and pale, and had a somewhat transverse direction; the lower were black, as if the subject of strangulation, and had an obliquely vertical arrangement. Below the cyst, the lower portion of the abdomen, which was little more than the pelvis, was occupied by coils of black small intestine which concealed the terminal portion of the large gut. Above the cyst, and encroaching on its shelving upper surface, lay the liver, and in the left hypochondrium the stomach. The great omentum was huddled up into a mass which fitted into the space between the cyst and the stomach. The colon was not visible, but it was found to encircle the cyst, except at its lowest part, and to be attached to its wall in a manner subsequently to be described. (Fig. 1.)

FIG. 1.



Appearance of sac before the parts were disturbed. L., Liver. T.C., Transverse colon. Sg., Sigmoid. E., Entrance to sac. S.C., Strangulated coils showing through sac wall. D.C., Distended coils inside sac. G.O., Great omentum. St., Stomach. Cm., Cæcum.

To permit of the further investigation of parts the strangulated small bowel occupying the area below the cyst was removed. It was a single loop some three or four feet long and the two ends of the loop passed into the cyst through an aperture on its lower surface. The two ends were tied a few inches from the aperture, as represented in the illustration. The whole loop was deeply congested, of a purplish-black colour, and infiltrated with blood. It was not constricted at the neck, and the finger could be introduced alongside the gut through the aperture into the cyst. The entrance to the sac looked downwards and was on the level of the promontory of the sacrum. It was large enough to admit three fingers. The cyst, which will now be referred to as "the sac," occupied the small intestine area within the arch of the colon. To continue the examination it was opened by a central vertical incision through its whole length which terminated by dividing the boundary of the aperture.

For the sake of simplicity the cause of the strangulation will be dealt with at once. The two cut ends of the strangled loop were continuous with similarly affected coils within the sac. There had been no strangulation by the neck of the sac, and no signs of constriction were presented by the portions of bowel that occupied it. The greater part of the ileum was in this deeply congested state which was evidently due to a twist of the lower portion of the mesentery, but the exact mechanism was not made out, as owing to the inexperience of the manipulator the relations were disturbed and lost, and the previous removal of the loop outside the sac added to the difficulties of its demonstration. The jejunum was distended but not strangled.

The small intestine was now removed from the upper end of the jejunum to the lower portion of the ileum. By this the whole cavity of the sac was displayed. On its posterior surface was the quite normal attachment of the mesentery. It lay entirely within the sac. At the upper part the third and fourth parts of the duodenum were in their natural position and covered as usual by peritoneum. The terminal portion of the ileum passed out of the opening to join the cæcum, which lay just outside and to the right of the mouth of the sac. The ileum at this point was attached by its mesentery, which blended with the margin of the aperture on the right side. (Fig. 2.) The condition may be fairly

FIG. 2.

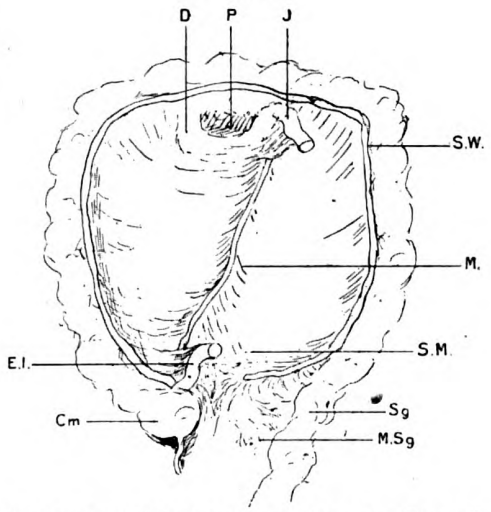


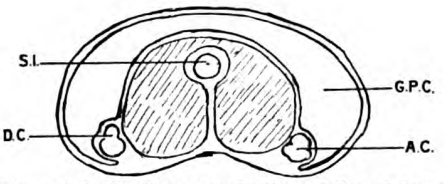
Diagram to show the posterior wall of the sac. The small intestine with its mesentery has been cut away as well as the anterior wall. J., Jejunum. P., Pancreas. D., Duodenum. E.I., End of ileum, with its mesentery. Cm., Cæcum. M.Sg., Mesosigmoid. Sg., Sigmoid. S.M., Mouth of sac. M., Cut attachment of mesentery. S.W., Sac wall.

described as a second and abnormal lesser peritoneal sac, whose natural contents were the small intestine and its mesentery. Some of the contents had escaped through the orifice into the general peritoneal cavity.

The actual anatomical disposition of the peritoneum can most easily be explained by the help of diagrams. Tracing the peritoneum in a horizontal direction (Fig. 3) about the middle of the sac and beginning with the outer layer of its anterior wall it could be followed to the descending colon, which it invested without forming a mesocolon. It was then reflected on to the anterior abdominal wall and lined the parietes till it reached the ascending colon. After investing this—also without forming a mesocolon—it was continued on the anterior wall of the sac to the point from which a start was made. On the inside of the sac the serous

membrane could be traced from the inner surface of the anterior wall to the right till the posterior abdominal wall was reached, but just before this the ascending colon could be seen lying upon its exterior. Passing to the spine the small intestine was invested and the mesentery formed. The posterior abdominal wall was then covered on the left side,

FIG. 3.

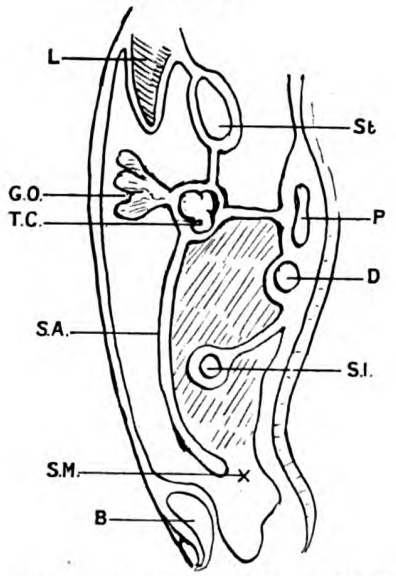


Diagrammatic horizontal section showing relation of the sac to the general peritoneal cavity. The sac is shaded. D.C., Descending colon. S.I., Small intestine. A.C., Ascending colon. G.P.C., General peritoneal cavity.

and as the peritoneum was reflected to the anterior wall of the sac to reach the point from which it started it skirted the descending colon which lay on its outer surface.

A study of Fig. 2 will make plain the way in which the terminal part of the ileum was tethered to the margin of the neck of the sac by the two layers of its mesentery which diverged to become continuous with the peritoneal covering of the aperture. A vertical section through the mouth shows how the two layers of peritoneum by which the anterior wall was formed blended at the free margin and also how the posterior peritoneal lining of the sac was continuous with the peritoneum lining the pelvis. (Fig. 4.) The neck of the

FIG. 4.



Diagrammatic vertical section passing through the aperture in the sac. The sac is shaded. L., Liver. G.O., Great omentum. T.C., Transverse colon. S.A., Anterior wall of sac. S.M., Mouth of sac. B., Bladder. S.I., Small intestine. D., Duodenum. P., Pancreas. St., Stomach.

sac contained no large vessels, but it was slightly rounded and thickened. The anterior sac wall was also destitute of vessels of any size.

It is evident that this unusual condition was in no sense a hernia, and that consequently, notwithstanding a certain suggestive similarity in appearance, the pathology must be quite different from that of the various forms of internal abdominal herniæ. I have discussed the case on several occasions very carefully with Professor J. Kay Jamieson, who has referred me to a paper by Dr. J. Cameron and Dr. J. D. Lickley,[1] in which is described an abnormal peritoneal sac very similar to this one, but without any aperture; and also to the report of another case by Professor Clelland (mentioned in their paper) which would appear to have some resemblance to it. I had hoped that Professor Jamieson would have joined me in this communication and given a description of the way in which such a condition might arise in the process of development, but at the present time he feels unwilling to commit himself to an explanation which subsequent research may show to be incorrect. As the whole subject is one in which he is much interested it has been decided that the case shall be published now, and at some future date he may in a separate communication deal with the condition from the anatomical standpoint.

Personally I believe that the abnormal sac is a consequence of an irregularity occurring during the evolution of the large intestine. With a piece of rubber tubing to represent the bowel and a towel to constitute the mesentery, it is quite easy by imitating the normal rotation of the colon and the passage of the cæcum to the right side to produce a sac, such as existed in this case, either by the formation of a fold in the mesocolon and its adhesion to the posterior parietes, or by adhesion at some point of the right peritoneal layer of the mesocolon. But I must content myself with this simple statement, for the description of the manner of its production —in such a way that it could be understood—is beyond me.

Leeds.

[1] Journal of Anatomy and Physiology, vol. xli., p. 88. The reference to Clelland's paper in this article does not seem to be correct.

BRADYCARDIA IN ASSOCIATION WITH URÆMIA.

BY E. E. LASLETT, M.D. VICT., B.SC. LOND.

IT is well known that an infrequent pulse is occasionally associated with some forms of toxæmia, particularly those which accompany catarrhal jaundice and chronic nephritis. An infrequent pulse may be due to three different causes: (1) the regular occurrence of extra-systoles not perceptible to the finger on the pulse (coupled rhythm); (2) heart block, partial or complete; and (3) slowing of the whole heart. It is only since the introduction of the graphic method of studying heart affections that it has become possible to distinguish certainly between these distinct conditions. It has been ascertained that the slow pulse of jaundice is most often due to a coupled rhythm, much less commonly to a slowing of the whole heart. As regards the pulse in nephritis, little is at present known either as to its nature or its cause. It is not yet considered as proved to be due to uræmic poisoning, and Vaquez and Esmein,[1] in their report on Bradycardia to the French Medical Congress last year, state that the question needs further research.

The patient, a man now aged 42 years, was first under my care six years ago with an attack of nephritis. When first seen he had already had considerable dropsy of the legs for three weeks. The urine contained a considerable quantity of albumin, granular casts, and some blood. At the time it was hoped that it was a first acute attack, but the subsequent progress makes it more probable that it was really an exacerbation of an already chronic disease. This attack was of four months' duration, and at the end of it the urine still contained a large quantity of albumin. In spite of many weeks' rest in bed, careful dieting, and the usual remedies the œdema was very persistent. Finally, he improved considerably on a more generous diet and the free administration of iron, and he was able to go into the country in April, 1906. On his return he went back to work and remained fairly well and able to perform his duties until March, 1908. Then he had an attack of "influenza" and the œdema returned. This time the disease was still more resistant to treatment than before, and he was in bed for over eight months. In spite of all the usual remedies the amount of urine often fell very low and the œdema gradually spread upwards, fluid collected in the abdominal and pleural cavities, and the breathing became at times very distressed, particularly at night. At times there was almost total suppression of urine, and for many weeks the onset of severe uræmia was feared. The exclusion of salt from the diet appeared to have little effect as regards producing diuresis. It may be mentioned here that the patient was extremely fond of

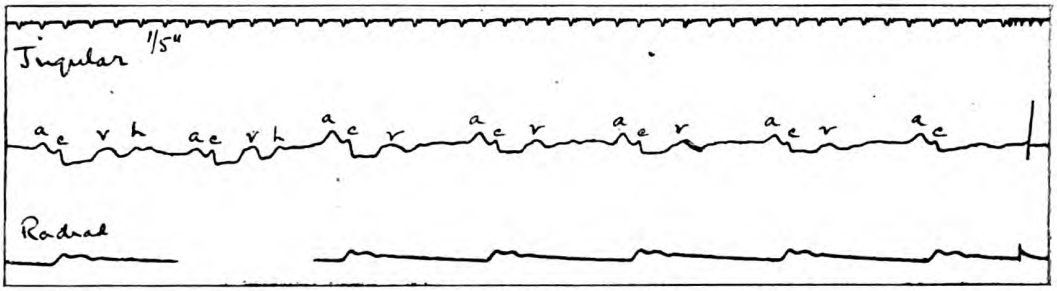
[1] Vaquez and Esmein: Archives des Maladies du Cœur, Paris, December, 1910, p. 732

salt. On his recovery from this attack he was warned to be sparing in his use of this condiment, and it is perhaps noteworthy that he has remained practically free from dropsy up to the present time. Finally, the head of the bed was raised six inches, and the dropsy so encouraged to sag into the lower extremities, whence it was drained off by Southey's tubes. In the course of about two months about 50 pints of fluid were thus drained away, and in this manner he was kept fairly comfortable, without, however, any striking improvement in the amount of urine. This soon diminished alarmingly whenever the dropsy was allowed to make headway, as when the tube had to be withdrawn. Ultimately the legs became too sore and inflamed to allow of the continuance of this treatment. As a last resort he was put on sodium theocin acetate (with digitalis), which had not previously been tried. The result was most striking. In a week the œdema had practically disappeared. He then gradually improved, and he was able to resume his work in March, 1909, after a year's illness. His systolic blood pressure taken on several occasions during the illness ranged about 160–165 mm. Hg (Oliver). Curves were taken on several occasions from the radial pulse. Nothing abnormal in the rate of the pulse was ever met with during this illness. Since that time he has kept remarkably well. Except for about a fortnight, when he was operated on for ischio-rectal abscess, he has been steadily at work. His wife has at intervals roughly tested the urine for albumin by boiling, and she states that the amount of coagulum diminished very considerably. During the latter part of February of this year it had, however, again increased, and he had not been quite so well, although he remained at work.

His present attack began suddenly in March. On the 18th he got a chill while working late at night in an exposed place. Next day the temperature was 101° F., pulse 80 per minute, and there were a few rhonchi in the lungs. The urine was not measured, but it had diminished considerably. Next day the temperature was normal, pulse 64–70. The urine had still further diminished. It was smoky and loaded with albumin. On the 22nd the urine was less than 10 oz He was now rather drowsy, complained of constant headache, and vomited several times. The eyelids were rather puffy, but there was no œdema of the legs. The pulse-rate had now fallen to 42. The skin was reacting well to treatment and the bowels had been well moved. Next morning he was about the same. He had passed no urine for 12 hours. The pulse was still slow, slightly varying in rate, but 46 per minute on the average. Later he passed urine and on the following day he was brighter. Urine for the past 24 hours 10 oz. The pulse-rate had now risen to 50. With further diaphoresis and purging he progressed rapidly. The urine increased and coincidently with that the rate of the pulse. On the 27th he was passing urine freely, and the pulse-rate was now normal at 70–72. He was kept in bed a week longer, and in another week he was able to resume his work. The blood pressure, measured when the pulse was slow, was found to be 150 mm. Hg, systolic (Hill).

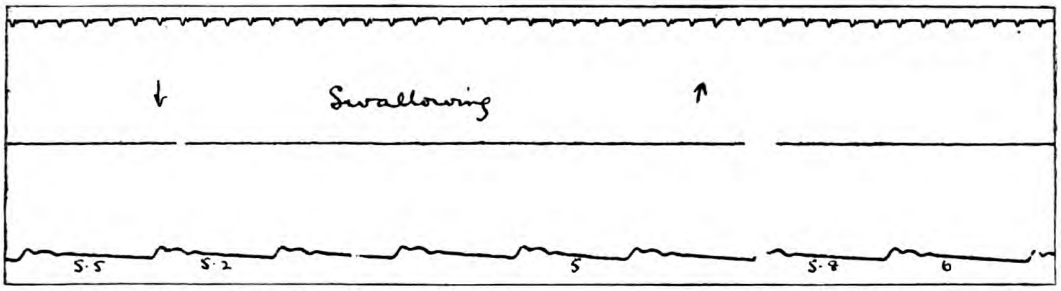
From the curve in Fig. 1 it is evident that it is a question of a slowing of the whole heart, auricles and ventricles being equally affected. The *a.-c.* interval is normal. Although it was not deemed advisable to apply the atropine test, it seems justifiable to attribute the slowing of the heart to heightened vagus control. There was a slight degree of sinus arrhythmia, dependent upon respiration. Occasionally this was more marked, as the following pulse intervals (in fifths of a second) show—6·2, 6, 5·9, 5·6 (inspiration), 6, 6·8, 7.

FIG. 1.



Simultaneous curves of the jugular and radial pulses, to show that auricles and ventricles are equally affected. The *a.-c.* interval is normal. Pulse-rate 46 per minute March 23rd, 1911.

FIG. 2.



Shows the increase in pulse-rate due to a series of swallowing movements, the duration of which is indicated by the arrows. March 23rd, 1911.

Exertion slightly quickened the pulse-rate. Further, two or three swallowing movements made in succession definitely increased the rate temporarily, which slowed again just after the last swallowing movement (Fig. 2).

Danielopolu[2] has recently reported two cases of bradycardia observed in the course of nephritis. In both cases the slow pulse was due to a true bradycardia from increased inhibition. In one of the cases the development of the slow pulse was observed, and the writer considers that there is good evidence that the bradycardia was due to uræmic intoxication. In the present case the infrequent pulse was due to a true bradycardia. It was a new feature, never having been observed in his previous acute attacks, and inasmuch as the gradual development of the bradycardia coincided with the onset of uræmic symptoms, and its cessation with the increase of the urine and the disappearance of the dangerous symptoms of poisoning, it is at least very suggestive that the

[2] Danielopolu: Archives des Maladies du Cœur, Paris, July, 1911 p. 417.

condition of the heart was due to the uræmic poison acting probably through the inhibitory mechanism. The fact that the bradycardia was observed only in the last attack and never during the previous long illnesses may possibly be related to the acuteness of onset of the symptoms of uræmia and the rapid diminution of urine.

Hull.

OPEN-ETHER ANÆSTHESIA:
SOME IMPROVEMENTS.

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SENIOR ASSISTANT ANÆSTHETIST, ABERDEEN ROYAL INFIRMARY.

AT the present time there is no need to enlarge on the claims of ether anæsthesia by the open method. They are generally recognised. For the past 18 months it has been my custom to employ this form of anæsthesia. The number of cases at the Aberdeen Royal Infirmary anæsthetised by me in this manner is 400, and on the records of these the following remarks are based. I have no fault to find with chloroform, except that it is a drug with which one may do more harm of a really dangerous character than ether; and therefore if as good results can be got with ether it is our duty to the patient as anæsthetists to use it

It used to be said that it was impossible to anæsthetise a person with ether alone, and it is true there are difficulties. These difficulties have brought about the general plan of putting the patient "under" with chloroform first, and then instituting open-ether anæsthesia. I have endeavoured to avoid doing this, and have succeeded in all but two cases in giving ether from start to finish. The modern major operation is often prolonged, and may involve extensive interference with anatomy and with physiological processes. In such cases there is little call for administering any anæsthetic which will encumber the vital organs. Chloroform, or ether by the close method, will certainly do this. The period of induction of anæsthesia is with chloroform fruitful of danger, and it is desirable, therefore, to exclude it even as a preliminary.

The method employed here is very simple. Several layers of ordinary white gauze are put into a Schimmelbusch's frame, so forming a mask, which is placed over the patient's mouth and nose. Ether is dropped on this from an ordinary drop-bottle, and the vapour so produced is intensified gradually by winding a roll of white gauze round the edge of the mask, perhaps adding a fold or two to the thickness of the mask itself. In six minutes the patient is anæsthetised, and during this time the preparation of the skin for incision can be actively proceeded with and the patient placed in the Trendelenburg position if necessary.

When this method was first tried it required from 3 to 4 oz. of ether to put the patient "under," sometimes even more; but the improvements which I will endeavour to describe have greatly reduced both the quantity of ether and the time necessary for full anæsthesia. The total quantity used was often 10 to 15 oz., but we have succeeded in reducing this to from 1½ to 2 oz., even for a long operation, with very few exceptions.

The difficulties met with in putting a patient "under" ether are that in many cases spasm of the jaws and glottis takes place at an early stage, and however much ether is poured on very little is inhaled and a great deal escapes into the room. Again, the vapour is apt to cause increased secretion of mucus and saliva, which collects in the pharynx and larynx, becoming converted into foam by agitation during the movements of respiration. This adds another obstruction to the inhalation of ether, and a certain amount of cyanosis takes place with great delay in the induction of anæsthesia. I know of nothing which will remedy this condition readily, for to mop out the throat only serves to stimulate the mucous membrane to further secretion during the second stage of induction, and any such attempt is greatly resented by the clenched jaws. Sharp rubbing of the lips and nostrils with a towel sometimes helps. As full anæsthesia is reached these adverse conditions gradually disappear, the mucus is swallowed, the jaws relax, and the colour improves. But should the patient be allowed, even for a short time, to return to the second stage, as may happen if the patient is moved about, all the difficulties reappear.

In my experience, seven out of every ten cases present those difficulties in varying degrees, where no preliminary treatment of the patient has been resorted to. If, however, 1/100th gr. of atropine sulphate is given in conjunction with 1/6th gr. of morphine, hypodermically half an hour before operation, it is very rare to find any of these difficulties, and in these rare cases it will be found that the injection has been too superficially given. I have records of 280 cases treated this way. The injection soothes the patient's mind before operation, and prevents spasm of the air-passages and jaws. Anything like the chloroform excitement stage is never met. The shock of operation is, to a large extent, prevented by rendering the brain centres less sensitive to afferent impulses from the operation area. Mucus secretion in the throat is greatly lessened. There is never any cyanosis or dyspnœa to speak of. Less ether is used because more is really inhaled. There is practically no sickness, and the patient remains in a comfortable sleep for several hours, which has naturally a good post-operative effect.

The value of omnopon[1] in the administration of ether has been brought before your readers by Mr. H. M. W. Gray's experiments, an account of which was published in THE LANCET of Sept. 2nd. For the first three or four months of these tests I had to administer ether in the omnopon cases very frequently. The number of cases of omno-ether anæsthesia at the hospital is 220. Lately, the number of cases requiring ether—i.e., where omnopon and local anæsthesia have been insufficient—has been much reduced, chiefly due, I think, to the skill Mr. Gray has acquired in injecting the novocaine. He welcomes honest criticism, and will not mind my remarking on the extraordinary complexities of the pharmacological question involved in his form of anæsthesia. First, there are the various alkaloids in omnopon, numbering something like 15. Add to that scopolamine, novocaine, adrenalin, and finally in 20 per cent. of cases (his own figures) ether, and one has a medley of empiricism which appears regrettable.

The type of anæsthesia which I advocate—viz., omno-ether—is certainly open, but to a lesser extent, to the criticism of pharmacological complexity, but I think it will be found to excel most other forms of anæsthesia, pending the perfection of the ether "Narkose intravenöse," which is still only on trial.

Let the patient have a deep subcutaneous injection of one dose of omnopon, at any rate an hour previous to operation. This may be given by the nurse. It will be found, when the patient is placed on the operating table, that he is in a slightly sleepy condition. Place the mask over the nose and mouth, and in three or four minutes, as a general rule, having administered half to one ounce of ether, the patient is snoring comfortably and absolutely lax. No difficulty is experienced in maintaining this condition with another half-ounce of ether for an hour. I heard the condition lately described, and I think well, as synthetic sleep. The pupils are slightly contracted and react to light. I have noticed in some cases slight and temporary divergent strabismus. The conjunctival reflex is absent. The face is slightly flushed a pink colour. The pulse is full and steady. The respirations are slow and deep, perhaps 12 to 15 a minute. There is no mucus production in the throat, and no spasm or tremor. After a three hours' operation the patient is practically in the same condition as at the start.

Where an effort has been made to perform the operation with local anæsthesia, and for that reason a larger dose—say 1½ to 2 ampoules—of omnopon has been given, the respirations may be reduced greatly in rapidity, giving some anxiety, but a little ether inhaled will accelerate them again. In such cases I have seen the respirations slow down gradually, even when ether is being given, but only after a very prolonged operation. Oxygen will then be found of value. With these exceptions, none of the omno-ether cases have ever given me the slightest anxiety during the administration, nor have there been any injurious after-effects. Pathological lesions in the heart, lungs, or kidneys seem to be no drawback to ether anæsthesia by this method, as far as our experience goes. There has been no selection of cases whatever.

Aberdeen.

[1] Hoffmann-La Roche, 7, Idol-lane, London, E.C.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF PERSISTENT CHYLURIA MARKEDLY INFLUENCED BY POSTURE.

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CHYLURIA results from an abnormal communication of a lymphatic vessel with the urinary tract. In this country it is uncommon, but in tropical regions, where filariasis is endemic, chyluria is common. The filaria either causes an obstruction by blocking up the lymphatic tract, or the obstruction may be the result of secondary changes of an inflammatory type induced by the presence of the filaria. In either case the lymphatics distal to the obstruction become varicose, and chyluria is set up if one of the distended vessels ruptures into the patent urinary tract. It is obvious that any other obstruction, apart from filaria, which interferes with the normal passage of chyle and lymph through the thoracic duct may also cause chyluria by setting up, first, distension and varicosity of the vessels distal to the obstruction, and then rupture of one of the distended vessels. As a matter of fact, chyluria apart from filariasis seems very uncommon. Lüdke[1] in 1908 was only able to collect ten cases of non-parasitic chyluria from published records. The case which I now record seems also to be an instance of non-parasitic chyluria.

The patient is an Austrian, aged 59 years, who noted the chyluria first in May, 1900. In early life he was a sailor and visited Egypt, India, Brazil, America, and the East and West Indies. So far as he knows he never became infected with filaria, but for many years suffered from malaria. Since 1875 he has made his home in Glasgow, and has never been out of the country since 1880. He is an outdoor worker and is also often employed at the fruit market. Apart from repeated attacks of ague he enjoyed good health till May, 1900, when he noticed that every two or three days the morning urine tended to be very milky. Two months later he began to suffer from dull pain and uneasiness in the loins after working hard or lying long in the same position. After this had gone on for some ten weeks he woke up one morning and was unable to pass his urine. This inability lasted for some hours, but eventually after severe straining he dislodged a thick clot and was then able to micturate freely. Subsequently he had similar attacks, and on one occasion he noted that blood came along with the clot. About this time he observed that the urine standing overnight clotted.

The patient was admitted to the Western Infirmary under Professor R. Stockman's care in 1902, when the chyluria had persisted for nine months. At that time the urine was very milky, containing fat droplets, lymph cells, epithelium, and a few casts. No filariæ were present. The urine varied in appearance at different periods of the day. When it was chylous it contained albumin but no sugar. It was noted that posture had an important effect upon the urine. If the patient lay down after taking a meal the urine became rapidly chylous. Thus as a rule the chyluria was most evident in the morning, especially if he had taken food just before going to bed. It is interesting to note that in the summer months the morning urine remained much clearer. This seemed to arise from the fact that the patient's occupation necessitated him being out of bed from 2 to 6 A.M. During the time the patient was in hospital chyluria could be induced at any time of the day by giving him a glass of milk and then making him lie on his back. Repeated and systematic examination of the blood failed to demonstrate any filaria even when films were made at two-hourly intervals for a consecutive period of 24 hours.

After a residence of several weeks in hospital the patient went out with the urinary condition practically unaltered. Subsequently I lost sight of him for four years, when he consulted me at the Central Dispensary on one or two occasions. By that time his urine had become much clearer, but was still milky.

In December, 1910, the patient again sought admission to the Western Infirmary on account of gastric disturbance, which was producing flatulence, palpitation, and dizziness. During his stay in hospital it was found that the chyluria still persisted, though it was much less marked than in 1902. Repeated examination of the blood and urine again failed to reveal any filaria. It was found that the chyluria was markedly affected by the position of the patient. When he was upright the urine was practically free from fat, but if he reclined at an angle greater than 45° he promptly began to pass milky urine; but if he sat in an upright chair the urine remained clear. The most milky urine was passed when he lay flat on his back. On the other hand, he could lie flat on his face without the urine becoming milky, but it became milky as soon as he turned round and lay on his back.

The conclusion we came to was that the chyluria was due to some intermittent pressure exerted on the thoracic duct by some factor which only became operative when the patient assumed certain attitudes. Probably the obstruction was a pedunculated calcareous gland. There was no enlargement to be felt in any of the abdominal glands, and an X ray examination failed to reveal any calcareous masses. Still, on the whole, a moveable enlarged gland seems to be the most likely explanation of the intermittent obstruction.

The patient would not allow a cystoscopic examination to be made, so that it was impossible to determine whether the chyle leaked into the bladder or was mixed with urine at a higher portion of the urinary tract. Lüdke was able to show that in his case of chyluria, which developed as a sequel to an inflammation of the bladder due to infection with B. coli, the urine left the ureters free from chyle, but became chylous in the bladder. Hertz[2] examined a case of chyluria and post mortem found the obstruction of the thoracic duct above the diaphragm, and the communicating ruptured lymphatic vessel in the bladder.

Glasgow.

[1] Münchener Medizinische Wochenschrift June 30th, 1908.

A CASE OF NECROSIS OF ALMOST THE ENTIRE CLAVICLE.

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NECROSIS of the clavicle in the form of scaly sequestra due to tuberculosis, &c., is not a very rare occurrence, but such an extensive involvement of the bone as the following case presented does not seem to have been frequently observed.

The subject of the present case, a man aged 28 years, was admitted to the British Hospital, Buenos Aires, on Jan. 28th, complaining of a swelling on the right clavicular region. He stated that three years before he had been treated in a Manchester hospital for syphilis, when he had a chancre followed by eruptions on the skin of an ulcerative kind. He had 18 months' continuous treatment with mercury. The swelling occupied the root of the neck and the supra-clavicular fossa; it was red, indurated, and not very painful to the touch. The temperature varied from 37° to 38° C. Ten days previously a ship surgeon had made an incision just above the inner third of the clavicle, but no pus came from it, and it was closed when the patient entered the hospital. The wound was again opened and a large quantity of pus escaped. No dead or exposed bone could be found, and the cavity seemed to extend behind the clavicle towards the axilla. A tube was inserted, but the temperature continued high, and a few days after exposed bone was felt with a probe. The wound was now thoroughly opened up under chloroform, and it was found that the whole clavicle was denuded of periosteum and lying in a tube lined by dirty granulations. The bone, which was quite white and clean-looking, like a museum specimen, was still attached by the ends, and no attempt was made to remove it, in the hope that it would act as a stay until the periosteum recovered and began to lay down a new clavicle. Fig. 1 gives a good idea of the condition, though only the inner end of the clavicle can be seen, owing to the camera having been placed too low down. The periosteal tube was split from one

[2] Royal Medical and Chirurgical Society, March, 1907. THE LANCET, March 16th, 1907, p. 733.

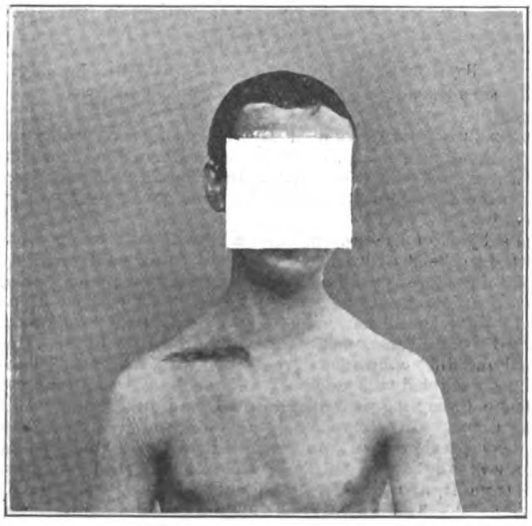
end of the clavicle to the other and the wound lightly packed with iodoform gauze. Thirty days later the sequestrum, which became loose, was removed; it consisted of the entire

FIG. 1.



clavicle minus the articular surfaces, which seem to have survived. Gradually the wound closed up and a thick deposit of new bone formed in the site of the clavicle; in

FIG. 2.



fact, a new clavicle has been laid down. There is practically no deformity, as can be seen in Fig. 2, and the arm is functionally sound.

Buenos Aires.

ST. MARY'S HOSPITAL MEDICAL SCHOOL (UNIVERSITY OF LONDON).—The following have been elected to Entrance Scholarships at this school for the year 1911. University scholarships: 50 guineas, A. S. Cohen, University College, Cardiff; 50 guineas, F. A. Williamson, B.A., Queen's College, Cambridge. Open scholarships in natural science: £50, G. E. Barker, Latymer School and Birkbeck College; £25, A. R. Fuller, Leighton Park School, Reading. Epsom College Scholarship: T. R. Davies.

Reviews and Notices of Books.

The King's Evil. By RAYMOND CRAWFURD, M.A., M.D. Oxon., F.R.C.P. Clarendon Press. 1911. Pp. 188. Price 8*s.* 6*d.* net.

PRIMITIVE medicine at the dawn of history, and even at an earlier date, consisted mainly in so-called magical operations—i.e., charms, incantations such as the Homeric ἐπαοιδή, and occasionally the administration of herbs gathered at certain seasons, with appropriate prayers. Such prayers, even in Christian times, were often frankly Pagan, and a good example thereof is to be found in the British Museum (MS. Harl., 1585, fol. 12a ff.) in the shape of a prayer to the great Earth Goddess at the gathering of medicinal herbs. Trephining was known to and practised by our Neolithic forefathers, probably with a view to affording a means of escape for evil spirits; but, on the whole, in early ages medicine was of a less material nature. In process of time medicaments of infinite variety, and often of appalling nastiness, began to be employed, while the methods of surgery were crude and necessarily painful. It is not astonishing, therefore, that the magical methods held their ground, for they offered a *via media* between the repulsiveness of medicine and the anguish of surgery; and it must be remembered that the terms "magical" and "magician" did not originally connote any idea of trickery or deception, but simply conveyed the possession of knowledge.

All knowledge being held to be of divine, or at least of supernatural, origin, it would seem natural that the class of society the members of which were in communion with Deity should possess more knowledge than those who were not so; hence the priest, the prophet, and the king were the repositories of learning, and especially of the healing art or faculty. Of these three classes, the sovereign at first bestowed the healing touch, conferred on him by his "sacring," to the cure of many diseases, but by the time of Henry II. the diseases curable by the royal touch seem to have been narrowed down to two—namely, plague and scrofula. That these two diseases should have flourished in the time of Henry II. is no wonder, if we can believe Peter of Blois's account of the court of that energetic monarch, who, desiring to see with his own eyes, made perpetual progresses up and down the country. The discomfort, the dirt, and the total lack of any sanitary laws during these progresses may be read in the fourteenth letter of Peter, "Ad Clericos Aulæ Regiæ." The lodging was bad; the food was execrable; "sick beasts were sold at random with fishes even four days old." If such was the life at court, that of the common people was probably worse, and there would be no lack of patients for the royal healer to cure.

The King's Evil and the History of the Royal Touch form the subject of the latest treatise in medical history. Dr. Raymond Crawfurd has in this volume expanded his Fitz-Patrick lectures for 1911 into a treatise on the history of the royal touch, which is of extreme interest to all who take thought for the origins of medical custom. The first European king who is recorded to have healed the sick by his royal touch is Robert the Pious (996–1031), who healed "sick folk and chiefly lepers," but Philip I. (1061–1108) and his son Louis VI. (1108–1137) did actually touch for the cure of scrofula, which had not yet acquired the title of *morbus regius*. Healing by touch was apparently then considered a prerogative of the kings of France, for Guibert de Nogent, who records the healing by Philip and his son, concludes by saying that he knows nothing of the power of other kings in this matter, but "I know that the English king makes no attempt to do likewise." Edward the Confessor

had, however, touched for the evil in England shortly before his death in 1066, a rite which he had previously practised when in exile at the Norman Court from 1013 to 1041. He was probably led to this practice by the example of the French kings, as was another monarch, Olaf of Norway (1015–1028). It is true that the healing which Dr. Crawfurd quotes from the Saga reads as if it were a tonsillar abscess broken by gentle massage, and at first Olaf's powers were attributed to the fact that he had "good hands," but the case is of importance as carrying on the tradition of royal healing. After the reign of Henry II. historical evidence that his successors exercised the power is wanting until the reign of Edward I. In the meantime the title "Morbus Regius" had come to mean scrofula as well as jaundice, which alone it signified in classical times. Gilbertus Anglicus, Bernard of Gordon, and John of Gaddesden, who between the birth of the first and the death of the last cover the period 1160–1361, all use the term, and all say that kings have the power of curing it. It is notable that while Bernard puts the royal touch as superior, or at least equal, to surgery, Gaddesden, a little later, possibly owing to the practical English temperament, advises the possible remedies in the following order—medicines, royal touch, and if both fail surgery.

And so the record runs down the ages, with an occasional interruption. The last sovereign to touch for the evil was Queen Anne, but the service "At the Healing" appeared in the Prayer Book of George I., and the reader may trace in Dr. Crawfurd's pages the gradual changes which the ceremonial underwent. But though touching in England ceased with the last of the Stuarts, in France, where apparently the custom arose in Europe, Charles X. revived the whole office at his coronation in 1824. As a scholarly and careful record of a by-way of medicine, of a custom, too, which goes back in its inception to the earliest times, and is connected with some of the deepest feelings of human nature, the desire for health and faith in the supernatural, this book can be commended.

Trattato dei Neoplasmi Maligni, preceduto da uno Studio sulle Infezioni Chirurgiche in Generale. Volume Primo. Con 81 figure nel testo e una tavola a colori. Pp. xlvii. – 944. Di Professor D. B. RONCALI, Direttore del R. Istituto di Patologia speciale Chirurgica della R. Università di Padova. Torino: Unione Tipografico-Editrice Torinese. 1911.

IN no subject is the disparity between our actual knowledge of it and the enormous amount of work which has been expended on it so marked as in that of cancer. The present book, which brings together more information than any other we know upon this subject, underlines this statement. Its author, Professor D. B. Roncali, is Director of the Institute of Surgical Pathology in the University of Padua, and its production is a proof that the fire of research which burned there many centuries ago is still alight. It is a book in which 20 years of labour and experiment, combined with learning and insight, have all contributed to produce a result which, in our present knowledge, should be a stimulus to those working at its main subject, as well as a storehouse of information for them. There is one thing which may to some extent lessen the usefulness of this book, and that is the fact that its author is of opinion that there must be a specific parasitic cause of cancer. But we really know so little of the immediate cause of cancer that this ought not to stand in the way of a proper appreciation of work which is so comprehensive and wide. The author, by the way, disclaims the idea entirely that this is in any way the last word upon this difficult subject, knowing well that we have yet nothing like sufficient knowledge even to make a few generalisations on it. He appreciates the difficulties of divided work on cancer; he knows that the clinician has not the necessary time even to follow, and cannot have the necessary knowledge to enable him adequately to judge of the vertiginous movements of the biology of to-day. So he approaches the subject alike from the clinical, experimental, and pathological points of view; and the book is divided into lessons, in which the separate arguments can be treated with less rigidity than in formal chapters, making the whole very pleasant and easy to read. Those who have had to wade through the thousands of papers and books on this subject will appreciate the advantage of this. The author, unlike many modern writers on the same subject, has made much use of clinical observations. He is convinced of the principle, which ruled in medicine from Morgagni to Claude Bernard, that whatever the importance of an experimental discovery may be, it can never lower the supremacy of clinical observation; and he takes as motto the well-known words of Protagoras: Πάντων χρημάτων ἄνθρωπον μέτρον εἶναι. He first uses observations, and then illuminates the facts observed by experiment, which seems to be the logical course. We are apt to forget that before the experiments in the laboratory of to-day were a thousand years of clinical observation.

The whole work is to consist of six parts, of which three constitute the present volume. These are: 1. Conceptions of inflammation. 2. Classification of surgical infections. 3. Anatomical, pathological, and clinical criteria by means of which malignant new growths ought to be separated from benign, and to be considered as infections, or inflammations *sui generis*. The analogies between inflammatory processes and cancer, and the looking on cancer as a specific reaction are, of course, not new. The same views were suggested by Plimmer many years ago, but they are here worked out with such detail and instance that they assume quite different proportions and become thoroughly suggestive. In the first part the limits of inflammatory processes are established. In the second part the general characters of surgical infections are described. For purposes of description these are divided as follows: those in which the effect is entirely toxic (tetanus); those which are toxic and in which the parasite also plays an active part (septicæmia, pyæmia); suppurative (abscess, phlegmon); erythematous (erysipelas); pseudo-membranous (hospital gangrene); those in which the parasite exerts its pathogenic power on particular cells—e.g., in rabies on the pyramidal cells, in osteomalacia on the bone cells, in coccidiosis on the epithelial cells of liver, intestine, and skin; the granulomata (tubercle, leprosy, &c.); and malignant neoplasms, epithelioma, sarcoma, &c). These two parts are to be looked upon as a preparatory study to the third part, which treats of malignant new growths in general and in particular, and the author here brings a large amount of anatomical and clinical evidence together to support his view that the cause of cancer is either a parasite, or something which acts on the cell as a parasite. He makes a most minute study of the biology, morphology, and degenerative processes of neoplastic cells, and of carcinomatous foci, in which they are compared biologically, morphologically, and in regard to degenerations with the cells and foci of various infective processes, particularly with the granulomata, whether spontaneous or experimentally produced; and his conclusion is identical with that of Menetrier, who, notwithstanding his opposition to the parasitic view of cancer, does not hesitate to say that "all the morphological alterations of the cancer cell are to be met with in cells altered by inflammatory processes, with this difference, that in malignant growths of connective tissue the acute and subacute inflammatory processes will furnish the more exact type of comparison, whereas in epithelial cancer,

the type of comparison will be found in chronic inflammatory processes." The study of the manner of the formation of metastases has added new arguments for the demonstration of the intimate bond between malignant neoplasms and inflammatory processes, and likewise has made clear the mode by which carcinomatous diffusion in the body of the host is to be differentiated from that of any other infective process, and helps to explain why cancer should be called an infection *sui generis*. Following his rule of taking the mass of anatomical and clinical facts before the experimental, the author shows that in new growths the occurrence of metastases can take place in two ways: either by specificity, or by cellular infection. In the first class are those metastases which histologically reproduce exactly the primitive growth; this is the commoner means of the diffusion of cancer and belongs exclusively to cancer. In the second class we have those metastases which are histologically quite different from the original growth, and these are exceptional forms of metastases, their genetic mechanism being common to those of the granulomatous processes; for in this case the neoplastic cell acts as if it were a parasite, exciting the tissues with which it comes in contact to proliferation, not first multiplying itself. The author thinks that the clinical and experimental facts justify the belief that, in this second contingency, the neoplastic cell is able to provoke a metastasis by exercising an action which is directly infective by means of its protoplasm, and an indirect action by means of parasites which may be contained in it.

The next part of the volume discusses the complex series of phenomena which constitute the cancerous cachexia, or toxæmia, caused by probably many poisonous substances which are eliminated by the cancerous foci and the metastases, by means of which the cellular elements of various organs become deteriorated in structure and perverted in function. The differences in the effects according to the situation of the cancer are very well described—e.g., in a gland with only internal secretion, and in one with both internal and external secretion; the histological and functional alterations of the various organs are clearly stated and arranged; the anæmia, wasting, fever, œdema, and the various psychoses are discussed at length, and are compared with the consecutive phenomena of chronic infective diseases, such as tubercle or syphilis; and the author concludes that cancerous cachexia or toxæmia in its anatomical, pathological, and clinical complex has in it nothing specifically characteristic, nothing which cannot be found in the general intoxications consecutive to various infective processes, especially the granulomata. The author insists upon the intimate relationship of the cancerous processes with infections in general and with the granulomata in particular, and with their absolute separation from those of benign growths. As a natural corollary there follows a complete study of the histological texture of the separate malignant growths. The comparisons between the early stages of cancer, in which the transition from a normal cell to a cancer cell takes place, and the alterations in inflammatory tissues during the progress from an acute inflammation to a chronic one, are extremely well worked out and are full of suggestiveness. To most readers the pathological and histological studies of the various species of new growths will appeal; they are clear and well done, and especially good is the section upon complex tumours, a subject which is generally very confused and confusing.

The whole of this part of the book forms an excellent treatise on oncology, in which there is an attempt at both synthesis and reorganisation, according as the histogenesis is able to be interpreted respectively by the doctrine of blastomeres of Bonnet and Marchand, by that of cellular metaplasia, or by the author's "ovo-spermoblastic" doctrine. The classification is essentially embryonic, and the carcinomata, in the broad sense, are divided into four subdivisions: (1) connective tissue tumours (sarcoma, endothelioma, perithelioma, and lymphoma); (2) epitheliomata (epithelioma of the various kinds, neuro-epithelioma—subdivided again into glioma and its varieties, and gliopyramidoma); (3) complex tumours (divided into blastomeric, metaplastic, and ovo-spermoblastic tumours); (4) placentomata (divided into chorion-epithelioma, deciduoma, and chorion-deciduoma). After a description, both general and particular, of the clinical characters and histological texture of all the sarcomata; of the epitheliomata proper and the neuro-epitheliomata; of the cellular metaplasia connected with the mixed sarcomatous tumours; and of the laws which regulate the constant relation between the degrees of recidivity, anaplasia, atypicality, and malignity, the author gives a very careful clinical, histogenetic, and anatomical study of the mixed tumours and the placentomata, which brings the volume to a close. The complex tumours are divided into acquired and congenital, and these last again into malignant and benign. The many doctrines and hypotheses current with regard to their histogenesis are discussed with great fairness and skill. The author's division is again an embryological one. He concludes from a critical examination of the whole question that the congenital complex neoplasms, both malignant and benign, can be explained by the blastomere theory of Bonnet and Marchand; that the acquired neoplasms which develop in the glandular organs and viscera (breast, parotid, submaxillary gland, uterus, brain, &c.) can be explained by the metaplastic theory; and, finally, that those complex neoplasms which start in the ovary and testicle (solid or cystic embryomata) are explainable histogenetically by his own ovo-spermoblastic theory, which rests on the work of Boveri, Carazzi, and Wilson on predetermined germinal localisation.

Although the author's researches have led him on broad lines towards the parasitic theory of the origin of cancer, the criticism throughout the book is of the best kind, impartial and unirritating, and he always keeps in mind the fact that we really know nothing certain on this vexed question, and he, at any rate, "dares stamp nothing false where he finds nothing sure." The book is well printed and well illustrated, and, apart from any particular views, is encyclopædic upon the subjects of "Inflammation and Cancer," which is its second title.

Lehrbuch der Kinderheilkunde. Edited by E. FEER, Director of the University Children's Clinic in Heidelberg. With 2 coloured plates and 160 illustrations. Jena: Gustav Fischer. 1911. Pp. 734. Price M.11.50, unbound.

THIS volume is practically a supplement—a very large one, it is true—to Krehl-Mering's Text-book of General Medicine. The contributors, each in his own particular domain, are all men who have made pædiatric history in Germany. The editor in his preface plaintively remarks that the branch of medicine covered by this volume has now attained to such a degree of specialisation that no one man can be expected to do justice to all its ramifications. It is quite certain that each of the 11 sections of which this work consists has been written by a master of his subject. It is almost surprising that, under such conditions, the bulk of the volume has been kept within the relatively modest compass of some 700 pages. Without qualification this statement perhaps hardly does justice to the moderation and restraint of the company of authors, for a page of a normal German scientific text-book is often an ocean of print. This book is, however, printed in large bold type, is well paragraphed, and freely illustrated, and hence, as has been

said, is a comparatively small book. There is little in the general arrangement of its contents to differentiate this volume from many others on the same subject which have been reviewed during the last few years in THE LANCET. There is, however, greater uniformity of method between one chapter and another than is usual in composite works.

Professor Pfaundler, who appears to have unlimited capacities for literary productiveness, is responsible for a very good chapter on certain constitutional and blood diseases. The sections on the inflammatory, or exudative, diathesis, the status thymico-lymphaticus, neuro-arthritism, Mongolian idiocy (Mongolismus), are certainly worthy of careful attention. The diseases of the respiratory system are ably dealt with by Professor von Pirquet; syphilis is dealt with by Professor Moro; while Professor Feer himself has contributed a number of admirable chapters. Chief among them is that on the acute infective diseases, which, by the way, includes acute polyarthritic rheumatism, the latter occupying some five pages. To this chapter one accessory page is attached which deals with chronic rheumatism—probably a somewhat disproportionate distribution of favours according to English ideas.

The chapter in this volume, however, which is likely to prove of greatest interest to English readers is that by Professor Finkelstein and his colleague Dr. Ludvig F. Meyer, on the diseases of the digestive organs. The part of this chapter, and it is much the largest part, which is concerned with disturbances of nutrition in infants is quite revolutionary in character and arrangement. As is well known, Professor Finkelstein attributes most of the troubles of infancy to food causes; and he discounts almost to the vanishing point the part played by bacteria in the production of gastro-intestinal troubles. Practically the same views have been maintained by English writers, but Professor Finkelstein has had almost unrivalled opportunities in Berlin for establishing by the clinical test the presumptive truth of many of his main theses. Many authors, in dealing with disturbances of digestion and nutrition in infants, separate these groups into independent disorders of the stomach, intestines, liver, pancreas, and so on, but not so Professor Finkelstein, who groups all the symptoms attributable to disturbances of digestion or nutrition under one heading. In so many words, he says the organism has a certain degree of tolerance for food—what we should call powers of physiological utilisation; when these are abused or over-reached we get certain reactions or disturbances which are similar in kind but different in degree, and according to the degree he classifies them as follows: 1. Mild disturbances of function: (*a*) dislocation of equilibrium (Bilanzstörung); (*b*) dyspepsia. 2. Severe forms with organic changes: (*a*) decomposition; (*b*) intoxication. The disturbance in its fourth degree of severity (intoxication) is practically the same as that which often passes under the somewhat unscientific name of marasmus or the more scientific name of athrepsia. So far as food is concerned Professor Finkelstein incriminates all elements—proteins, carbohydrates, fats, and even whey itself; but it is to some undetermined element in the latter that he holds chiefly responsible for the great majority of the troubles. His treatment is simplicity itself—the withholding of food, the giving of mild diffusible stimulants such as weak tea or broths, and the subsequent return to a modified milk diet in which the fat percentage is kept low and the carbohydrates are not exclusively of the milk-sugar variety.

Professor Feer's text-book can be commended to the notice of English readers. And but for the fact that there is already a plethora of modern works in English of almost equally high standard, we should expect to see an English translation.

A Laboratory Text-book of Embryology. By CHARLES SEDGWICK MINOT, LL.D., D.Sc., James Stillman Professor of Comparative Anatomy in the Harvard Medical School. Second edition, revised, with 262 illustrations, chiefly original. London: J. and A. Churchill. 1911. Pp. 402. Price 16*s.* net.

IT is easy to understand why this excellent work is dedicated to Henry Pickering Bowditch, who died only a short time ago. Bowditch was one of the pioneers of physiology in America, and was one of the early pupils of Ludwig in Leipsic. Minot was one of Bowditch's many pupils, and later he also began his physiological studies in Leipsic. On returning to Harvard Minot's bent soon showed itself, and his name is now inscribed large amongst embryologists who take a wide and comprehensive view of the importance and relations of this attractive subject. The work is designed primarily for the use of students taking a practical course in embryology and aims at directing the student's attention to actual original observations to be made by himself. This is the second edition, and it has been so extensively revised that it may be described as almost a new book.

The chapters are of very unequal length. The first one deals with general considerations, and it is impressed on the student that the embryo illustrates with particular clearness the fundamental principles of morphology. To a medical student embryology gives the clue to the intelligent comprehension of the anatomy of the adult, while it throws a vast light on pathology, the problems of malformation and monstrosities, and also upon the whole question of pathological changes in the tissues. In the first 30 pages a terse, vivid, and living description is given of such subjects as the segmented animals and metamerism, of the vertebrate type of structure with its six more important and six less important characteristics, and then each of these twelve is successively passed in review. This is followed by a rapid survey of the principal modifications of the vertebrate type, which brings us to the word "anlage," which has obviously come to stay, and which the author defines as "the first accumulation of cells in the developing embryo recognisable as the commencement of a structure, organ, or part." Then follows a short account or summary of such subjects as cytomorphosis, larval and embryonic types, germ layers, relations of surface to mass, and this leads to a study of projections, invaginations, and then to a classification of glands, the law of unequal growth, germ cells, sex, the theory of heredity, i.e., the theory of germinal continuity which we owe to Moritz Nussbaum—the only theory which to the author seems tenable at the present time. The chapter winds up with a short account of the law of recapitulation and the arrest of development.

The second chapter is necessarily a long one (p. 33–117) as it deals in detail with the early development of mammals, beginning with spermatozoa, ovulation, ovum and its maturation, impregnation, segmentation, and blastodermic vesicle—all of which is set forth much as in other books—and proceeding step by step to the formation of the layers and the origin of the mesoderm. Each part is then shortly described, beginning with the primitive axis, notochord, and its fate, archenteron, the digestive canal, the nervous system and the sense organs, the origin and destiny of somatopleure and splanchnopleure, and then the development of organs, finally ending with the allantois, trophoderm, umbilical cord, the chorion, and amnion. These two chapters occupy about one-third of the volume. About 30 pages (Chapter III.) are given to the human embryo. It is admitted that our knowledge of its early stages is very imperfect. As to classification of the early stages, 11 such stages are postulated, the last of these in embryos of about

10 mm. long. Each of these stages is then described in detail so far as they are known in certain of the primates, but more particularly in man. Some of the illustrations are taken from the well-known work of Coste. Embryos of various ages are carefully figured, drawn accurately to scale. Chapter IV. is short (pp. 160–173), and deals with the segmentation of the ovum and of the blastodermic vesicle in mammals. For laboratory work on this subject two animals especially have been studied—viz., white mice and rabbits. The work of Sobotta and of Kirkham on white mice forms the basis of our knowledge of these early stages in mammals. Careful details are given of the period of heat. In the mouse this occurs 21 days after littering. The ovum of the mouse measures only 80μ, and is the smallest known mammalian ovum. That of the cat measures 200 , of the rabbit 161 .

Chapter V. (pp. 174–218) is devoted to the classic subject "Young Chick Embryos." As in other text-books, details are given of how to obtain, to remove, and to preserve the embryos, and how to cut serial sections. The staining processes used are given more fully in the last chapter. Careful descriptions and excellent figures of chick embryos with from eight segments onwards are given with a great wealth of detail. The study of pig embryos occupies pp. 219–330, and is particularly full and painstaking. Pigs of 7·5 mm. are first selected for the study of outward form, and so on with those of greater age and length; then their general anatomy is described and copiously illustrated. Some of the illustrations are singularly artistic, while others represent wax reconstructions. Then follow elaborate studies of sections, serial and otherwise, of the embryo as a whole or of its individual parts. The largest pig embryo studied is 24 mm. The last chapter but one (pp 339–.376) is devoted to the study of the uterus and the fœtal appendages of man. A wax reconstruction of a uterine gland of a virgin of 18 years gives an idea of the very great complexity of such glands—a fact hardly revealed by sections shown in the ordinary text-books. The last chapter is devoted to methods, much on the lines of those commonly found in text-books of histology.

The work is one that can only receive the highest commendation. Anyone who has worked through such a course as is here laid down, and, as we gather, is actually carried out in Harvard, will have received a training both in original observation and in technique such as but rarely falls to the lot of medical students in this country. It would be interesting to know what time is devoted to such a course. Professor Minot is to be congratulated most warmly on the success, efficiency, thoroughness, and stimulating character of his work.

Medical Revolution: A Plea for National Preservation of Health based upon the Natural Interpretation of Disease. By SYDNEY W. MACILWAINE, M.R.C.S. Eng., L.R.C.P. Lond. (retired). London: King and Son. 1911. Pp. 162. Price 2*s.* 6*d.* net.

THE author of this small book is satisfied that medicine is hampered by a false interpretation of disease, and he sets before us what he considers the only true gospel. He is, it would seem, a little doubtful of the salvation of his *confrères*, for he addresses himself primarily to the "intelligent layman," and his book is a sign of the times, as showing a general appreciation of the difficulties produced in the practice of medicine by the rapid developments of modern science. This, however, is not quite how the author would describe his own able reflections.

His argument falls into two parts—first, a destructive criticism of things as they are; second, a constructive account of things as they ought to be. The second part, however, comes first in the book and the first second, while towards the end the constructive side is brought forward again. The arrangement is less confusing than might be expected, and for the most part the author's views, though strong, are expressed with admirable restraint and moderation; though now and again, as when he puts up a specialist to hit at, or describes Virchow's part in the development of medicine, his masseters tighten in a way that hardly suggests the philosophic spirit. Briefly summarised, his thesis runs as follows: All diseases are the effects of natural causes; the causes fall within the study of medical science, the effects and their prevention within the art of medical practice. Every "true" disease is, by definition, a mental conception drawn from a number of cases showing determinate and similar causation. These true diseases are separated into two groups according to whether the cause lies in the patient's environment or is constitutional. But it is the habit of the present day, says the author, to jumble together several diseases in one, thus creating "spurious" diseases. He takes Bright's disease, for example, as an effect of several different causes (scarlet fever, influenza, gout, lead-poisoning). The symptoms are not of determinate and similar causation, and therefore when the medical man diagnoses Bright's disease he makes an illusory diagnosis, preventive measures become impossible, and medicine is defrauded of its legitimate aim.

So far we can accompany the author. It is true that some of our "diseases" are only groups of symptoms. We are working to remove this reproach. But when he comes to explain why we of the medical profession are illusory diagnosers of spurious diseases he shows a bias that makes it difficult to go forward with him. Morbid anatomy, according to the author, has been the profession's undoing, and Virchow is the evil spirit who enmeshed it. According to the author, when Virchow exposed the ancient sham of humoral pathology he set in its place the equally fallacious doctrine of cellular pathology based on the dogma, "Every chronic disease is rooted in an organ." And Mr. Macilwaine feels so strongly against morbid anatomy that he will see nothing good in it at all. He tells his readers that outside the narrow circle of orthodox "pure physicians" Virchow's pathology is as completely ignored as the humoral pathology, and that the pathologist of to-day uses it merely to cloak his ignorance. Virchow's dogma, he holds, has no foundation in fact, and is not one whit less artificial than the ancient humoral pathology. Locomotor ataxy, for instance, is not a disease, inasmuch as its lesions can be produced by different toxic agents; fatty degeneration of the heart and myxœdema the same. These and many others for Mr. Macilwaine are spurious diseases, and Virchow "could not have done a greater disservice to medicine" than in setting up morbid anatomy as its guiding science. The statements as to the illogicality of our nomenclature of diseases are sound, but to assail morbid anatomy in the terms which the author employs, to see nothing good that has come out of it, to deny it a leg to stand on, bespeaks either a biassed mind or imperfect knowledge. How far does morbid anatomy deserve these strictures? Had it done nothing more than establish the facts that one of the effects of the tabetic toxins is to be found in the posterior columns of the cord, that fatty degeneration of the heart does exist and often goes with phosphorus poisoning, and that atrophy of the thyroid gland is associated with myxœdema, it would have earned the gratitude of the medical profession. As a matter of fact, from the apparently barren subject of post-mortem observation was generated, in due time and in large measure, the science of bacteriology and parasitology, which has boundlessly increased our knowledge of causation and our practice of prevention.

The author, we consider, has taken up an untenable position, even while he makes out an interesting case for his system of reform and is able to apply it in a practical way. Few who read this book will go back to their patients without feeling that their mental attitude towards disease has undergone some change, and for this reason we thank Mr Macilwaine for the courage and industry which have led him to write his book. We also endorse very heartily the view that the prevention of medicine would be well served by more regular and anxious inquiry into the heredity and environment of our patients than the present conditions of medical practice permit.

Tumours, Innocent and Malignant: their Clinical Characters and Appropriate Treatment. By J. BLAND-SUTTON, F.R.C.S. Eng., Surgeon to, and Member of the Cancer Investigation Committee of, the Middlesex Hospital. With 360 illustrations. Fifth edition. London, New York, Toronto, and Melbourne: Cassell and Co., Limited. 1911. Pp. 686. Price 21*s.* net.

FROM its first appearance Bland-Sutton's "Tumours" was accorded a place amongst the highest of the works on new growths, whether in English or in any other language, and that position has been fully maintained with every subsequent issue of the work. We have read it in different stages of its development, and, as our readers know, have consistently found it good. For two things this book is chiefly noticeable—the originality of the treatment of the subject, and the wealth of illustration derived from cases of neoplasms, not only in human beings, but also in the lower animals. No one can even glance through this volume without being struck with these characteristics. One other point deserves mention. The carefully chosen bibliography which follows every chapter is remarkable not so much for the number of the references as for their rigid selection. The etiology of carcinoma is discussed in a very critical but judicious manner, and we are interested to see that the author is inclined to believe that malignant disease is due to "a micro-parasite which stimulates the normal cells to multiply and produce cancer." There are still many debatable points in connexion with tumours, and there is room yet for two opinions on many of these; and though we may differ from the author on some of these, all will allow that this work is a trustworthy treatise for the student and a monument of British pathology.

Traité Pratique de Pathologie Exotique, Clinique et Thérapeutique. Publié en Fascicules sous la Direction de MM. CH. GRALL et A. CLARAC, Médecins Inspecteurs des Troupes Coloniales. Vol. V.: Intoxications et Empoisonnements; Béribéri. Par MM. HÉBRARD, GAIDE, CLARAC, LASNET, BOYÉ. Avec 124 figures. Paris: J. B. Baillière et Fils. 1911. Pp. 452. Price, paper, 12 fr.; boards, 13.50 fr.

THIS, the fifth volume of the above treatise, opens with the subject of beri-beri. This disease, concerning the etiology of which there have been so many varied hypotheses offered, is a notable one, inasmuch as it affects so adversely the efforts at colonisation of the European immigrants into tropical climates. Originally of Asiatic origin, it has successively invaded various tropical regions, and now to-day it is found to influence generally the colonisation of warm countries by Europeans. Dr. Hébrard, the author of the article, first tells us of its origin and diffusion. The original birthplace of the disease was in Asia, where it appeared in China, Japan, Indo-China, Burma, India, and the Malay Peninsula. The disease ravaged the Japanese army in the late Russo-Japanese war. More recently it has attacked New Caledonia; then Senegal, the Belgian Congo, and other places in Africa; next we find Brazil, Guiana, and the Antilles attacked; so that it affects a large portion of the intertropical globe. The author makes four classes of the affection—the acute, the subacute, the incomplete, and the chronic. The clinical characteristics of these various manifestations are succinctly and clearly portrayed, first as a whole for each of the classes, and they are then individually analysed. In the differential diagnosis the distinction from Bright's disease, chronic alcoholism, ankylostomiasis, rheumatism, malarial cachexia, tabes, the Aran-Duchenne type of progressive muscular atrophy, the toxic polyneuritis of arsenical poisoning and diphtheria, and lastly, epidemic dropsy, is detailed. The author, with regard to the last-named disease, however, does not mention the researches of Bentley, which certainly tend to prove its identity with beri-beri. The pathological anatomy is given, and then its rate of mortality. This in some epidemics has been as high as 85 per cent.

The etiology is next discussed. The author at once gives his opinion that the subjects of the malady are those people who eat rice as the basis of their food-supply. He then proceeds to show that white rice is the culpable agent. This rice, being decorticated, is exposed in a greater degree to contamination; whereas the red rice, not having lost its cortex, offers greater resistance to any pathogenic microbe, and has less chance of becoming contaminated. All this has been made very familiar to readers of THE LANCET, mainly by the excellent work of Dr. Henry Fraser and Dr. A. T. Stanton. But the French authors consider that white rice alone will not produce the malady. In Asia, for instance, the great majority of rice eaters are immune to this disease. Hence there must be some other factor apart from the quality of the rice, and the author opines finally that this food acts as the vehicle most favoured by the pathogenic agent, which is a toxin of some sort. But the actual microbe responsible for this toxin has not yet been indubitably shown. The article concludes with the treatment of beri-beri. As regards prophylaxis, the introduction of the infectious agent must be avoided, by attention especially to the quality of the rice, and by making all the environment of the *personnel* as sanitary as possible.

Amongst the other articles included in this volume are those concerning opium poisoning, by Dr. Gaide; hashish poisoning and poisoning due to fish and snakes, by Dr. Clarac, who also writes on the effects of quinine on certain individuals. The volume fully comes up to the reputation established by its predecessors.

Carbonic Acid Snow as a Therapeutic Agent in the Treatment of Diseases of the Skin. By R. CRANSTON LOW, M.B. Edin., F.R.C.P. Edin., Assistant Physician to the Skin Department, Royal Infirmary, Edinburgh. London and Edinburgh: William Green and Sons. 1911. Pp. 117. Price 5*s.* net.

ALTHOUGH the employment of carbon dioxide snow is comparatively recent, it is now widely used, and with great success, in a large number of cutaneous conditions. Many articles have appeared describing the uses and the results obtained by the use of carbon dioxide snow, but this is, we believe, the first book dealing wholly with this method of treatment. When liquid carbon dioxide is allowed to evaporate rapidly some of it becomes solidified by the rapid abstraction of heat, and this solid carbon dioxide has a temperature equal to − 79° C., so that if applied firmly to the skin immediate freezing of the tissues results. For turning the liquid into the solid carbon dioxide many forms of apparatus are made, most of which are convenient, but they are not essential, for a piece of wash-leather or even a towel is quite sufficient. In this work several forms of apparatus are described and their merits are compared. Then the effects

of the snow on the skin and the effect of varying the duration are referred to. A chapter is devoted to the microscopic changes induced, and some illustrations show the alterations that the tissues undergo. The therapeutic uses of the snow form the most important part of the subject, and Dr. Low speaks with a reasonable enthusiasm of the results obtained.

Bericht über die Ergebnisse der Konjunktivalreaktion mit Tuberkulin, sowie über die lokalen Tuberkulinreaktionen bei Tieren, speziell beim Rinde. (Report on the Results of the Conjunctival Reaction with Tuberculin, especially the Local Tuberculin Reaction in Cattle.) Von Dr. A. WOLFF-EISNER. Jena: Gustav Fischer. 1911. Pp. 49. Price M.1.20.

Dr. Wolff-Eisner's name is now well known in relation to the methods for the diagnosis of tuberculosis. The conjunctival reaction is more closely associated in England with the name of Dr. Calmette, although Dr. Wolff-Eisner must be accorded the priority of one month in publishing the method. Some discredit has fallen upon it as applied to man owing to results that have occasionally attended its use, and to the frequency with which a positive result is obtained in apparently non-tuberculous subjects. Dr. Wolff-Eisner in this paper fights strenuously for the retention of the test, more particularly in the domain of hygiene, for the diagnosis of tuberculosis in cattle. Writing of the conjunctival reaction in man, he states that whilst in healthy persons over 20 years of age the cutaneous reaction is positive in 50–80 per cent. of cases, only 5–10 per cent. show a positive result with the conjunctival reaction. Moreover, a considerable number of the latter cases show signs of tuberculosis in the course of one or two years. If both reactions are positive, active tuberculosis is present. If only the cutaneous reaction is positive the tuberculous affection is relatively inactive.

The paper is concerned principally with a research on the value into the conjunctival reaction in oxen. A 40–50 per cent. tuberculin is used in place of the 1–4 per cent. solution used in man, and the experimental results tabulated in the paper show the high value which is to be attached to the reaction as a means of eliminating tuberculous cattle which might otherwise be used for food.

Theory and Practice of Thyroid Therapy. By HERBERT EWAN WALLER, M.R.C.S.Eng., L.R.C.P. Lond., Honorary Anæsthetist, Birmingham Dental Hospital; Medical Officer, Balsall Heath Provident Dispensary. London: John Bale, Sons, and Danielsson. Pp. 154. Price 5*s.*

Mr. Waller first discusses the function of the thyroid gland, which enables the body to make use of calcium salts. He applies this principle to various conditions. He is of opinion that rickets in its worst form, starting as it does in the earliest months of life, is primarily caused by depriving the infant of the benefit of maternal thyroid activity, the infant's own thyroid secretion being invariably unequal to its requirements at birth. He supports this view with the statement that "the protective influence of breast-feeding against rickets has been placed beyond dispute." He applies the same arguments to dental caries, and maintains that this condition also is largely due to artificial feeding, the infant being thereby deprived of the benefits of maternal thyroid activity. Thyroid insufficiency, he points out, may be brought about in another way—namely, by the deprivation of calcium salts. Mr. Waller believes that calcium salts are the normal stimulus to thyroid metabolism, and without this stimulus secretion may become deficient. He considers that this fact explains the beneficial action of lime salts as a remedy in deficient nutrition. Considerable space is devoted to a consideration of the relation of iodine and arsenic to the thyroid activity. The reasoning adopted in these matters is rather involved and difficult to follow, and the conclusions arrived at are vague. Nevertheless, the subject would seem to be a promising one for investigation, and doubtless Mr. Waller has done good service in drawing prominent attention to it.

The whole book is certainly worthy of perusal. Mr. Waller has employed thyroid medication in a variety of conditions, and his remarks are suggestive. Inquiry founded on the lines which he has followed may lead to valuable results: more cannot yet be said.

Les Maladies de la Cinquantaine (Diseases of the Fifties). Tome I., L'Artériosclérose; Tome II., Clinique du Cœur; Tome III., Le Diabète; Tome IV., Les Albuminuries. Par Dr. ARTHUR LECLERCQ, Lauréat de l'Académie de Médecine. Paris: Octave Doin et Fils. 1908–1911. Vol. I., pp. 335; Vol. II., pp. 357; Vol. III., pp. 438; Vol. IV., pp. 264. Price, Vol. I., II., and III., 6 fr. per volume; Vol. IV., 5 fr.

DURING the decade of life comprised by the "fifties" degenerative processes, metabolic disturbances, and cardiovascular changes are liable to become manifest, particularly in those in whom hereditary tendencies have been helped by strain, toxic conditions, dietetic errors, and misuse of alcohol. Most of these conditions are insidious in their origin, slow and progressive in course, and too often come for treatment when advanced and irreparable. The hygiene and management of this period of life are therefore important, and the recognition of early stages of these conditions may be the means of prolonging life and of delaying or avoiding the usual sequels. Dr. Arthur Leclercq has subjected the more important of these diseases to a careful and exhaustive analysis, and has reviewed their causation, pathogenesis, and treatment in the four volumes before us. His views as to their essential nature and development are somewhat original and are given at considerable length and with no little repetition. His theories are interesting, but require confirmation. His observations on treatment are full and helpful, as he discusses the various procedures and drugs which have been recommended.

The first volume is devoted to arterio-sclerosis. This condition is regarded as a reaction on the part of the arterial system to visceral changes, particularly in the liver and kidneys. The liver, as a consequence of disturbed metabolism induced by alimentary errors and by abuse of alcohol, is first stimulated to an excessive activity of its functions—a condition followed by a diminution preparing the way for the so-called arthritic manifestations, such as gout, gravel, obesity, and diabetes. These are regarded as defensive mechanisms rather than as morbid states, their object being to protect the organism from waste products which would lead to sclerosis of the organs. Dr. Leclercq would therefore replace the term arthritism, so dear to French writers, by hepatism. Other organs, notably the kidneys, share in the sequence of hyperfunction and diminished function. The diminished activity is in all cases associated with degeneration of the parenchyma and sclerosis of the supporting tissue. In the case of the kidney, these changes react upon the blood-vessels, which in turn show hyperfunction and then degeneration with fibrosis, constituting the condition of arterio-sclerosis. Other conditions simulating this state of the vessels—e.g., the sequels of infective arteritis from any cause such as syphilis—are differentiated as false or atypical arterio-sclerosis. True arterio-sclerosis is thus regarded as a viscero-arterio-sclerosis, its only cause being "hepatism," its only origin alimentary errors, its only adjuvant alcohol.

The second volume deals with diseases of the heart, classified according to the disturbance of rhythm produced.

The rhythms are described as eusystole, comprising the normal; dyssystole and asystole, the abnormal ones found in disease. These conditions are subdivided into various groups and examined in detail. The pathological relations, clinical characters, and treatment of each one are discussed. The classification is so minute as to be tedious and confusing.

The third volume, which has been "crowned" by the Academy of Medicine with the Alvarenga prize, is devoted to diabetes and exophthalmic goitre. These two diseases are regarded by Dr. Leclercq as strictly analogous in nature and pathogeny. They are described as being the result of a primary "dysfunction," followed by dystrophy of the entire organism, and especially of the nervous and neuro-glandular systems. The primary defect is regarded as occurring in the bulbar region, and diabetes is considered as a disturbance of the functional interrelations of the liver with other glands, notably the pancreas and thyroid; exophthalmic goitre as an alteration of the synergic action of the thyroid gland with other structures—viz., the ovary, hypophysis, and suprarenal. These highly speculative and theoretical views are developed at considerable length and are applied to considerations of treatment as well as of pathogeny.

The fourth volume contains an analysis of the various conditions giving rise to albuminuria, and is not restricted to a consideration of those occurring during the fifth decade. Here, again, the classification is a very minute one, and Dr. Leclercq's own views are given in regard to some forms of nephritis and to uræmia. Considerations of treatment are fully discussed and in a practical manner.

Modern Methods of Water Purification. By JOHN DON, F.I.C., A.M.I.Mech.E., and JOHN CHISHOLM, A.M.I. Mech.E. London: Edward Arnold. 1911. Pp. 368. Price 15*s.* net.

THIS work is a valuable addition to the literature of the important subject of water purification. The authors have made a punctilious study of the different methods of water purification adopted in this country, in America, and in various continental countries, and these methods are carefully criticised. A concise and complete bibliography of books and papers on water purification is given in a useful appendix.

A feature of this work is that the subject is treated not solely from the public health aspect, but that special attention is paid to the engineering aspect of the subject. A chapter is devoted to sources of water-supply and another to the storage of water, wherein full consideration is given to the important work done by Dr. A. C. Houston in this respect. The use of copper sulphate in restricting the growth of algæ in stored water is fully dealt with. Sand filtration and the scientific explanations of this important part of water purification are gone into in great detail. The information as to the management of sand filters will be of great value and assistance to the water engineer. A special chapter deals with the purification of water by ozone, and gives the details of the process. Mention is made of the process of the sterilisation of water by means of ultra-violet light.

The various processes of water softening and the apparatus necessary for this procedure are carefully and fully described. "The Testing of Water" occupies two chapters and the conclusions to be arrived at from the results of analyses are set out. A short account of the bacteriological examination of water is given, but we think that this method of investigation must always be left in the hands of a competent bacteriologist. The water engineer should not attempt any detailed examination of the bacteria present in drinking water, since the investigations necessary can be satisfactorily carried out only by an expert.

Everyone faced with the problems of water engineering should possess this valuable contribution to the subject, and the book should also prove of great value to the analyst and the sanitarian, who have to consider the important subject of water-supply.

Thérapeutique des Maladies Respiratoires et de la Tuberculose Pulmonaire. By Drs. E. HIRTZ, RIST, RIBADEAU-DUMAS, TUFFIER, J. MARTIN, and KUSS. Paris: J. B. Baillière et Fils. 1911. Pp. 713. Price F.14.

THIS volume forms the third number of the *Bibliothèque de Thérapeutique*. The first article is by Dr. E. Hirtz, physician to the Necker Hospital, on the treatment of broncho-pulmonary affections. He describes at length the treatment of bronchitis, broncho-pneumonia, bronchiectasis, emphysema, asthma, pneumonia, and other diseases of the lungs. The directions given are clear and concise, and numerous prescriptions are suggested which will be found of value in actual practice.

The treatment of diseases of the pleura is discussed by Dr. Rist and Dr. S. Ribadeau-Dumas. The operation for thoracentesis is minutely described, and especial attention is drawn to the indications for, and the technique of, injections into the pleura of sterilised gas or air. This procedure is suggested in those cases of pleural effusion in which the fluid rapidly recurs; the results are stated to be encouraging, but further experience is necessary before a definite conclusion can be arrived at. With the aid of numerous illustrations Dr. Tuffier and Dr. Martin describe the surgical treatment of affections of the respiratory organs, including tracheotomy, intubation, pneumotomy, and pneumectomy.

More than half the volume is occupied with a consideration of the treatment of tuberculosis, the article having been written by Dr. J. Kuss, physician to the Sanatorium at Agincourt. His remarks are characterised by the completeness and lucidity with which he describes the various therapeutic measures that have been introduced. He describes in detail the "open-air" treatment, and comments favourably on the usefulness of tuberculin if carried out with due precautions, but deprecates its use in inexperienced hands. He also refers to the artificial production of pneumothorax, and comes to the conclusion that in those cases in which extensive adhesions do not exist favourable results may be obtained.

We can speak in high terms of praise of this volume as being an excellent practical manual on the treatment of diseases of the lungs and pleura.

LIBRARY TABLE.

An Introduction to Experimental Psychology. (Cambridge Manuals of Science and Literature.) By CHARLES S. MYERS, M.D., Sc.D. Cantab., Lecturer in Experimental Psychology in the University of Cambridge. Cambridge: At the University Press. 1911. Pp. 156. Price 1*s.* net.—These little Manuals of Science are likely to fulfil a very useful purpose in the hands of those who use them in the right way. They are in no sense text-books, not even elementary ones, let alone "crams." They are intended to place before readers of ordinary intelligence and education, in terms that can be easily understood, a presentment of recent discoveries. The present volume aims to explain the methods of experimental psychology by describing typical themes of research therein, the subjects selected being touch, temperature and pain, colour vision, the Müller-Lyon illusion, experimenta æsthetics, memory, mental tests and their uses. This volume contains, by permission of Professor Ewald Hering and his

publishers, the instructive coloured diagrams representing the series of colour sensations, as given in the former's Grundzüge der Lehre vom Lichtsinn. The measurement of mental processes may arouse wonder even in those to whom scientific measurement of more concrete things is an ordinary task. Measurement is the first element of exactitude in most scientific studies, and its application to so elusive a subject as psychology is explained to the general reader in this little book.

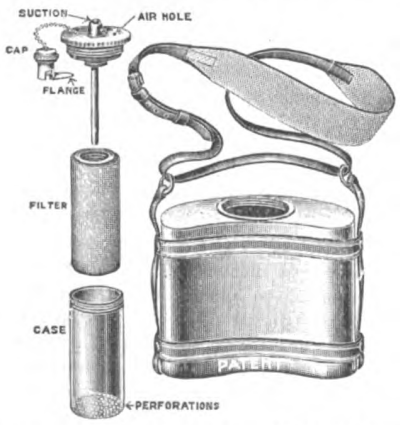
Queer Patients. By M. OSTON, M.D. Edinburgh: John Currie. Pp. 324. Price 3*s.* 6*d.* net.—This book contains 15 stories based on the more unusual incidents that have come in the author's way during his professional career. It is in a sense medical fiction, for while the main incidents, it is said, are all true, the circumstances and supposed personalities are fictitious. Some of the stories suggest valuable lessons to the practitioner, as, for instance, "A Mere Detail," in which an impending breach between husband and wife, owing to the latter's increasing irritability, is warded off through adopting the doctor's advice to change the wall paper in the dining room. "Lady Russel's Necklace" is a good, and by no means impossible, story. "The Letter D" is another good story illustrating the psycho-analytic method. We naturally referred to the Medical Register to see if Oston was the author's real name, but it is evidently an anagram. The book is decidedly readable.

Transactions of the Annual Conference of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis at Caxton Hall, Westminster, July 19th–21st, 1911. London: Adlard and Son. 1911. Pp. 220. Price 2*s.* 6*d.* net.—The proceedings of this conference were reported in abstract in THE LANCET of July 29th, 1911. Those especially interested in the subject will do well to obtain the Transactions, in which all the papers read are reported at length.

New Inventions.

THE HAMILTON COMBINED CANTEEN AND FILTER.

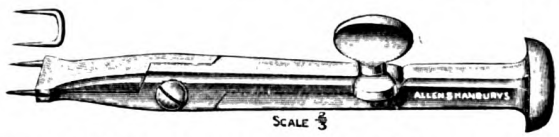
THE illustration below shows the component parts of this well-thought-out arrangement, which provides the soldier with a store of water ready at hand and fit to drink. The canteen is a small curve-shaped cistern, in which is suspended a protected case enclosing a germ-proof filtering cylinder.



All parts are easily detachable and therefore cleaned, while the efficiency of the filtering material can be ensured by mechanical cleaning and by placing it in boiling water when that is available. An important feature consists in the provision made for drawing the water by suction. The soldier does not drink from it by tipping the apparatus to his lips as from an ordinary drinking utensil, but by drawing the water from a nipple at the top by suction. An air hole is provided by means of which air replaces the water withdrawn. There is thus nothing lost by spilling, and the canteen enables the soldier to drink in any position. Prone on the ground he does not need to raise his head. He is prevented from gulping the water, which is a source of danger in some circumstances; he must imbibe it at a moderate rate. Water filters through on its own account, but the flow of filtered water is, of course, increased by suction, which places a pressure upon the water in the canteen. The filter canteen is very light, the container being made of aluminium. It can easily be filled from any source, and the filtering medium is stated under severe bacteriological tests to be a barrier to disease organisms. We understand that the Hamilton combined canteen and filter may be obtained at the leading stores in London. There is also made a combined canvas water-bag and filter which are intended to allow as much extra water to be carried as possible. They are adapted to be carried round the necks of horses or camels, and appear to be made with due regard to the comfort and convenience of the carrier.

A COMBINED STAPLE HOLDER AND PUNCH.

IN performing Roux's operation for femoral hernia it is found that the staple cannot be easily controlled and fixed in position before being driven home. This is particularly noticeable in stout patients with a patulous femoral ring. The clamp punch here depicted renders the staple perfectly



manageable during the process of pinning the ligament and is then used as a punch, being removed when the staple has been driven home. The illustration clearly shows the detail of the instrument, which was made for me by Messrs. Allen and Hanburys, Limited, of 48, Wigmore-street, London, W.

C. M. PAGE, M.S. Lond., F.R.C.S. Eng.
St. Thomas's Hospital, S.E.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Thomas Dwight, professor of anatomy in Harvard University.—Dr. H. C. Lutz, professor agrégé in the University of Paris.—Dr. Ostino, *privat-docent* of Laryngology and Otology in Turin.—Dr. Grandeau, professor of agriculture in the Conservatoire of Arts and Trades, Paris.—Dr. W. C. Phelps, professor of surgical anatomy in the Buffalo University.

LITERARY INTELLIGENCE.—The following new editions of well-known text-books are announced for publication by Messrs. Churchill:—"A Manual of Midwifery," by T. W. Eden, M.D., obstetric physician, Charing Cross Hospital. This book, in its third edition, has been thoroughly revised, 150 pages have been added to the text, and there are 60 new illustrations. "A Manual of Bacteriology," by R. Tanner Hewlett, M.D., professor of general pathology and bacteriology, King's College, London. This is the fourth edition of an admirable book for students. "A Handbook of Physics and Chemistry," by Herbert E. Corbin, B.Sc. Lond., and Archibald M. Stewart, B.Sc. Lond., headmaster of Alresford Grammar School. This also is a fourth edition, and now covers completely the extended syllabus of work required for the first examination of the Royal Colleges. "Quantitative Chemical Analysis, adapted for Use in the Laboratories of Colleges and Schools," by Frank Clowes, D.Sc. Lond., emeritus professor of chemistry in the University College, Nottingham, and J. Bernard Coleman, A.R.C. Sc. Dubl., head of the chemical department in the South-Western Polytechnic, Chelsea. This excellent book is now in its ninth edition.

THE LANCET.

LONDON: SATURDAY, OCTOBER 7, 1911.

The Medical Lord Mayor of London.

THE election of a medical man to the office of Chief Magistrate of the City of London is an event of considerable importance, as well as a proper source of gratification to the members of the new Lord Mayor's profession. It is fitting that the largest capital in the world, and the most wholesome, should have as its chief civic representative a member of that profession which has contributed so largely to its sanitary excellence, and consequently to its prosperity. If the way to be healthy, wealthy, and wise is not quite so simple as the words of the old jingle would have us believe, neither is that way so very complicated: it consists in studying the needful laws of life, and, having studied them, in sparing no reasonable expense to make the conduct of life possible according to those laws. This has been the spirit of our metropolitan administration now for many years, and we find in the appointment of a medical man to represent and to supervise the civic interests of the very heart of London an endorsement of that spirit.

Sir THOMAS CROSBY, who was elected Lord Mayor of London by the Liverymen of the City on Michaelmas Day, will enjoy the honour not only of being the first medical man who has occupied the chair, but also of being the oldest candidate for the position who has ever been elected. Born in Lincolnshire in 1830 he was educated at University College School and afterwards at University College, London, and subsequently became a student at St. Thomas's Hospital where he was later demonstrator of anatomy, and where he also enjoyed the advantage of having for one of his tutors the late Sir JOHN SIMON, the father of sanitary reform. After obtaining the Licentiateship of the Society of Apothecaries and the Membership of the Royal College of Surgeons of England in 1852 he commenced practice in the City; in 1860 he took the Fellowship of the College by examination, and in 1862 he graduated as Doctor of Medicine at the University of St. Andrews. His connexion with municipal affairs dates back to 1877. In that year he was elected a Common Councillor of the City of London, being Alderman for the Langbourne Ward. Thirty years later he served as Sheriff, and now despite his eight decades he becomes Chief Magistrate. The historical and professional ties between medicine and the City of London, to which this appointment forms a striking addition, are already close. The Royal College of Physicians of London, which dates from 1518, and whose foundation was purely medical from the beginning, for many years had its habitation under the shadow of St. Paul's. The Royal College of Surgeons of England grew out of letters-patent granted by EDWARD IV. to the "Freemen of the Mystery of Barbers of the City of London using the Mystery or Faculty of Surgery." The Society of Apothecaries of London, incorporated in 1617, is a City Livery Company, granting a registrable medical qualification. Many Lord Mayors of London by their vigorous advocacy of the Metropolitan Hospital Sunday Fund have advanced the cause of order in benevolence, which medical men know is so badly needed in medical charities. Many Mansion House Funds, again, have had their origin in catastrophes whose terror and tragedy have been largely medical. Again, to turn abruptly from grave to gay, the hospitality of the Mansion House to the medical profession has been conspicuously shown on such occasions as the dinner given by Sir WILLIAM MACARTHUR to the Seventh International Medical Congress which met in London under the presidency of Sir JAMES PAGET, and the dinner given by Sir HORATIO DAVIES "to meet the President of the Royal College of Physicians of London, the President of the Royal College of Surgeons of England, and other members of the medical profession."

The election of Sir THOMAS CROSBY to be Lord Mayor of London has, however, a broader lesson than any that is conveyed by remembering the association of the City with the profession of medicine. In all directions our calling has enlarged its boundaries, and in all directions it is seeking further to enlarge them. The presence of medical men in responsible municipal positions is a proof that this fact is obtaining public recognition, and this recognition will just now be most valuable to the public. Take one example only. The medical work of the Local Government Board, enormous as it is, is the growth of comparatively few years and assuredly will develop at an even greater rate than it has hitherto developed. But this sturdiness of growth, this irresistible tendency to annexation, has not been, and will not be, regarded complacently by all. Every extension of the work of State medicine means an invasion of provinces where private or, at any rate, non-sanitary interests have previously been paramount. Therefore, every extension is and must be regarded by certain sections of the population as an act of raiding, and may as a consequence provoke at the time a spirit of opposition to those entrusted with the duty of carrying it out. It is an invaluable thing that a medical man should have a voice in municipal counsels so that he may be present to explain sanitary proposals and remove from the public mind any apprehensions that they have been made for other than public purposes. The election of Sir THOMAS CROSBY as Lord Mayor of London emphasises in the most conspicuous manner possible the worth of medical counsel to a community.

Inter-Racial Problems.

WHILE not wishing to cavil at any of the soaring aspirations which have been set down as the objective of the first Universal Races Congress, nor to dispute the obvious good intention of a movement in support of which so many notable names have been enrolled, we feel bound to draw attention to certain dangers which we think have been passed over too lightly by speakers at that Congress, who dealt more especially with the sociological aspect of the racial question. This can be done conveniently now that

we have before us a report of the proceedings.[1] With the general objects of the Congress—viz., "a desire for a fuller understanding, the most friendly feelings, and a heartier coöperation between the white and coloured races of mankind"—we are in complete accord. Such a movement should bring credit to its originators. And it is no doubt doing them the barest justice to say that the advocates of this universal *rapprochement* between the nations are animated by a pure spirit of human benevolence. That the first congress of the kind should be held in London may be a coincidence, but it is quite in keeping with the view that the problems of racial intermixture fall finally to the Anglo-Saxon for solution. If there is one Power whose whole future is bound up in such solution it is ourselves. And because the interests at stake are so tremendous we must, in a political sense, walk warily, not sacrificing eternally to expediency, but certainly not following brightly imaginative ideals without due circumspection. Living in the future is often enough a harmless and an enjoyable form of recreation, but it is only a dweller in a fool's paradise who could suppose that mankind, of whatever race or colour, is ripe for changes so momentous as some of the speakers at the congress have been moved to suggest. We need not dwell on the probable political and economic effects on our modern civilisation of some of the proposals set out in this report; it is enough to refer only to the sociological side of the question.

Racial prejudice has existed always; the first dawn of civilisation saw its birth, and in many cases it has developed alongside of that civilisation as part and parcel of it. The attempt to preserve racial purity is natural and instinctive, and whatever may be said to the contrary by those who blindly advocate the total removal of those barriers, and who suggest cross-breeding as a means of solving the problem of racial antagonism, such an action, we affirm, would precipitate social disasters. It is true that the speakers at the Universal Races Congress, who dealt with the sociological side of inter-racial problems, did not, we believe, go so far as expressly to advocate indiscriminate miscegenation in support of their ideals, but some of the arguments brought forward do so, at least by implication. What is proposed is, in effect, that the black and yellow races of mankind should mingle with the white races under a universal charter of social, political, and economic equality. Whatever the future may have in store for us in this world the time for such a commingling has not yet arrived. The instinctive dread of the consequences of racial assimilation, which has made in the Western States of America miscegenation a worse offence than manslaughter, is founded upon sound political reasoning, however sad and terrible some of its immediate consequences may be. The same instinct has compelled our colonies to raise a barrier against the inflow of coloured races on their shores. White inhabitants fear that they will be engulfed in a torrent of alien humanity, while the hope that the stronger race with its higher ideals may raise such immigrants, by education, example, and law, to be fit subjects for miscegenation is felt not to take into consideration existing conditions. The hope is pious, not practical.

[1] Inter-Racial Problems. Edited by G. Spiller. London: P. S. King and Son. Pp. xlvi. + 485. Price 7s. 6d. net.

There is a field for national and racial coöperation, in which no bounds are fixed, where no racial antipathies need enter, where inter-ethnic relations of the most intimate kind may exist, and where the "better understanding" and "friendly feelings" so properly desired by the promoters of the Universal Races Congress may have full scope. Science is rapidly becoming the great healer of national and racial discord, for it knows no colour barriers, and no distinction of language or religion. It is, in a word, universal, and its beneficial discoveries have become the common heritage of mankind. No department of science has perhaps contributed so largely to this humanising process as the science of medicine. The history of medicine from the time of HIPPOCRATES shows that it has always borne a foremost part in the general diffusion of knowledge and the better understanding of nations. Scientific medicine has been a true international missionary. The discovery by KITASATO of the bacillus pestis is as well known and appreciated as the work of LISTER or KOCH. The common aim of all medical research, in whatever part of the world carried on, is disinterested inquiry into the laws that govern health and disease, so as by their better understanding to lessen the sufferings of humanity. It cannot be denied that this must prove a powerful factor in bridging the gulf of race, and every fresh discovery in the field of medicine fortifies the growth of that comity of nations and races which the members of the Universal Races Congress so eagerly await. In every branch of scientific medicine there is now an international congress, and apart from the contributions to medical science it would be difficult to over-estimate the value of these cosmopolitan gatherings in the removal of national and racial prejudices. We are in complete accord with the ideals which the Universal Races Congress would endeavour to promote, but until mankind shall have developed more the attributes of Deity we cannot believe that so close a bond of brotherhood as racial admixture would be other than provocative of disaster. To help the evolution of the peoples towards such an end is an admirable ideal for all scientific men, for the world will be a finer place when it is ready for such fusion of its various populations; but to press now for miscegenation is premature, and likely to obscure for serious persons the value underlying the purposes of those who promoted the first Universal Races Congress.

Women and Medical Research.

THE Introductory Address delivered on Monday last at the London School of Medicine for Women by Sir HENRY BUTLIN, the President of the Royal College of Surgeons of England, will attract the notice of all who are interested in medical research and in the future of medical education for women, two subjects which may be regarded as one to this extent, that the capacity for research, whatever its object, must usually be the finest development of education, whatever the sex of the worker. Sir HENRY BUTLIN'S words are always eloquent and to the point; nor does he flatter when criticism is called for. In his address he briefly surveys the field of medical research by way of preface to remarks on the fitness of women to labour therein. He compares and contrasts the two methods of research—the

method by observation and the method by experiment, and that the former is nowadays out of fashion, at least in medicine, seems to us to be a matter for regret. Experiment, of course, is more attractive to modern minds, impatient of interruptions and delay, but with all its rapid and striking results it is a two-edged weapon, and it cannot take the place of accurate and patient clinical observation. Its value as an accessory to the fruits of bedside labour is enormous. There is, in short, room for both methods; some problems are best suited to one, some to the other, and those who would approach all questions exclusively from one direction must in a short time appreciate their ill equipment. In the case of cancer research, for example, as Sir HENRY BUTLIN clearly shows, each method supplements the other and neither can replace the other. In view of modern tendencies this, we think, should be pointed out, while the restriction of research to such procedures as those which at first sight have an immediate utilitarian object is clearly impossible. Here we would quote the admirable words of Professor F. GOTCH, which, although spoken some years ago on scientific investigations in general, may well be applied to medical research in particular. He said that the scientific method demands of the worker "that he should deem no natural phenomenon too insignificant or too ignoble for investigation, that he should grudge neither time nor labour in making and repeating observations and experiments, that he should have the fear of error constantly before him, and that he should be unaffected by any consideration as to the immediate practical utility of his work." It is, of course, a fact that the man who works solely for an object so cramps his scope that, when the longed-for object is really attainable, he may not recognise his own success.

Turning to the past work and future prospects of women in medical research, Sir HENRY BUTLIN dwells on the qualities of mind and heart necessary for scientific investigation, and declares that in such important characteristics as humanity, patience, industry, cleanliness, perseverance, enthusiasm, and manual dexterity women are as well equipped as men. And here he plants a shaft of criticism: he suggests that women cannot be relied on to furnish accurate records of fact. This is indeed a serious allegation, for extreme and habitual accuracy in making and recording observations is vitally necessary in every branch of scientific research. If it be true that intelligent and highly-trained women cannot be trusted to make accurate records of simple business affairs, then clearly they cannot be trusted to conduct and record investigations, and so long as this is the case they are not fitted for research. We hope that this question of accuracy and sex, now that it has been raised by so eminent an authority, will be sifted without passion or prejudice. Women are challenging men in every intellectual field, and in so doing they invite criticism and comparison. The charge of inaccuracy should awaken, not resentment, but anxious thought and inquiry. If, so far at least as medical and scientific women are concerned, the allegation falls to the ground, then they will be the gainers. If impartial inquiry upholds Sir HENRY BUTLIN'S suggestion, we should be disposed to lay the blame upon the upbringing of women and not upon their sex. Between diligence and true accuracy there is a distinction which is not solely temperamental, but is largely a matter of education. Accuracy in science implies trained intelligence. The habit of accuracy cannot be acquired suddenly, but must be developed during youth as an integral part of the character. If women are inferior to men in this respect then their progress in research will wait upon the heels of reform in the methods of general education for women. OLIVER WENDELL HOLMES, when asked at what age we should begin to live aright, answered, "Two hundred years before we are born," an answer which took into consideration the influence both of a long heredity and a stable environment. As Sir HENRY BUTLIN points out, few women up to the present have taken up medical research, though the success of CAROLINE HERSCHELL and Madame CURIE in other lines of scientific investigation proves that the highest positions may be open to them. Mr. BUTLIN'S interesting and suggestive address ends on a note of inquiry. Granted all other requisites, have women the breadth of mind to originate and to organise independent research, or are they only suited to carry out work designed and directed by men? Can they lead in science or must they always be led? Sir HENRY BUTLIN does not know, he will not predict, but he would have them try. His hearers no doubt took this as qualified encouragement.

Pioneer women have fought long and bravely for equal rights and opportunities for their sex in the world of medicine, and bit by bit their claims have been recognised and conceded. It can scarcely be said that women are already on equal terms with men in every professional respect; but many harsh disabilities have been removed, and a woman can now receive an excellent medical education under conditions almost as favourable for developing skill, knowledge, and resource as those offered to male medical students. If the relative opportunities as between the two sexes are ever really equalised, it may then be possible to decide whether women are inherently fitted to rival men, not only as clinicians, but also as original investigators. At present the conditions are not alike, and we venture the opinion that the full handicap will not be lifted from medical women so much by throwing open demonstrations or degrees or appointments to them as by revising the environment and training of school-girls, and especially of those who show early aptitude and inclination for intellectual pursuits.

Annotations.

"Ne quid nimis."

JUSTICE FOR THE JUKES.[1]

WE welcome a reprint of this well-known work, the last edition of which was published in 1877. "Juke" is the pseudonym given by Mr. Robert L. Dugdale to a family whose environment and lineage he investigated through seven generations, beginning with one "Max," a descendant of the early Dutch settlers, who was born between 1720 and 1740, and lived the life of a backwoodsman in New York State.

[1] The Jukes: A Study in Crime, Pauperism, Disease, and Heredity. By Robert L. Dugdale. With an Introduction by Franklin H. Giddings. Fourth edition. London and New York: G. P. Putnam's Sons. 1910 Pp. 120. Price 5s. net.

Two of his sons married two out of six sisters named "Juke," and the descendants of five of these sisters, to the number of 540, as well as 169 related by marriage or cohabitation, have been traced. They include criminals, prostitutes, inebriates, and paupers, as well as respectable persons. Robert Dugdale was a man with great powers of observation and sound judgment. His views, put forward more than thirty years ago, are fully in accord with the modern tendency to attribute ever-increasing importance to environment at the expense of heredity. There is considerable irony in the fact that his book should be so often cited as supporting precisely the opposite view. For this record of the Juke family has been quoted over and over again as an instance of the force of heredity in relation to crime, inebriety, and social degeneration. Upholders of the eugenic movement have delighted to draw a moral from the supposed story of the Jukes, and have often done so in a prominent way in our own columns, where recently the following can be found: "Then there is the famous Juke family. Ada Juke, known as the 'mother of criminals,' left 1200 direct descendants, of whom nearly 1000 were criminals, paupers, inebriates, insane, or on the streets. The cost to the State directly in consequence of this inheritance was £260,000, while the indirect loss cannot be estimated." We have taken the same line, but if the original book is read in the light of Professor Giddings's preface it seems that the Juke family have been unfairly treated. The statistical summary shows that of the 709 descendants of the five sisters and those of "x" blood there were 76 criminals, 142 who received outdoor relief, and 64 in almshouses. No special investigation into the number of mentally deficient persons is recorded, but the tables show only one person of Juke blood as insane and one idiotic. The inferences in respect of inheritance cannot be justified. Professor Giddings points out in the introduction that the book is in no way a demonstration of hereditary criminality or degeneracy, and that the author never made any such claim for it, forgetting that a series of recorded facts might have a lesson which the recorder did not seek to convey. But he utters a caution against mistaking coincidence for correlation, which has clearly been needed, for wherever the facts appear to indicate the inheritance of vicious tendencies he points out that they can be explained as the result of a continuous bad environment. On the other hand, he quotes instances of children of vicious parents who under the influence of a new and good environment have become useful members of society. The general conclusion to be drawn from the book is that where the organisation is structurally modified, as in idiocy and disease, heredity is the preponderating factor in determining the career. In other cases the environment has more influence than the heredity. Pauperism and crime are to be overcome by training and education. The investigation into the Juke pedigree provides material for illustrating the fallacies which are frequently made when dealing with a "family" without having given a scientific definition to that word. Usually deductions are based on the assumption that a family consists of a number of persons who have descended from a single pair in a kind of ever-broadening stream. It is forgotten that were it not for the marriage of cousins an individual of the seventh generation would have 64 ancestors of the first generation all standing in precisely the same relation to him, and 126 ancestors altogether. In the loose statements made about the family of Juke the outside blood is always ignored, and the unfortunate "Ada" is made responsible for all the criminals, and this to an exaggerated number. In her detailed biography she is described as being "temperate and not criminal"; the worst things against her are that she was a harlot before marriage and was not industrious. Similar descriptions apply to most of her children. It is from those who married into the third and fourth generations that the worst strains seem to have been introduced. An interesting instance is given in the case of "Bell," the second sister. Her three eldest illegitimate children are described as being honest, industrious, and self-supporting. The fourth child was not a criminal, but he married outside the Juke blood, and among his children are found criminals. If any inference at all is justified, it is that the "x" blood and not the Juke blood was responsible for these particular criminals. Yet everyone believes, because we have been so often told it, that the Juke strain was the one at fault. A false impression once generally accepted is difficult to correct, but we hope that this new edition of Mr. Dugdale's book will be read by those who wish to use its lessons in their public pronouncements.

THE INDIAN RESEARCH FUND.

LAST year the attention of the Government of India was directed to the opinion expressed by its expert scientific advisers that the progress of public health in India might be greatly advanced by the establishment of a special fund devoted to defraying the cost of research work in connexion with public health and hygiene. After the question had received due consideration the Government accepted the views of its scientific advisers, and as a result it is now announced that a sum of 5 lacs of rupees has been set aside as an Indian Research Fund. The primary object of this will be to carry out the policy, which has already been adopted in India for some years, of making a direct attack upon certain of the more important epidemic diseases. It is very properly maintained that scientific investigations form the starting-point and basis of this policy, experience in other countries as well as in India having demonstrated that when the actual sources of infection and the mode in which it is transmitted have been definitely ascertained, the measures for preventing and controlling the disease become greatly simplified and are likely to prove far more effective than those recommended before such knowledge had been gained. From an editorial record in the recently published third number of *Paludism* (the organ of the Central Committee for the Study of Malaria in India) we learn that the organisation proposed for carrying out the objects of this newly established research fund is to be an association consisting of permanent and temporary members. The control and management will be vested in a governing body, of which certain members will be appointed to act as a Scientific Advisory Board, through whom proposals in connexion with the scientific objects of the association will be submitted. The proposals approved by the governing body will be carried into effect with the aid of working committees, of which the Central Committee for the Study of Malaria will be one. It is hoped to form committees to organise and carry on study in regard to the following: (1) medical entomology; (2) vital statistics and the more general problems of disease; (3) cholera; (4) plague; and (5) problems of practical sanitation and especially the preparation of schemes for model towns and other measures by which the efficacy of sanitation is demonstrated to the public. It will be seen that this programme includes further investigation of three at least of the most fatal but preventable diseases in India—malaria, plague, and cholera. Malaria annually carries off more than a million of the inhabitants of India, and in epidemic years a good many more. We have recently alluded to the terrible sacrifice of life caused during the last 14 or 15 years by plague in India, and this still continues; and as cholera has been epidemic in India for a long series

of years, and still slays thousands of the population every year, we rejoice to see that opportunity will be taken by means of the research fund to make further investigation with a view to lessen the serious mortality from it as well as from the two other diseases which at present are the scourges of India. It is particularly gratifying to find that general sanitation is to receive its due share of attention. The construction of sanitary works or buildings must lead to far-reaching and unexpected effects in benefiting the general health of the people. We also learn from *Paludism* that in anticipation of an allotment of money from the research fund the Central Malaria Committee has already formulated its proposals, which are to be submitted in due course to the governing body. These include research as to: (1) prevention of malaria among troops, (*a*) by experiments as to the best modes of protecting the soldiers, and (*b*) investigation into the efficacy of quinine prophylaxis among the military; (2) the institution of malariometric investigations; (3) inquiry into the bionomics of anopheles; and (4) inquiry into education propaganda. The carrying out of these and similar researches cannot fail to prove of benefit to the inhabitants of India, while contributing largely to the general stock of available knowledge. The money voted to the research fund we feel sure will prove a good investment, leading to the reduction of the high death-rate in India, besides preventing much unnecessary suffering.

PLEURAL EFFUSION WITH RIGIDITY OF THE PLEURA AND MEDIASTINITIS.

AT a meeting of the Société Médicale des Hôpitaux of Paris on June 30th M. Millardet reported a case of pleural effusion with an unusual complication which produced a puzzling combination of signs. A youth, aged 19 years, previously in good health, was seized with rigors and pain in the left side on Feb. 18th while in Paris. He did not seek medical advice, but returned home to Rennes, and was admitted to the Hôtel Dieu on the 24th. On percussion the left chest all over, in front and back, was absolutely dull, suggesting a large effusion with a lung so collapsed that air no longer entered it. But on auscultation M. Millardet heard to his great surprise well-marked double pleuritic friction, such as would be found in cases of a small effusion. As in the latter, he also found well-marked ægophony and whispering pectoriloquy. Vocal fremitus, which with so much dulness should have been abolished, was present, and scarcely less than on the right side. In certain cases of pneumonic consolidation of the lung a small amount of pleural effusion may, in consequence of the incompressibility of the lung, mount high in the pleural cavity. But in such cases there are dyspnœa, expectoration, tubular breathing or râles, and displacement of the neighbouring organs by the effusion, which is under pressure. In this case there was no dyspnœa, cough, or râles—a remarkable fact with an effusion reaching to the clavicle—though the heart was displaced two finger-breadths to the right of the sternum. Traube's space was not encroached upon and remained tympanitic. There was only one plausible hypothesis—infiltration of the pleura producing rigidity. Assuming this, the fluid could not push back the lungs or neighbouring organs; it would with difficulty separate the parietal from the visceral pleura, and, though in small quantity, might extend through the whole thorax. It would be necessary that the whole pleura, visceral and parietal, mediastinal and diaphragmatic, should be rigid. The only exception would be the layer covering the pericardium, as the heart would offer resistance to pressure; but in this case it would suffer compression, producing dyspnœa. As none was present the rigidity of the pleura must in the present case be general. The objection arose that such rigidity usually occurs in adults who have long been subjects of chronic rheumatism or chronic infection. In this case there was nothing to suggest syphilis or tuberculosis. Paracentesis was decided on, but its difficulties were foreseen. Fluid contained in a rigid cavity might not yield to aspiration unless the admission of air was provided for. A second needle was prepared for this purpose. The *interne* failed to pass the trocar into the pleural cavity, though forewarned of the difficulty and used to paracentesis. It was passed with difficulty by M. Millardet in consequence of the great resistance of the pleura. 1600 grammes of brownish sero-fibrinous fluid were withdrawn. Contrary to what usually happens in paracentesis, the lung was never once felt beating against the cannula. This was explained by the want of suppleness of the visceral pleura which held down the lung. After the paracentesis Traube's space was exactly as tympanitic as before and the cardiac apex remained two finger-breadths to the right of the sternum. Evidently the pericardium had contracted adhesions to the mediastinum. Cytological examination of the fluid showed some red blood corpuscles and numerous lymphocytes—a condition which was in favour of a tuberculous origin of the pleurisy, but did not exclude syphilis. It was intended to perform the Wassermann reaction, but the patient left hospital on his own initiative. He was seen again a month later. The heart had almost regained its normal position and pleural friction was present. The pulse was 126—a fact which was in favour of the diagnosis of tuberculosis in spite of the apparently robust appearance of the patient. The case not only offers an interesting problem in diagnosis but is important in regard to treatment, for it gives warning of the difficulties of paracentesis.

THE PHARMACIST OF THE DAY.

Dr. J. Macdonald Brown, at the opening of the session of the School of Pharmacy of the Pharmaceutical Society on Wednesday, Oct. 4th, delivered an interesting inaugural address with the above title. Disclaiming any intention to trace the history of pharmacy through the ages, he none the less dwelt humorously upon the evolution of pharmacy from alchemy and the gross quackery of the ancient nostra to its present position as a scientific profession. Of the National Insurance scheme he hoped good things, but while speaking of advances made, and still to be made, in the State recognition of pharmaceutical work, he alluded to a recent piece of legislation in severe terms. "One cannot but regret," he said, "the step taken by the Government when, in 1908, the legislature sanctioned a change in the poison laws, by which arsenic and the alkaloids of tobacco were liberated from the operation of the Poison Schedule, and it became enacted that certain classes of ordinary tradesmen (men who had received no education or training in the handling of poisons) might sell these dangerous poisons to the public, simply by the acquirement of a licence from the public authority in their particular town or district—a licence which appears to have been granted in most cases as a mere matter of form. To think that such looseness of action in a matter so important could have been sanctioned by any Government in the world is monstrous and incredible." Dr. Brown then described the course demanded of the pharmaceutical student, in the course of which he bewailed, as too many of those interested in medical education have had to do, the tendency of the present day to spoon-feed those in the state of pupillage. In addition, he said, to lectures, demonstrations, and text-books, coaches and crams of the most varied character abounded, and in

his opinion these flourished mainly because the tendency of the day was to work for the examination and not for the knowledge itself. This is certainly true, but it also is a position exceedingly hard to alter. Examinations are necessary; such tests must be rigorously applied for the protection of the public, and all that educational authorities can do is to see that the character of the examination is kept as practical as possible, that due stress is laid both in the papers and in the *viva voce* questions upon essential principles, and that the examiners are selected with regard to the responsibilities which they have to discharge.

WOODY PHLEGMON OF THE NECK.

IN 1893 Professor Paul Reclus described under the name of "woody phlegmon of the neck" a form of inflammation which he believed to have been previously unrecognised. He said that the condition occurred in men over 50 in broken-down health, but free from other disease. A slowly extending, board-like infiltration developed in the neck, sometimes in front, sometimes at the side. The skin gradually became of a wine-red, blue, or purplish colour. There was no fever or pain. At first cancer of the skin was simulated, but after five or six weeks œdema and fluctuation appeared, and pus was discharged spontaneously or after incisions. The phlegmon then slowly healed, but in one case the patient succumbed to œdema of the glottis. Professor Reclus thought that this form of inflammation might occur in other parts and be confounded with cancer, actinomycosis, or tuberculosis. He believed that it was due to microbes of low virulence. Cases were subsequently described by many other surgeons on the continent. In the *Journal of the American Medical Association* of July 29th Dr. Charles A. Powers has reported three cases. In the first a labourer, aged 50 years, in poor health, came under observation with a hard, fixed, bluish mass, something resembling a flattened apple, in the middle line beneath the lower jaw. The history was that he had suffered from a tender swelling in the floor of the mouth for one month. This had twice been incised with discharge of pus. The swelling beneath the jaw came on slowly, painlessly, and progressively. On examination it was of stony hardness and fixed to the deep tissues; the skin was adherent and slightly œdematous. A provisional diagnosis of carcinoma was made. Under local anæsthesia the swelling was deeply incised. The cut surface was hard and greyish-white; no pus was encountered. A piece was submitted to Professor J. A. Wilder of Denver for microscopic examination, and he reported it to be fibrous inflammatory tissue. Treatment consisted in local moist applications and tonics. In three weeks the mass greatly increased in size and small superficial foci of suppuration appeared. On incision they yielded thin pus containing staphylococcus pyogenes albus and aureus. After three or four weeks the mass began to diminish slowly, and the patient passed from observation. He was seen again four months after the onset. There was some thickening beneath the jaw, and its movements were somewhat restricted. During the height of the swelling deglutition was interfered with. In the second case a man, aged 45 years, was seen. Two months before he had suffered from infection round the left parotid gland, and on incision a little thin pus was evacuated. The inflammation did not subside, but extended to the left side and back of the neck, painlessly and without fever. On examination the whole of the left side and back of the neck showed a diffuse hard swelling which extended from the occiput and mastoid process above to the level of the spinous process of the fourth cervical vertebra below, and forward towards the jaw and across the median line. The swelling was fixed, and the overlying skin was attached to it and somewhat discoloured. It gave the impression of malignancy. On incision it was hard and whitish, and looked like carcinoma. Complete removal was impossible. Professor Wilder examined excised portions and reported that the condition was inflammatory fibrosis of muscles and fasciæ. At no time while the patient was under care was there suppuration. The patient died three years later, but the cause of death could not be ascertained. In the third case the woody phlegmon followed acute inflammation of the connective tissue of the neck (Ludwig's angina). In a recent letter to Dr. Powers Professor Reclus states that he does not consider woody phlegmon a definite morbid entity, but a reaction which can be provoked by any pathogenic germ, not only by the ordinary agents of suppuration but also by fungi (actinomycosis and sporotrichosis). The reaction is characterised by the formation of fibrous tissue and may occur in other regions than the neck, for example, around the abdominal viscera, especially in the right iliac fossa or around the kidney. The so-called perinephritic sclerosis is practically a woody phlegmon.

THE LONDON MEDICAL EXHIBITION.

THE London Medical Exhibition held annually in the Royal Horticultural Hall, Vincent-square, Westminster, continues to gain support from professional visitors. The exhibition, which was held this week, revealed a further development upon scientific lines, which proves that, apart from the commercial aspect of the meeting, a real opportunity is offered to the surgeon and physician and their assistants to become practically acquainted with recent advances in pharmaceutical preparations, special dietetics, surgical appliances, sanitary devices, and so forth. The exhibition attracts also the manufacturers who provide the profession with its armamentarium, and the result is that the medical man finds his visit interesting and instructive. The invitations to the demonstrations are sent to medical men only, a plan which secures an audience bent on seeing all that counts for progress in medicine and a class of demonstrator which issues no appeal to the layman. The increasing success which attends this exhibition year by year must be attributed to this policy, for it draws larger attendances on each occasion, and its professional character is well maintained. The exhibition this year has been marked particularly by the excellent demonstrations given of advanced therapeutics and of fine pharmaceutical products, while a further interesting feature was formed by the exhibitions given of the applications of radio-activity in medical practice.

LIGATURE OF THE SPERMATIC ARTERY IN THE OPERATION FOR VARICOCELE.

SOME eight years ago Dr. E. Styles Potter of New York advocated the treatment of varicocele by ligature of the spermatic artery as well as the veins, and now, in the June number of the *International Journal of Surgery*, he reports on 214 cases of the employment of his method, and the results which he has obtained have served only to strengthen his opinion of its value. It is generally held that it is important to avoid tying the spermatic artery when excising the spermatic veins, as otherwise atrophy of the testis is liable to occur. Dr. Potter, however, has never seen atrophy following his operation. He has been able to follow up 67 of the 214 cases, and some of these for several years, and in none of these was any atrophy to be seen. In one case orchitis appeared, but no cause for it could be found. Relaxation of the scrotum with ecchymosis of the scrotum and penis frequently occurred, but it passed off in a few days. Dr. Potter considers that when the spermatic artery is tied the blood-supply of the testis is carried

on by the artery of the vas deferens, so that he sees no reason why atrophy should occur. He has not yet tried ligature of the spermatic artery without at the same time tying the veins, but he hopes that it will be done, and he says that he expects that a gradual atrophy and absorption of the veins will occur. It is probable that the artery has been sometimes tied unintentionally, for it is not easy to distinguish the spermatic artery from the veins at an operation.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DURING October a series of demonstrations of museum specimens will be given by Professor A. Keith and Mr. S. G. Shattock. The series commences on Friday, Oct. 13th, at 5 P.M., when Professor Keith will deal with specimens added to the museum during the last three years illustrating "Various Recent Discoveries in the Anatomy and Pathology of the Heart." The second demonstration will be given by Mr. Shattock on Monday, Oct. 16th, at 5 P.M., on specimens illustrating "Necrosis," a section of the museum which is being greatly extended at present. The other demonstrations will also be given on Fridays and Mondays throughout the month as announced in our "Diary of the Week." Recent additions to the museum provide Professor Keith with an opportunity of giving a very complete exhibition of the lesions seen in acromegaly.

THE PRESERVATION OF VACCINE VIRUS IN HOT COUNTRIES.

WE have received from Dr. J. Dickson Hunter, of Arequipa, Peru, the paper to which he alluded in our columns last week. This was originally published in the *Bulletin de la Société de Pathologie Exotique* by M. Pierre Achalme and Dr. Marie Phisalix, and gives details of what is described as a practical method of preserving vaccine lymph in tropical countries. They find that the glycerination of the lymph is less efficacious in hot climates than in temperate ones. The glycerine prevents the development of the bacteria present in the epidermal débris existing in the lymph. This bactericidal action is, however, apparently not directly produced by the glycerine, but by the soluble ferments present in the cells and extracted by the glycerine. It is found that the preservation of the vaccine in hot countries is more certain if glycerine is added to the crude material derived from scratching the vesicles than if this is previously rubbed up and triturated. The reason of this is that these procedures set free the intracellular ferments more completely, and that these are more powerful at temperatures near 37° C., and therefore attack the vaccinal agent as well as the extraneous organisms. After many trials M. Achalme and Dr. Phisalix have adopted the method of desiccation as the best means of preserving the vaccine at warm temperatures. They state that this observation is not absolutely new, since Wurtz of the Belgian Vaccine Institute has shown the advantages of the procedure, and Carini has demonstrated the increased resistance of powdered vaccine to raised temperatures. M. Achalme and Dr. Phisalix suggest that this process of rapid desiccation hinders the growth of bacteria and the activity of the soluble intracellular ferments, but they maintain that in order to obtain these effects it is necessary to secure complete desiccation and to preserve the dried material in sealed tubes because of its hygroscopic properties. The method they have adopted is to take 30 grammes of crude vaccine, obtained directly from heifers, and to dry it rapidly *in vacuo* on porous plates in the presence of sulphuric acid. After 12 hours the process of desiccation is complete and the vaccine is converted into a horny brittle mass. Some of this material they have preserved in sealed tubes in an incubator at a temperature from 37·5° to 38° C. for a year, and on inoculating it into heifers have obtained a typical eruption of vaccinia. They have also found that the vaccine keeps better in fragments than in powder, and better *in vacuo* than in contact with air. On investigating the effect of various temperatures they have found that after keeping the vaccine for six days at 57° C. it would still give a reaction, but that it was much weakened, that a temperature of 45° C. was also slightly injurious, but that those of 41° C. and 42° C. exerted no harmful action. They therefore recommend the adoption of this method for the transport of vaccine to tropical countries. The dried vaccine can be very readily prepared for use, since in virtue of its marked hygroscopic character it will readily absorb either normal saline solution, weak glycerine and water, or sterile water, any of which rapidly convert it into a pulpy mass very convenient for use. The supply of active vaccine for warm climates is an important matter. The method described has the merits of simplicity and convenience, and if it can be shown that the growth of extraneous organisms is equally well prevented by its use as by glycerination, it should prove a valuable help in the preservation of vaccine for these climates. Dr. Dickson Hunter's interesting letter sufficiently proves the need for a desiccated and efficacious vaccine.

HEMLOCK AS A STATE POISON.

IN ancient Athens the prisoner condemned to death was made to drink the juice obtained by the decoction of hemlock (κώνειον, the Latin *cicuta*), the seeds of which were pounded in a mortar as the first step in the preparation. The poison acted slowly, its efficacy consisting of its refrigerating power (the *vis refrigeratoria*, according to Pliny the Elder) —a process which spread from the lower extremities to the heart, when death ensued accompanied by spasm or convulsions, symptoms expressly noted by Plato in the case of Socrates. Its action was antagonised by wine, which was often used as an antidote, beating the patient, and so impeding its characteristic action, a result also obtained by the effort and excitement of discussion, as was stated to Socrates by the expert in whose charge he was, so that the dose had often to be readministered to a talkative subject once or even twice. Phocion, the great antagonist of Socrates (according to Plutarch), was put to death by the draught of hemlock as prescribed by the State, and before him, as narrated by Xenophon, Theramenes was executed by the same method. Of late years some doubts have been thrown on Plato's account of the drug's action, hemlock juice (it is alleged) producing symptoms of a quite opposite kind. These doubts, however, have just been disposed of by the professor of materia medica in the Medical School of Dundee, Dr. Charles R. Marshall, who, in a note communicated to Professor Burnet of St. Andrews, the most recent editor of the "Phaedo," maintains the soundness of Plato's narrative, the doubts referred to being, in his opinion, "unworthy of serious consideration." Although he admits that *Conium maculatum* is somewhat peculiar in its action, and that the symptoms ensuing on its exhibition may vary with the dose, and probably with the individual, still he is decidedly of opinion that the death of Socrates was due to the said conium and in the manner described by Plato. The whole subject of poison in antiquity as a means of State-execution or of suicide is deeply interesting and might well inspire a special treatise at the hands of the toxicologist. Bull's blood is said to have been taken with lethal purpose and effect by Themistocles, and Phocion's great rival Demosthenes,

according to Plutarch's dramatic account, took poison in the Temple of Poseidon, graduating the dose, which he sucked from the point of a writing-quill, so that it might not take effect till he was well out of the sacred precincts, which were thus immune from desecration by self-murder committed within them. Hannibal is said to have carried in a ring the poison by which he committed suicide; but what that poison was is still a matter of controversy, as is also that employed by Demosthenes. In mediæval times such methods of "cheating the gallows" were common enough—witness the cynical self-possession with which (in Scott's "Fair Maid of Perth") the mediciner Henbane Dwining baulked his executioners on the ramparts of Falkland Castle.

THE ASYLUMS OFFICERS BILL.

A BLUE-BOOK has been issued containing the special report of the Select Committee on the Asylums Officers (Employment, Pensions, and Superannuation) Bill. The committee, we are glad to note, shows a full appreciation of the very arduous and responsible duties imposed on asylum attendants, and recognises that the conditions under which these duties are carried out must be materially improved if a proper standard of excellence is to be maintained in the personnel of our institutions for the insane. At present, according to the estimate of the Lunacy Commission, the number of hours' work required of the asylum attendants averages for England and Wales 84 per week. This is obviously excessive, especially when regard is had to the nature of the work, much of which, as the committee justly observes, is tedious, monotonous, wearing, and not free from some personal risk. That a more reasonable system is quite practicable is shown by the example of the London County Asylums, in which the male attendants work on an average 66 hours on the day and 63 hours on the night staff, and the nurses 72 hours on the day and 65 hours on the night staff. Considering the demand which the nursing of the insane makes on tact and temper, these hours seem quite long enough, and this view, we may add, is to be urged not less in the interest of the patients than of the attendants themselves. The committee recommends that Parliament should impose a statutory maximum, and it suggests as a reasonable limit 70 hours a week for the day staff and 60 hours for the night staff. It deprecates, however, any attempt to introduce a stereotyped system, and it advises that within the statutory limits each visiting committee should be empowered to draft its own scheme of hours of duty and periods of leave. It is satisfactory to note that the committee disapproves strongly of the proposal to pay overtime, a system which in asylum work has obvious disadvantages as compared with the alternative method of allowing equivalent leave for extra duty. With regard to superannuation, it is very reasonably suggested that as the salaries of nurses are generally lower than those of male attendants, an effort might be made to redress the balance by granting pensions to nurses on a higher scale. The Bill, as amended in committee, should go a long way towards removing the very real grievances under which asylum attendants have laboured; it is therefore to be welcomed as a measure of justice to a very deserving body of public servants, and further, as a reform which must tend to promote the efficiency of the institutional care of the insane.

THE first Hunterian lecture will be delivered by Dr. T. B. Hyslop on Oct. 11th, at 9 P.M., on "Intracranial Murmurs in their Relationship to Tinnitus Aurium," at the London Institution, Finsbury-circus. The lecturer will deal with some of the more important of the anatomical and physiological problems of intracranial physics, including the pulsatile, respiratory, and peristaltic movements of the cranial contents. Examples will then be given of morbid affections of the vascular and lymphatic systems which may, in some instances, be attended by acoustical phenomena, which may be observed both subjectively and objectively. All members of the medical profession are invited to attend.

THE undermentioned gentlemen have received the authority of His Majesty the King to accept and to wear the decorations which have been conferred upon them by His Highness the Khedive of Egypt—viz., the Third Class, Imperial Ottoman Order of the Osmanieh, to Mr. Alexander Granville, of the Egyptian Ministry of the Interior; and the Third Class, Imperial Ottoman Order of the Medjidieh, to Dr. Reginald Gower Kirton, Chief Medical Inspector of Prisons, Cairo.

THE death has occurred of Dr. Joseph Bell, of Edinburgh, consulting surgeon to the Edinburgh Royal Infirmary, for many years editor of the *Edinburgh Medical Journal*, and admitted by Sir Arthur Conan Doyle to be the prototype of Sherlock Holmes.

THE Harveian Oration will be delivered by Dr. C. Theodore Williams at the Royal College of Physicians of London at 4 o'clock on Wednesday, Oct. 18th.

REPRESENTATION OF HONORARY MEDICAL STAFFS UPON BOARDS OF MANAGEMENT OF VOLUNTARY HOSPITALS.[1]

BY ERNEST S. REYNOLDS, M.D. LOND., F.R.C.P. LOND.,
PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY, AND CHAIRMAN OF THE MEDICAL BOARD.

SOME ten years ago, owing to an acute disagreement between the lay and medical elements of one of the London hospitals, a series of articles appeared in the *Practitioner*[2] on the question of hospital management from the lay and the medical points of view. The arguments in favour of medical representation on boards of management are so convincing that further discussion on the subject seems to me to savour of the profitless undertaking of flogging a dead horse; and I was unwilling to undertake the request that I should read this paper until I learned, with surprise, that there are still hospitals in this country in which such arrangements do not exist.

To shorten my argument, I take it for granted that every hospital possesses a lay board of management (composed entirely, or almost entirely, of laymen) and a separate medical committee (composed of the honorary medical and surgical staff), and these I will allude to below as "the board" and "the staff" respectively.

Now it is always well in dealing with an adversary in argument to consider as calmly as possible why it is he can persist in being so adamant as not at once to alter his opinion in accordance with the views you put before him, and so far as I can surmise the reasons for a purely lay administration of hospitals are: (*a*) the question of ownership, (*b*) the finding and spending of money, (*c*) business capacity, (*d*) possible censure of one or more members of the honorary staff, and (*e*) lay suspicion of medical hospital practice. I will consider these seriatim.

(*a*) *Ownership.*—I suppose that in law a voluntary hospital is owned by the trustees, who are entirely, or almost entirely, laymen, and it naturally seems to follow that they should manage their own property. This highly complex organism, a hospital, comprises not only buildings and paid lay and medical officers, but also as a most important and indispensable part of its working units an honorary medical staff; and

[1] A paper read at the Conference of the British Hospitals Association, held at Manchester, on Sept. 29th, 1911.

[2] Vol. xiii., 1901.

just as the paid officers have naturally no voice in the management, so it is supposed that the honorary staff should have no voice. But it should be remembered that a large number of hospitals in this country have been initiated by medical men in the district, partly from philanthropic motives, and partly, to put it broadly but in no sinister sense, for purposes of self-education and advertisement, and it seems somewhat arbitrary that having once started the hospital they or their successors should take no further part in the management. Secondly, the honorary staff are not paid except indirectly by the experience gained and the advertisement of being on the staff, and if owing to bad management the hospital is a failure the reputation of the staff may suffer enormously.

(*b*) *The finding and spending of money.*—The obtaining of money to maintain a hospital is largely the work of the board, but this does not seem to me to be a reason why the staff should not have a voice in the expenditure. I am sure the Chancellor of the Exchequer could not well object to the First Lord of the Admiralty and other members of the Cabinet having a "say" in the Naval Estimates. Moreover, it is by no means unknown for members of the honorary staff not only to contribute to the funds of the hospital, but also to obtain large sums from their richer patients.

(*c*) *Business capacity.*—It is frequently stated, and in the articles in the *Practitioner* already alluded to is rather insisted upon, that members of the medical profession are very lacking in business capacity. I admit that some of them are, but I have seldom known a successful medical man who was not businesslike in his habits. Want of business capacity is a fault which has been commonly associated for centuries with scientists and artists and has frequently been made the subject of mirth, and in spite of this, such unbusinesslike people have won the greatest renown, often, however, without making great fortunes. But taking the average run of successful doctors they are in my experience quite as businesslike as other members of the community. I have even known more than one unbusinesslike lawyer.

(*d*) *Possible censure.*—It may be urged that if it is deemed necessary to censure a member of the honorary staff either for irregular attendance or irregular conduct it would be difficult to do so if the member himself or one of his colleagues is sitting on the board. But, firstly, such occasions are very rare; and, secondly, it is exactly on such occasions that mistakes may be made by laymen which a word from a member of the staff will rectify at once and so prevent possible friction and misunderstandings.

(*e*) *Lay suspicion.*—Finally, it may be argued that the staff should not be represented on the board because of the suspicion which many of the lay public unfortunately have about medical work in hospitals, and especially in hospitals to which medical schools are attached. The idea is that "the doctors must be looked after." I do not believe there is the slightest foundation for this suspicion, but, knowing that it exists, I think it is in the highest degree desirable that hospitals should be managed by laymen, who should be in overwhelming preponderance in number on the board. But this is no reason why some of the board should not be drawn from the staff—rather, indeed, that they should be present, so that they may hear at first hand, and be able to correct at once, unjust allegations made against them or their colleagues.

The above are the only reasons I can think of for the exclusion of staff representatives from boards of management; possibly other reasons may be brought forward by the members of this conference.

Let us now consider reasons why the staff should be represented on the board. It is obvious that some means must exist by which the views and requests of the board and of the staff can be communicated one to the other. The three methods of intercommunication are: by resolutions placed on the minute book or forwarded by letter; by conference; or by direct representation of members of the staff on the board. A point arises here which may be at once disposed of. It may be argued that if the staff is represented on the board of management the latter should be represented at the meetings of the staff. But as a matter of experience, the meetings of the staff are taken up almost entirely with purely medical or teaching matters, and also (at any rate at the Manchester Royal Infirmary), in the rare event of the board wishing to discuss matters with the full staff, a conference is always most readily arranged.

In the method by resolution or by letter the communication may be ignored by the other parties, it may be misunderstood or may not be clearly and fully worded, and may thus require a whole mass of correspondence, thus causing a delay of weeks or months over a matter which a personal explanation would settle in a few minutes. The method by conference is better, but again involves unnecessary delay in arranging a time and place to suit all parties. By regular representation these delays and misunderstandings are at once done away with. Misunderstandings may and do arise first because of the different points of view from which lay and medical men look at certain questions, and, secondly, because of the somewhat extraordinary ignorance sometimes displayed by lay members of hospital boards about hospital matters, and not unfrequently even on matters relating to the very hospital on whose board they serve. This ignorance may be found more particularly in those members who may possibly attend quite regularly, but who are very busy public men who have already too many irons in the fire. Examples of misunderstandings because of a different viewpoint may arise on certain subjects which are principally professional but on which the layman sometimes thinks his knowledge is of great importance, such subjects as relate to the decoration, furnishing, ventilation, warming, and alteration of wards, the expense or utility of certain dietaries, the use of alcohol and the amount ordered, the necessity or otherwise for special medical and surgical appliances or methods of treatment proposed by the staff which some layman may consider to be a mere fad, or some method proposed by the layman which the staff know to be a fad; and last, but by no means least, letters which sometimes come, even in the best regulated institutions, complaining of the treatment which patients have received. By direct representation also matters which have been dealt with by the medical board and entered briefly on their minutes can be at once, if necessary, explained in full detail before the lay board. But in many other subjects which arise at the meetings of the lay board, such as those relating to pure finance, many legal matters, the management of servants (other than medical), the placing of contracts and similar purely business affairs, the layman is, and ought to be, paramount, and such matters are better left alone by the staff even if present at the board meetings.

I have worked at hospitals under lay boards both with representatives of the staff and without representatives. I was resident medical officer (and as such was also secretary of the medical committee) of the Manchester Royal Infirmary for the four years 1887 to 1890, and during this time I remember many differences of opinion between the board and the staff, some of these being of a somewhat acute nature; and at times each body, anxious to maintain its dignity, was as far apart from the other as the Lords and the Commons have lately been. This was a bad thing for the constitution of the hospital, but I was so used to this that I hardly knew there was a more perfect way. This I learned when as medical officer and visiting physician to the Manchester Workhouse Infirmary I was asked by the board of guardians to attend regularly at its fortnightly meetings. I then found how easy it was to straighten out in a few words what might otherwise, but for my presence, have been very crooked matters, and how as a result for the 16 years I was an officer of the Poor-law and in charge of a hospital of nearly 2000 beds practically no friction occurred, and certainly none of a lasting character.

About 11 years ago the board of management of the Manchester Royal Infirmary arranged to have representatives of the staff to sit with them, and as one of the physicians I have seen with the greatest pleasure the enormous improvement in the relationship between the board and the staff as compared with what I formerly knew, so that since this change I have never known any friction whatever to occur, and the utmost good feeling exists between the various members of the board and the staff. The system arranged seems to me to be so admirable that perhaps I may be permitted to describe it in a little more detail.

The board of management consists of certain lay trustees, 21 in number, elected by the general body of trustees at their annual meeting. This board meets once a month; exactly the same gentlemen meet once a week as a house

committee. The medical committee consists of all the members of the honorary staff, 23 in number, and meets regularly once a month to discuss any matters relating to the treatment and well-being of the patients, the diet sheets, surgical instruments, the sanitary state of the wards, the consideration of cases which have been over three months in the hospital, and all questions relating to the teaching of students. At the January meeting each year the medical committee elects by ballot four of its members to represent them on the board of management. As a rule—and it ought to be a rule—two of the elected members should be physicians and two should be surgeons, one of the four, however, being from time to time chosen from the honorary officers in charge of special departments, such as those of gynæcology, eye or ear diseases; and, as a rule—and again it ought to be a rule—no member should serve as a representative for more than two years in succession, for it is most important that no one member of the staff should obtain an undue influence on the board. These four elected members now become full members for the year of the board of management and are summoned by the general superintendent and secretary of the infirmary to all meetings of the house committee and the board of management and can take part in all discussions on any subject and can vote. As a matter of fact, they do not interfere as a rule with any subject with which they have no concern, such as finance, &c., to which I have already alluded as being purely lay in nature. They are there more to explain and, if necessary, to advise on points which I think all the members present would consider to be proper for them to deal with, and I do not know of any case in which the explanation or the advice has been resented.

As I have said, this system has worked in the most perfect way at the Manchester Royal Infirmary. At other hospitals, although the staff is represented on the board, its representatives are not allowed to vote. This is a point which does not seem to me to be of any great importance; the thing that matters is the actual presence of members of the staff with permission to explain and advise. At other hospitals the whole of the members of the staff sit on the board. If the staff is small in number and the lay members are preponderatingly large in their average attendance, I do not see any great objection, but otherwise I do, for if there is about an equality in numbers the public might think the staff was managing the hospital, and this is an idea which it is advisable should not exist. Another objection is that if the whole staff is allowed to attend then there may be occasions when no member of the staff is present, each depending too much on the others, for what is everybody's and anybody's work is nobody's work, whereas a few elected representative members of the staff have put upon them the duty of regular attendance. And it is very necessary that this attendance should be regular, for by experience I know how often at the end of some ordinary meeting, just as members are rising, some question is asked or some letter is read which at once fixes the members to their seats and keeps them there for another hour's discussion, and frequently such matters arise which involve and require medical advice and explanation.

I should like before closing to mention one comparatively small matter but which is important. At some hospitals, instead of, or in addition to, members of the active staff sitting on the board a member of the retired staff is present. This is to my mind undesirable, and especially so if he is the only medical member present, members of the active staff not being admitted. It is undesirable because members of the retired staff have a tendency to lose touch with or to lose sympathy with the work of younger men, and the advice they may give to the lay members of the board may be diametrically opposed to the views of the active staff and their presence on the board may become a hindrance to the progressive work of the hospital.

To summarise, I would suggest that in every hospital the staff should be represented on the board of management by some or all of its active members; that these members, if elected as representatives (which is the method I prefer), should be elected annually, should in no case serve for longer than two years in succession, and should be few in number, so that the lay members are always predominant. To those hospitals who have not yet tried this arrangement I would say, "Try it as soon as possible, I have seen the good results."

SOME ADMINISTRATIVE DEFECTS OF THE NATIONAL INSURANCE BILL.

BY GEORGE P. FORRESTER, F.C.S.

As is clear from a leading article in THE LANCET of Sept. 30th on the National Insurance Bill, medical and public opinion alike is a little in doubt as to the actual conditions prevailing in Germany. Therefore a consideration of the methods under which the German system is applied in practice may prove opportune, particularly in view of the absence in Great Britain of many measures upon which a scheme of this nature is naturally dependent, and which were in existence in continental countries prior to the introduction of this form of social reform.

A scheme designed directly to affect the vital interests of one-third of the entire population of the United Kingdom, and at the same time involving a fresh charge upon the national revenue in addition to the financial claims to be imposed upon an even greater proportion of the citizens of this country, represents a legislative measure fraught with far-reaching consequences which should be embarked upon only after a careful consideration of all the interests directly and indirectly involved, and after making due provision for safeguarding the legitimate claims of all persons coming within its scope. It is to be regretted that in the case of the National Insurance Bill these considerations have not prevailed more fully, for the framers of what is perhaps the greatest scheme for social reform ever presented to the British nation, a scheme fraught with vast possibilities for good and in its conception worthy of the highest praise, cannot be spared the reproach of having introduced a measure incomplete in many essential particulars. Especially they have neglected the creation of provisions absent in our country, but existent elsewhere, and of having disregarded the lessons taught by the experience of other countries. It was a comparatively easy matter to graft a measure of the nature of the National Insurance Bill on to the institutions and conditions in existence in Continental countries, and this fact has apparently been overlooked by our legislators, who in their endeavour to provide the British public with the kind of benefits enjoyed by these other countries have omitted to take into consideration the different conditions and customs prevailing at home, and have overlooked the imperative necessity of first providing similar conditions before adopting similar remedies. In their haste to rush the Bill through they avoided the inclusion of many essential administrative details, and by framing several of the clauses in vague terms they will invite disputes and frequent friction when an attempt is made to carry them into effect. This criticism applies particularly to the administration of the medical benefits, the supply of medicines, the future position of the hospitals, and the peculiar position and hardships awaiting a large section of the to-be-insured.

The unanimous and determined opposition of the medical profession which marked the introduction of the Bill affords an apt illustration of the mistake made in omitting more definite proposals for regulating the administration of the medical benefits. At the same time it shows that the framers were willing to commit the same error as their German colleagues, and instead of profiting from the lesson taught by the long years of strife that have marred the working of this scheme in Germany, and have led to the repeated occurrence of doctors' strikes in that country, they contemplate introducing practically the same, if not worse, conditions, after promising that the doctors were not to be sweated. It is the absence of any legal provision regulating the remuneration of the medical attendant that has proved the greatest source of dispute in the administration of the benefits of sickness insurance in Germany. The system of a capitation grant to be paid to the doctor represents a limited remuneration for an unlimited amount of work. The proposal first put forward by the Chancellor of the Exchequer that each doctor would receive a capitation fee amounting to 4*s*. per person insured presented no satisfactory solution of the problem; a 6*s*. capitation fee to cover the expense of drugs also did not make a favourable appeal. It must be remembered here that the Bill promises the provision of the best medical attendance, but makes no provision for the payment of special cases

requiring the assistance of specialists, such as major operations. True, in Germany the average rate of payment of the sick-club doctor works out at about 4*s.* to 5*s.* per head of the insured, or to about 12*s.* where free medical attendance is also extended to the insured person's family, but this represents his remuneration for ordinary contract practice work, including at the most small operations of minor importance.

In Great Britain there exists no standard scale of charges for medical services save the limited and unrevised Poor-law scale. In Germany the standing scale of charges, containing a minimum and maximum fee for each kind of service, becomes operative in the case of disputes arising between patient and doctor regarding the latter's fee, in the absence of any special agreement. This medical tariff also forms the basis of remuneration for professional work done on behalf of the authorities, for instance in certain classes of poor practice, prison work, &c., and is applicable to patients whose treatment is paid for by sick clubs. Generally, every German sick club, in addition to the club doctors, makes an arrangement with a number of specialists, including a surgeon, a specialist for diseases of the throat, an oculist, and so on, according to circumstances. These specialists are remunerated according to the scale of charges of the official tariff, possibly modified by private agreement to suit special cases. For years already the German doctors have been fighting to obtain a better form of remuneration than the system of capitation payment, and thanks to a splendid organisation which has not hesitated to carry into effect regular strikes of the medical attendants of sick clubs, they have succeeded in vastly improving their economic position. In many cases they have been successful in achieving their ultimate object—i.e., that the official scale of charges should alone form the basis of remuneration for sick-club work, thus substituting the capitation grant for a fixed payment for each service rendered. It would be obviously unfair to expect the British practitioner to start at a level that his German colleague has left behind, yet this would be the case were the Chancellor's scale of 4*s.* to hold good, with the important addition that in order to fulfil the promise to provide the best possible medical attendance provision would still have to be made to pay fees for services outside the province of the club doctor. If the medical benefits are to consist solely in ordinary medical treatment to the exclusion of surgical operations and special advice the German example is not being followed. Had Mr. Lloyd George fully comprehended the working of the German scheme he would have had the advantage of providing the doctors with a tangible subject for argument by embodying in the Bill a draft of a scale of charges for professional work, elaborated with the assistance of a number of doctors. The members of the profession at large would have been in a position to suggest useful amendments, and the vexed question of the free choice of doctors could have been readily solved to mutual satisfaction. It cannot be too strongly emphasised that the successful working of a scheme of this nature largely depends upon the soundness of its principles. It would be well for our legislators not to regard any apparent defects in the German scheme in the light of shedding an extra lustre on the advantages of the British measure; they should seriously consider whether these defects are not being reproduced in some different form.

In the matter of allowing medical men to do actual pharmacy work as well as to prescribe for patients, to act as physician and dispenser combined, Great Britain practically stands alone, with the sole exception of some Swiss cantons and the United States. Everywhere else the doctor writes out a prescription which the patient takes to a pharmacy to have made up, and the doctor is strictly forbidden to dispense his own medicines. Abroad the dispensing of prescriptions figures as the principal duty of the pharmacist, and it cannot be denied that the peculiar position of the "chemist" in Great Britain is largely the result of the anomaly created by depriving him so largely of his legitimate professional activity. Whilst an amendment has been carried, giving effect to the intention of the Bill, that the dispensing of medicines for the insured is to be done by pharmacists, in vain do we look for any mention of administrative details regulating the principles upon which this innovation is to be carried out. We are here again confronted by the absence of a provision existent in many continental countries, which fits in well with the provisions of a national scheme of insurance against sickness, a scale of charges for prescriptions. In Germany, Austria, Hungary, Russia, Scandinavia, Servia, and Bulgaria there exists an official tariff according to which every prescription for rich and poor alike has to be charged; in the case of club prescriptions the Government usually requires a rebate off the full charges, the pharmacist being required to grant a discount of 15 per cent., or even more, on the charges fixed by this tariff.

If the National Insurance Bill is to prove a successful measure of social reform its benefits must extend equally to all concerned, and in the public interest it is imperative to frame its provisions in such a way as to avoid on the one hand any injustice to those called upon to administer its benefits, and on the other hand to prevent any section of the community from reaping unearned profits through the same source. If the medical profession as well as the pharmacists are to participate in administering the medical benefits due precautions should be taken to ensure that each party will be in a position to fulfil his allotted share of work under satisfactory conditions. For this reason the greatest care should be taken to see that the standard of remuneration set up for both should be binding for all parties concerned. If a scale of fees for medical services is established it should be elaborated for the purpose in view and steps taken to ensure its proper application, and in the case of a national dispensing tariff this, too, should be so adapted to suit the requirements of dispensing on behalf of the insured, that its scale of charges will find a rigid application, while special precautions should be taken to prevent any unfair competition among the administrators of the benefits in order that even in its application this may prove a truly national scheme. The more evenly the whole benefits are distributed the smoother will the scheme work, and if this measure is to be enforced it cannot be too earnestly urged to provide the proper machinery in time by a greater attention and a more just appreciation of the details lacking than has hitherto been manifested.

The future position of British hospitals under the Bill is a subject of particular interest. British institutions depend for their maintenance wholly upon voluntary contributions, in distinction to continental hospitals, which are either supported by the State or municipality. In Germany, for instance, every hospital has a fixed tariff of charges varying with the class to which the patient belongs—that is to say, that a patient occupying a single room pays more than one content to share a room with another or even more persons, and all persons in a position to pay, and undergoing hospital treatment, have to comply with this rule. In the case of sick club patients, the club has to pay the hospital authorities for every patient undergoing treatment, payment being effected according to a fixed scale of charges varying according to the nature of the medical or surgical attendance required. The *per capita* rate of payment for hospital treatment in Germany amounted to 3*s.* 4*d.* in 1909; in all this item entailed a total expenditure of £2,085,325. Clause 17 of the British National Insurance Bill vaguely states that it shall be lawful for the clubs to subscribe to hospitals and other institutions in which the members receive treatment, but here again no basis of remuneration is even hinted at. Now, the Insurance Bill is a business proposition; employers and employees are forced to contribute towards the application of its provisions. On the other hand, voluntary contributions are solicited and generously given to keep up the hospitals. But as the Bill stands we may take it that the best possible medical attendance as far as hospital treatment is concerned is to be paid for out of the voluntary subscriptions of the general public, already called upon to participate in the cost of this scheme either in the capacity of employer, employee, or of a humble taxpayer. This is obviously grossly unfair, and in the first place will result in the withdrawal of subscriptions in many instances, and thus further jeopardise the existence of many institutions already in a precarious financial condition. In this case, too, a fixed basis of remuneration for patients undergoing hospital treatment would do much to place many of them on a sound foundation, and it is only necessary to apply the German figure of a payment of 3*s.* 4*d.* per head to our 14,700,000 insured to form an idea of the value of this annual contribution of £2,450,000 to institutions otherwise mainly dependent upon the public charity. The German scale of payment includes remuneration for food and attendance, medical or surgical treatment, and drugs, bandages, and dressings.

As regards the administration of the benefits, the British

Bill adopts a somewhat peculiar attitude. The insured must either become a member of a Friendly Society—i.e., of a voluntary association which has been found to deserve the appellation "approved," or if unsuccessful will be insured as a Post Office subscriber. When insurance was introduced in Germany there were no Friendly Societies equalling in importance the existing British associations, so that the few and unimportant societies could be treated as a *quantité négligeable*. The administration of the provisions of the German laws on insurance against sickness is entrusted solely to autonomous sick clubs, and beyond reserving to itself the right of supervision, the State does not interfere. These sick clubs are either local, formed to include the insured residing within a certain district or town, or establishments employing at least 50 hands are empowered to form their own sick club. In addition there exist a few associations resembling our Friendly Societies, and in some respects our trade unions, which recruit their members in all parts of the empire. A person liable to compulsory insurance and belonging to one of these is not required to enter the local club, as the German law allows all sick clubs to exist providing they comply with the legal requirements and grant their members the minimum benefits stipulated in the insurance laws. This is in marked contrast with the British point of view; in the first place, the existing Friendly Societies are required to adapt themselves to the new order of things, although in many instances their field of activity is by no means confined to the benefits set forth in the Bill, and, secondly, societies not approved of are not to be given an occasion of acting as administrators. The greatest hardship, however, will fall upon those workers for whom provision is already made, in several cases exceeding even the benefits to be enjoyed under the insurance scheme, as here they are to be compelled to comply with the letter of the law by joining some approved society or insuring through the Post Office. However, it stands to reason that the establishments which already voluntarily provide the funds for granting similar benefits will not feel disposed to pay in addition the contributions required by the new order of things, and thus we shall witness the peculiar picture of an avowedly beneficial measure bringing an actual loss to a section of its unwilling participants. To meet this objection, it would be well to permit the creation more freely of "approved" societies, without adopting the German plan which has led to the creation of no less than 23,279 sick clubs, with a total membership of 12,519,785. Latitude of this kind would enable many large establishments to continue their present satisfactory system of making proper and liberal provision for the care of their sick and disabled employees.

We should not lose sight of the fact that Great Britain is already in possession of a fully equipped organisation recently created to deal with another aspect of social reform—old age pensions. The introduction of the Insurance Bill will witness a second creation of posts for officials, and the question arises whether the machinery required to administer both statutes could not be united, in the interests of the taxpayer. It is significant that the Chancellor of the Exchequer himself estimates the cost of administration at a higher figure than is actually the case in official-ridden Germany; there the total outlay per head of the insured comes to 1*s*. 7*d* in the case of insurance against sickness, and to 1*s*. 8*d*. for insurance against invalidity, or a total expenditure of 3*s*. 3*d*. *per capita* (these two branches of insurance united in one measure in the British scheme form two distinct categories in Germany, each administered on different lines—invalidity insurance is under State, not under autonomous club, control); this still leaves a margin of 9*d*. to the good as compared with the 4*s* it is assumed will be spent on administrative expenses in Great Britain. The cost of administration in Germany is recognised as being unduly high, and the new law foresees a considerable reduction by reducing the number of existing sick clubs, and limiting the staff of officials. Presumably the quantity of officials required in Germany will be balanced by the quality to be provided in our country—as far as the salary attached to the position is concerned. It is interesting to note that in many respects the administration of the British insurance scheme will be carried out on considerably more bureaucratic and possibly less equitable lines than is actually the case in Germany, as will appear from a brief consideration of the more important fundamental principles underlying both measures.

In Germany two distinct forms of insurance are in operation; the one makes provision for sickness, and the other includes disablement and old age pensions. Both forms are strictly contributory, but the organisation and administration of each differ materially. Insurance against sickness, already mentioned, is enforced without State interference, and also without State assistance. Self-governing sick clubs are formed to meet local or other requirements, and the management of the club is vested in a board consisting of representatives of the insured and of the employers, two-thirds of which are elected by the former and the remaining one-third by the latter. The contributions depend upon the wage-earner's salary, and the total levied may not exceed 4 per cent. of the worker's earnings. Of this total one-third is contributed by the employer and the rest by the insured. For this the worker is entitled to free medical attendance, free medicines, including any appliances required, and free hospital treatment, and every care is provided to restore him to health, even to the extent of sending him, if necessary, to undergo treatment at a health resort. These benefits extend for a period of 26 weeks, and during this time he is entitled to sick pay amounting to at least half of his daily wage, or, if he undergoes treatment in a hospital, his dependents draw an amount equal to half the allowance he would be receiving were he to undergo treatment at home. The income limit for compulsory insurance is £100 a year. No distinction is made either as regards contributions or benefits in the case of women, and as the contributions are graduated according to the worker's salary the employer of unskilled labour is not compelled to pay the difference out of his own pocket, as will be the case in England with workers earning less than 2*s*. 6*d*. a day. As the sick clubs are absolutely autonomous, beyond, of course, having to comply with the provisions of the law, it follows that they are able to dispose of their surplus finances untrammelled by outside considerations, and thus it is that certain clubs in a flourishing financial state are able to go beyond the limits prescribed. Naturally, in the case of the independent sick clubs having the character of British Friendly Societies, the board of managers is composed solely of representatives of the members, and membership of one of these recognised societies complies with the compulsory insurance clause, and renders it unnecessary for the member to reinsure in another club should he change his place of work. A new law, which has raised the income limit of the compulsorily insured to £125, divides the contribution into equal shares for employer and employee alike, and effects a corresponding change in the composition of the managing boards.

It must be confessed that the German system is more equitable than the British proposal. Why should a woman be penalised for her sex in being granted a lower rate of benefits? In practice there are really more cases of women requiring assistance in illness or invalidity than of men, to mention only the widows with families, who certainly outnumber the widowers. Again, the fixed rate of contribution is not in harmony with the principle expounded by the present Government of suiting the burden of taxation to the strength of the shoulders by which it must be borne; 4*d*. a week to a man earning £3 figures differently on the budget of a household with but 18*s*. to call its own.

The second branch of industrial insurance in Germany is also contributory, and includes invalidity and old age pensions. In this the contributions are borne in equal parts by both parties, the amount being again dependent upon the wage-earner's salary, which is in this case divided into five classes, the total weekly contribution rising from 1½*d*. on salaries under £17 10*s*. to 4½*d*. on salaries over £55. In this case, however, the management of the benefits and the whole organisation lie in the hands of the Government, which contributes towards the cost of administration and supplements each invalidity or old age pension granted by a State allowance of £2 10*s*. annually. These benefits, both based on compulsory contributions, are regulated by the length of time that the applicant had been insured and by the wage class to which he belongs; the amount of an invalidity pension may therefore be anything between £5 16*s*. and £22 10*s*. per annum, while the old age pension, which becomes operative at the age of 70, ranges from £5 10*s*. to £11 10*s*. In Great Britain invalidity insurance is included with sickness insurance in a single measure, while old age pensions form a direct charge upon the national revenue; the sum granted in both cases amounts uniformly to 5*s*. a week, or a fixed annual allowance of £13, irrespective of the

recipient's former salary or of the number of years during which he has contributed towards this benefit.

In comparing social legislation at home and abroad, the Briton is nowadays prone to belittle his own institutions, and to forget that no country possesses so highly developed and well organised a system of voluntary and humanitarian associations for rendering assistance in sickness as Great Britain. The importance, as well as the financial soundness of her friendly societies and their admirable work, are universally recognised as worthy of the highest praise; they are the outcome of voluntary thrift, and a striking symbol of the sound common sense inherent in the British working classes. As a number of these societies extend their field of activity even beyond providing for their members during sickness or incapacity, it would be a mistake to seriously imperil their existence, and instead of drawing distinctions likely to lead to the extinction of many excellent bodies in establishing too narrow limits for inclusion in the magic circle of approved societies, it would be well to grant an even greater degree of autonomy in the question of administering the benefits prescribed in the Bill. On the other hand, it is evident that the State should in this case reserve itself the right to take the necessary steps to ensure an equitable application of the minimum benefits to which the insured are entitled, and at the same time to safeguard the interests of those called upon to participate in the administration of these benefits by providing certain fair standards of remuneration for services rendered. A guarantee of some kind could be required to insure the solvency of each society, somewhat on German lines. In Germany every sick club is required to accumulate a reserve fund amounting to an average year's expenditure, based on the expenses incurred during the three previous years; in addition a portion of the yearly surplus must be set aside to form a special reserve fund, to meet unforeseen contingencies such as an unprecedented incidence of sickness, epidemics, &c. The example afforded by the latter country in divorcing sickness insurance from invalidity and old-age pensions might be adopted to some advantage, if only for the resulting saving in the cost of administration. In many respects the payment of an invalidity pension is merely a clerical matter, the claim itself is based on the doctor's verdict consequent on a period of sickness. Therefore, why not relieve the approved societies of this task, a burden new to many, as hitherto several societies have limited their work to providing only for their members during sickness, or during a fixed period of incapacity, and transfer the payment of disablement benefits to the machinery already provided for the payment of old age pensions. A step of this kind would do much to simplify the administration of the other portion of the benefits provided in the scheme, already rendered unnecessarily cumbersome by the creation of two distinct classes of the insured—members of approved societies and Post Office contributors. Administrative costs have a disagreeable tendency to rise, and as they represent a totally unproductive expenditure every precaution should be taken to keep this item within the lowest possible limits.

Much positive work will have to be accomplished before the National Insurance Bill will be an efficient working measure, capable of application in practice, and while rendering tribute to Germany for the assistance afforded, the framers of this measure would do well to further study many of the foundations upon which the continental schemes are based, and after due consideration of the different conditions prevailing in our country elaborate similar provisions suitable to our peculiar requirements. Until then it cannot be regarded in the light of a carefully prepared proposal; indeed, the widespread opposition voiced against certain of its provisions proves that not sufficient care was taken to obtain the unbiased opinion, as well as the active coöperation, of members of the various interests eventually affected. Instead of attempting to rush the measure through in its present unfinished state, regardless of the chaotic conditions which may result from its vague phraseology, it would have been better to treat the Bill merely as a draft, and before submitting it for discussion invite an expression of opinion on its contents. The actual Bill presented to Parliament would embody the essential points raised in an impartial criticism by the nation at large. This course has been adopted in Germany with all measures vitally affecting the interests of a large section of the population; surely this scheme is revolutionary enough to merit a thorough discussion before the forum of the people, for whose benefit it is primarily intended, and, a more important consideration, who will ultimately be called upon to make good any financial loss resulting from a too optimistic estimation of the relationship between income and expenditure as foreseen in the Bill. A measure wholly influenced by so uncertain a factor as human health, intended to remedy any deviation from its full enjoyment, should not be introduced without a thorough consideration of its financial as well as economic aspects. To illustrate the huge sums involved in a scheme of National Insurance the principal items from the balance sheet for 1909 (the latest available official statistics) of the German insurance against sickness are appended:—

	£	Per person insured. s. d.
Total number of persons insured	12,519,785	
Contributions from employers	5,079,350	8 1½
Contributions from employees	11,448,180	18 3½
Cost of medical attendance	3,516,762	5 9
Cost of medicines, &c.	2,223,509	3 7
Sick pay to members and dependents	6,722,821	10 9¼
Payments to hospitals	2,085,325	3 4
Maternity grants	305,350	—
Cost of administration	961,306	1 7
Total reserve funds of all sick clubs	12,271,010	19 7½

MEDICINE AND THE LAW.

Hospital Witnesses and Fees at Inquests.

Dr. F. J. Waldo recently at an inquest held at the City coroner's court drew attention once more in forcible terms to the unjust provision in the Coroners Act, 1887, depriving of their fees witnesses who are medical officers of hospitals. In the case in question the medical witness asked to be relieved from waiting longer than was necessary in the coroner's court because he was due as a witness in the Clerkenwell county court. The position was thus created, and the coroner rightly called attention to it, that a medical man was compelled through being a member of the staff of a voluntary hospital to be a witness in two courts in the same day, a sufficiently onerous duty when the amount of time wasted is taken into account, as well as the importance of the issues as to which his evidence was probably essential. In one of the courts in question he would receive a fee for his attendance and in the other none. The injustice in connexion with inquests is an old cause of complaint, and the departmental committee which reported on the law relating to them in 1910 recommended that it should cease. No fresh legislation, however, has followed, but when any takes place it is probable that witnesses' fees at inquests will become the subject of rules to be made by the Home Secretary, and that fees for medical officers of institutions debarred from receiving them under the present law will be prescribed.

The Danger of Dogs not under Proper Control.

The prosecution of the owner of a dog for not keeping it under proper control, which was heard recently at the Portsmouth police court, although it failed through the inherent weakness of the case for the police, illustrates nevertheless the fact that many owners of dogs, not necessarily savage or dangerous, expose their neighbours to alarm and annoyance, and themselves incidentally to trouble and expense. The case in question had features almost of a humorous character. The animal was a Great Dane, stated to be of considerable value, and one of the chief witnesses against the character for tractability and gentleness which it had before enjoyed was a constable at whom, according to his story, it had barked and growled through the railings of a garden, where it was then safely confined, its mistress adding insult to injury by laughing at the policeman's nervousness. This incident by itself would hardly have constituted grounds for a summons, but upon another occasion a post-office messenger, when delivering a telegram at the house where the defendant lived, opened the garden gate and was the victim of an onslaught by the same dog, which evidently frightened him and possibly hurt him a little. The extent of his injuries proved to be the doubtful feature in the case. He claimed to have had some blue marks or bruises on his left arm when he returned to the post-office, and said that he was thereupon directed by "the authorities" to go to a neighbouring druggist for treatment. The druggist's assistant "cauterised the wound," that is to

say, he rubbed an ordinary caustic pencil over marks which, as the boy admitted, were not wounds at all, for there was no penetration of the skin, and whatever virtue there may have been in this operation the lad's father paid 6*d.* for its performance. We may mention here that a correspondent referring to this case informs us that druggists are very frequently asked to cauterise alleged dog-wounds, and appears to think that the marks thus produced are used to frighten dog-owners into paying compensation to avoid being made the victim of legal proceedings. Of this there was no suggestion in the case upon which we are commenting, but the druggist's assistant was not called as a witness, and as the father refused throughout to allow his son's arm to be examined by a medical man there was no evidence whatever beyond that of the boy to show whether the marks to which caustic had been applied were originally inflicted by the dog or not. In these circumstances the police may fairly be said to have instituted a prosecution upon evidence not likely to secure a conviction, and after several neighbours and friends of the defendant, including the postman, the milkman, and the dustman, had given evidence that they had found the dog quiet and harmless, the magistrates declined to make any order. They expressed, however, the opinion that the telegraph boy had told the truth, and although they attributed the dog's behaviour towards him to playfulness, they advised the defendant to control it better, lest upon some future complaint they might be obliged to deal differently with her. This appears to be an eminently sensible conclusion for the magistrates to have arrived at. If the lad's parent had been seeking to secure compensation for him in a civil court he would no doubt have called a medical witness to describe his injuries, or failing to do so would have been unable to prove that they existed. Perhaps, however, he was satisfied that the "cauterisation," at the cost of 6*d.*, of the bruises inflicted through the lad's coat was a sufficient precaution, and that "wounds" so easily and inexpensively dealt with were hardly serious enough to form the basis of litigation. However, although we may smile at the time and industry of a bench of magistrates being expended over the hearing of a charge of the nature indicated, we may also be allowed to endorse the observations made to the defendant as to the control of her dog, applying them generally rather than to her particular case. We need hardly say that the person who knows a dog to be savage towards strangers and allows it to be at large so that it may fly at passers-by on the highway, or at those who in the performance of their duties have to call at the owner's house, is guilty of a particularly cruel kind of negligence, for which he is likely to suffer financially sooner or later. There are such persons, and they are often allowed an undesirable amount of freedom from interference owing to the difficulty of proving that they know their dogs to be dangerous. There are, however, other owners who are also in their degree careless of the fear and annoyance that their animals cause, although they have no intention to neglect their duty towards their neighbours. These persons own dogs that cannot well be classed as dangerous, and in keeping them run little risk of allowing the infliction of serious injury on anyone. To take, for example, the animal made the subject of prosecution at Portsmouth. The Great Dane is known to most people as one of the largest dogs kept as pets, and its appearance is not calculated to reassure any nervous stranger with whom in play or otherwise it may desire to become familiar. As a matter of fact, but to speak generally, Great Danes are acknowledged by those acquainted with their habits to be very quiet, harmless dogs, not over-courageous or very intelligent, and certainly not, as a rule, likely to fly at anybody. Kept in confinement with insufficient exercise many big dogs become exuberantly demonstrative when released, and not everyone wishes to be the object of canine affection, still less of canine excitement and possibly of temporary irritability or nervousness. Moreover, not many people make a sufficient study of dogs' peculiarities to know whether they are savage or merely excited and over-friendly, and whether they belong to a treacherous or to a peaceful and naturally timid species. No one can expect such knowledge as this to be general or has any right to condemn those as foolish and cowardly who have not acquired it. Old ladies and children may be frightened with serious consequences by dogs who have no intention to bite them, and they have our sympathy when they are barked at and terrified by ill-disciplined animals whose owners neglect their duty to keep them in order, and thus show that they have no right to keep them at all. Offenders of this class are of both sexes, and an amount of toleration is extended to them that they do little to deserve, for the amount of trouble necessary to prevent a dog from becoming a source of annoyance is not great.

A Druggist and a Case of Poisoning.

At an inquest held recently at the City coroner's court by Dr. Waldo evidence of an incident of an unusual character was given. The deceased, a clerk in the office of a publisher and bookseller in Paternoster-row, informed the occupant of another office in the same building that he had taken spirit of salt, which he had no doubt done, and in consequence of which he soon afterwards died. This gentleman, Mr. Richard Greenacre, appears to have acted with humanity and promptitude, for he summoned police assistance and took the youth to a neighbouring druggist's shop where he asked for "an antidote," which was refused, the druggist saying apparently that it was not his duty to prescribe and that the deceased should be taken at once to a hospital. The policeman who was present asked definitely for a little chalk and water, and also meeting with refusal hurried next door, where he obtained some whitening which he used for the purpose indicated, immediately after which the electric ambulance arrived and conveyed the patient to St. Bartholomew's Hospital, where he died. Mr. A. W. Stott of St. Bartholomew's Hospital, who gave evidence, expressed the opinion with regard to what had taken place, that if chalk and water had been administered to the deceased promptly his life might possibly have been saved, but admitted that the druggist probably acted within his legal right in refusing to "prescribe." Whether it would have been a case of "prescribing" to supply something selected for the purpose by another does not seem to have been discussed. The jury expressed no opinion on the subject, but added to their verdict, which ascribed death to the self-administration of spirit of salt, a commendation of the action taken by the police constable. The druggist was placed in a difficult position, but he could have no reason to know that the policeman's diagnosis and treatment were correct.

REPORT FOR 1910 ON THE HEALTH OF MANCHESTER.

AMONG the various local contributions to the literature of Public Health the reports which reach us annually from the city of Manchester are exceptionally instructive and complete. Dealing as they do with the sanitary progress of one of our largest and most important industrial centres, these records possess a national in addition to their local interest, while they afford evidence of praiseworthy energy and public spirit on the part of the municipality. Sanitary reform in Manchester is of comparatively recent growth. By the grant of a charter in 1853 the City Corporation became responsible for the guardianship of the health of the citizens, and for the removal of the mass of adverse conditions which under the misrule of the borough reeve and constables had accumulated for years to the imminent danger of the public. A glance at the earlier reports of the first medical officer of health will suffice to show the nature and extent of the evils prevailing amidst the homes of the poor, and will give some idea of the magnitude of the task devolving on the health committee of the day for their abatement. Happily for Manchester, the reforms carried out by the corporation have generally been supported by public opinion, and under the guidance of successive medical officers of health the sanitary condition of the city has steadily improved down to the present time.

Vital Statistics.

The report before us contains the ordinary statistics respecting natality and mortality, from which it appears that the health of the community in 1910 was maintained at a high standard. The death-rate was estimated at only 15·9 per 1000 living, which is less than half the rate prevailing at the time when Manchester acquired the dignity of a city.

The subject of infantile mortality continues to receive particular attention in Manchester. "It has come to be felt," writes the medical officer (Dr. James Niven) "that if

a vigorous race is to be reared effort must be made to ensure that the care of the individual shall start at the commencement of life." Owing to the failure of the city council to adopt the Births Notification Act, Manchester is at a disadvantage in its efforts to regulate the care of infants from the earliest days of life; nevertheless, substantial progress is being achieved by the efforts of the local Midwives Supervision Committee and the Infant Life Preservation Subcommittee. At present infantile mortality is at the rate of 132 per 1000 births, against 187 per 1000, the average rate in 1891–95.

Enteric Fever.

Among topics of more than local concern Dr. Niven directs particular attention to the behaviour of enteric fever and tuberculous phthisis, both of which diseases have always caused high mortality in the city. With respect to the death-rate of enteric fever in Manchester we learn that it is higher than in England and Wales generally, and is more than twice the rate prevailing in London. And, what is of even greater importance, the mortality has not decreased so rapidly in Manchester as it has done elsewhere in this country. Possibly this is due to the persistence of some local cause, such as the consumption of infected shell-fish. The etiology of enteric fever has long been systematically studied in Manchester, and quite recently a connexion has been suspected between the ingestion of ice-cream and excessive incidence of the disease, but in the absence of exact data it has not as yet been possible to indicate the actual cause or causes of its local prevalence.

Tuberculosis.

Of all causes of death tuberculous diseases are economically the most important. In Manchester these diseases in the aggregate account for one-third of the total mortality in the span of life intervening between the fifteenth and the forty-fifth year. In the year 1910 tuberculous phthisis caused a mortality of 14·9 per 10,000 of the population, showing a reduction on the rate obtaining in 1881–85 equal to 38 per cent. From diseases of the lung other than phthisis there has also been a reduction equal to 31 per cent., so that there is no doubt as to the reality of the life saving in respect of phthisis, which is represented by a fall in the recorded death-rate from 24·2 per 10,000 in that quinquennium to 14·9 in the year under notice. The death-rate from tuberculous peritonitis and tabes mesenterica has declined since 1881–90 by 57 per cent. Other diseases of the tuberculous class have likewise declined, but in a less degree.

For many years past the campaign against tuberculosis has been prosecuted in Manchester with remarkable vigour, and recently with increased success. It will be remembered that under the Public Health (Tuberculosis) Regulations of 1908, by which notification of phthisis was introduced throughout the country, all cases of pulmonary tuberculosis occurring in Poor-law medical practice must be notified within 48 hours to the medical officer of health. Under the further regulations of the following year respecting tuberculosis in hospitals, all cases of phthisis coming under treatment in hospitals and dispensaries supported by charity must similarly be notified to the same officer. By these means the majority of phthisical cases, including those of paupers, are now compulsorily notifiable in Manchester.

The administrative measures of control now carried out in the city are set forth in this report. They include domiciliary visitation by inspectors or health visitors; the giving of advice and assistance by way of appliances; the disinfection of houses and clothing; the distribution of cautionary circulars concerning the disposal of sputa and the avoidance of unnecessary contact between the sick and the healthy. Dr. Niven holds that the provision of sanatoriums is only a part of the campaign against tuberculosis, which, in order to be effectual, must be supplemented by other preventive measures rendered possible under general notification. Public feeling has grown rapidly during the last year; and as a result the South Manchester guardians have purchased an estate of 285 acres in Wales for the treatment of their consumptive cases. Moreover, the Manchester education authority is about to establish, on an estate recently presented for the purpose, a school for the treatment of incipient cases of phthisis; and, further, a scheme of definite preventive action against tuberculosis has already been approved by the sanitary committee, and after sanction by the city council will probably be carried out at no distant date.

MEDICINE IN THE ENCYCLOPÆDIA BRITANNICA.

VII.[1]—MEDICINE.—SURGERY.—NEUROPATHOLOGY.

WE continue below our series of articles upon the medical aspects of the new edition of the Encyclopædia Britannica. Our object has been to furnish a brief review and commentary upon the various articles in the Encyclopædia which deal with medical topics, rather indicating what has been the treatment of the subjects in the Encyclopædia than suggesting that this, that, or the other might have been added or omitted. For the scope of an article in an encyclopædia must always be to large extent the matter of definite arrangement between editor and contributor. The articles on medicine and on surgery as a whole, which we have to consider among others in the issue of the later volumes, are supplementary to a number of articles scattered throughout the volume which discuss the causes, symptoms, and treatment of individual diseases.

Medicine.

The article Medicine in Vol. XVIII. of the present edition is divided into two portions. The first, which deals with the subject from the earliest times down to the year 1840, is the work of that learned historian of medicine, the late Dr. J. F. Payne, and is a revised reprint of the article written by him for former editions. The second, which deals with modern progress, is from the pen of Sir Clifford Allbutt. Dr. Payne's masterly survey of ancient and of early modern medicine has only to be well known to be rightly appreciated. To anyone who wishes to obtain a comprehensive and accurate knowledge of the history, the mistakes, the successes, and the progress of the medical profession no better short manual can be recommended than this article, although in saying this we by no means wish to minimise the value of longer treatises, such as Freind's "History of Medicine," Withington's "History of Medicine from the Earliest Times," or the works of Pagel, Le Clerc, or Neuberger.

Sir T. Clifford Allbutt, whose contribution recounts the handing on of the torch throughout the period extending from 1840 to the present day, writes, it seems to us, with acute consciousness of the vastness of his subject. And despite his great equipment he may well be so, for the discoveries, the inventions of new methods, and the modern application of old ones which have come to the fore during the past forty years alone have revolutionised both our conceptions of many diseases and our theories of treatment. And yet, with all this, the marked character of modern medicine may be said to be unity; unity in that disease is coming to be recognised as the result of varying forces operating upon a complex organism, which although it responds in apparently varying ways, yet is using fundamentally the same methods of defence, diversified, however, in accordance with the method of attack. It therefore follows that, as Sir Clifford Allbutt well says, "One of the chief lessons of the latter moiety of the nineteenth century was the unity of medicine in all its branches—a unity strengthened rather than weakened by special researches, such as those into 'medical' and 'surgical' pathology, which are daily making more manifest the absurdity of the distinction. Surgeons, physicians, oculists, laryngologists, gynæcologists, neurologists, and the rest, all are working in allotments of the same field, and combining to a common harvest." And again: "Medicine and surgery are but two aspects of one art; Pasteur shed light on both surgery and medicine, and when Lister, his disciple, penetrated into the secrets of wound fevers and septicæmia he illumined surgery and medicine alike, and, in the one sphere as in the other, coöperated in the destruction of the idea of 'essential fevers' and of inflammation as an 'entity.'"

Sir Clifford Allbutt gives a necessarily superficial review of the progress made in all departments of medicine. Omissions can of course be found. Thus he says nothing about serum therapy, and hardly anything of the principles of immunity. Again, in the section upon methods of investigation no mention is made of the various endoscopes,

[1] Articles I., II., III., IV., V., and VI. were published in THE LANCET of Feb. 25th (p. 530), March 4th (p. 609), 11th (p. 692), and 25th (p. 828), and April 1st (p. 897) and 15th (p. 1026), 1911, respectively.

such as the cystoscope or bronchoscope, while in his remarks upon the ophthalmoscope he is perhaps over-modest. For though hardly anyone has done more than he himself to link up ophthalmoscopy and medicine, he makes no allusion to his own work in this field. But taken as a whole Sir Clifford Allbutt's contribution is a worthy sequel to that of Dr. Payne, and with such a subject to write upon whatever limitations an author laid down for himself some one would be found to say that he had been too inclusive or too exclusive.

Surgery.

The article on Surgery, like that on Medicine, is divided into two sections contributed by different writers. The historical section is by Dr. C. Creighton, and that on modern practice by Mr. Edmund Owen. Of these the first portion is by far the longer, for, unlike medicine, the progress in surgery which has been made during the last forty years, great and widespreading though its effects have been, is due almost entirely to one thing—namely, Listerism.

Dr. Creighton's historical summary is of extreme interest and should be read in company with that of Dr. Payne on the medical side by all practitioners who wish for a knowledge of the history of their profession. An interesting précis is given of Susruta's practice of surgery, though as the date assigned to the work attributed to him ranges "as widely as 500 years on each side of the Christian era" the question as to whether it is one of the earliest works of the Eastern branch of the European stock on surgery must be held, as Dr. Creighton remarks, insoluble. Chinese surgery follows, and then Egyptian. Passing to Western Asia and Greece a reference is made to Homeric surgery, and an account is given of Hippocratic practice. Celsus and Galen follow and ancient surgery is brought to a close with Paulus Aegineta (A.D. 650). Throughout the dark ages—i.e., during the next 500 years—surgery was mainly kept alive by the Arabs and the Jews, although the school of Salerno sustained Hippocratic and Galenic tradition from the tenth century nearly to the thirteenth, Montpellier being the centre of Arabic medicine in Europe. In his review of mediæval surgeons Dr. Creighton curiously enough omits any mention of John Arderne (b. 1307), the well-known English surgeon, and the first in this country at any rate who acted on the sound principle that meddlesome surgery is bad surgery. Passing on to Paracelsus (1493–1541) and Paré (1510–1590) he allows full credit to both for their reforms in surgical practice, but in one place he gives the latter more than it would seem that he deserves. Dr. Creighton says: "Instead of treating gunshot wounds with hot oil according to the practice of the day, he had the temerity to trust to a simple bandage ....." If we remember rightly Paré's temerity arose from the fact that on one occasion his supply of hot oil ran out, and he had to trust to a simple dressing, on account of which he records that he passed a most uneasy night. But on finding on the following morning that his patients, over whose enforced neglect he has been making himself miserable, were much better than those who had been treated with the hot oil, he was led to substitute in future a simple dressing in the place of the irritating application. Dr. Creighton concludes his section, which may be taken to end with the middle of the nineteenth century, with a *résumé* of improvements in surgery during that period. Among others he mentions the introduction, or possibly revival, of lithotrity, but without referring to the improvement in this operation, introduced by Bigelow, by removing the débris at the time of crushing.

Mr. Edmund Owen's section upon modern surgery is, as might be expected, almost entirely confined to the rise and progress of Listerism and the gradual evolution of antisepticism into asepticism. It is an excellent essay. A short account of Bier's passive congestion treatment is given, and the article concludes with some wise words on the X rays and radium. Mr. Owen bids his readers remember that too much is not to be expected from these two forms of energy.

Neuropathology.

The article on Neuropathology, by Dr. F. W. Mott, extends to ten pages and forms, so far as such a condensed account can, an admirable introduction to this subject. A large proportion of the article is devoted to the causation of changes in the nervous system. Dr. Mott's classification of causes into "internal" and "external" has the difficulty of causing some confusion between those external or internal to the body and those external or internal to the nervous system only. A short space has been given to the numerous and important varieties of auto-intoxication of the nervous system, but all the more important conditions are glanced at, and a summary in a few words is supplied of the most recent theories. The effects of muscle-fatigue products, such as sarcolactic acid, the results of excess of uric acid, oxaluria, and glycosuria, are all noted, as well as the connexion between the graver forms of anæmia and degenerative changes in the spinal cord. To the clinician the importance of nervous symptoms indicating auto-intoxication is very great.

Incomparably the most interesting section of the article is that on poisons produced by micro-organisms, but it is short, space having been found for recent work on protozoan disease to the exclusion of other well-known conditions. The nervous sequelæ of the acute infective fevers are dismissed with an enumeration of their names, while not even that recognition, as far as we could see, is given to acute anterior poliomyelitis.

The importance of the protozoa in the production of disease in general is becoming yearly greater, and in no sphere of pathology more than in that of the nervous system. The more chronic protozoal invasions tend to produce profound changes in the nervous system characterised broadly by a formative hyperplasia of the fixed cell tissues, whether endothelial or epithelial, and there is a close similarity in the defensive reaction of the tissues to all forms of infection by protozoa. There is therefore a great advantage in studying in one article, such as that before us, the effects of the trypanosomata which have been most studied, syphilis (spirochæta pallida), sleeping sickness (trypanosoma gambiense), dourine, or *mal de coit* of horses; and to these Dr. Mott adds rabies, on the assumption that the "bodies" or cells recently described by Negri indicate a stage in the growth of a protozoon taking place within the nerve cells, comparable to the endocellular growth of the hæmatozoon malariæ within the red blood corpuscles of its host. The present position of the pathology of rabies is admirably indicated, but it is doubtful if a pathological question still *sub judice* should be introduced into an article in such a general work. It took 20 years to build up a complete knowledge of the life-history of the malarial parasite, and the general public might well wait for a few years for complete knowledge on that of rabies and variola.

Another field of recent exploration is very well surveyed. We are given here an excellent summary of the huge mass of investigation recently carried out on the cerebro-spinal fluid, which is proving of value in the diagnosis of cerebro-spinal meningitis and sleeping sickness.

Dr. Mott has attempted a difficult task in condensing into a few lines the distinction between true syphilitic lesions and the premature degenerations of nerve substance commonly known as parasyphilitic. The former are the result of the reaction, protective in character, of the tissues to the living virus, the latter are due to a bio-chemical change in the body induced by this reaction. In true syphilis there may be nervous symptoms of the gravest kind, but they are focal, selective, or limited in area; the parasyphilitic affections appear to be due to destruction of neural elements. Such breakdown of neurons is characterised, as Dr. Mott remarks, by the production of "lipoid" substances, but no hint is given as to the nature of "lipoid substances," though the author considered it necessary to explain their nature in his admirable paper on Syphilis of the Nervous System[2] before a specially informed audience. They are found in all animal and vegetable cells and fall into three groups: (1) the fatty group, such as cholesterin; (2) the nitrogenous group, such as kerasin; and (3) the lecithin group containing phosphorus and nitrogen.

It is essential in a general article to handle such a thorny question as chronic alcoholic poisoning with judgment, knowledge, and care; all three are displayed. While the importance of alcohol as a frequent cause of nervous degeneration is allowed, it is here recognised that in only 10 per cent. of the cases in the London Asylums was it the direct cause, though 20 per cent. were admitted with a history of alcoholism. Cirrhosis of the liver is so rare in asylum cases that Jane Cakebread was the only example found. This rarity of cirrhosis indicates that lapse from temperance has

[2] Proceedings of the Royal Society of Medicine, Jan. 27th, 1910.

not been of long duration in such mental cases, and is an indication of the final breakdown rather than its cause.

There is no new information to be found on the important subject of focal injuries to the brain, such as embolism, hæmorrhage, &c., but an admirably lucid sketch is given of such conditions, and of the variations in symptoms produced by variations in locality. Some excellent photographs of pathological states of the brain are appended.

The section dealing with the Microscopical Changes in Degeneration of the Neurone begins with a survey of the trophic dependence of the nerve fibre upon its cell of origin established by A. V. Waller's experiments made about 1850, and concludes by an interesting reference to the researches of the author, in conjunction with Professor W. D. Halliburton, into the chemical changes which occur during the degeneration of peripheral nerves after section.

HOSPITAL DINNERS.

St. Bartholomew's Hospital.—The annual old students' dinner was held this year as usual in the beautiful great hall of the hospital, and over 175 past and present members and guests assembled under the chairmanship of Mr. W. H. H. Jessop, senior ophthalmic surgeon to the hospital, on Oct. 2nd. Amongst those present were the treasurer, Lord Sandhurst; Sir William Church, the Presidents of the Royal Colleges of Physicians of London and Surgeons of England, the Vice-Chancellor of the University of London, the Master of the Society of Apothecaries, Sir T. Clifford Allbutt, Professor Howard Marsh, Sir Malcolm Morris, Sir James Porter, Sir William Gubbins, Sir Francis Champneys, Sir Lauder Brunton, Sir Anthony Bowlby, and the treasurer of the Foundling Hospital. The chairman, in proposing the toast of "The Hospital and Medical School," appealed for an endowment fund to ensure a living wage for lecturers. The year 1881 was the high-water-mark of prosperity of the school. Since then many new departments have been created, and work has increased in all directions, but the income has diminished. There is now a prospect that a charter for the medical school will be approved by the governors and the Privy Council, which will enable reversions to be left for the endowment of teaching and research. Mr. Jessop offered congratulations to the seven old students who have received Coronation honours, and concluded with feeling references to the great loss which the hospital had sustained by the deaths of Mr. Henry Power and Dr. Samuel Gee. Lord Sandhurst responded in a short and interesting speech, in which he touched on the National Insurance Bill and the present heavy demands upon hospital resources. Dr. Norman Moore proposed the toast of "The Guests" in the learned, witty, and graceful manner of which he is a master, and Sir William Collins, in his reply, insisted that medical men should now take an active part in public affairs. The chairman's health was proposed by Mr. W. Bruce Clarke.

Middlesex Hospital.—The annual dinner took place at the Trocadero Restaurant on Oct. 2nd. The chair was occupied by Dr. F. J. Wethered. Among those present were Prince Alexander of Teck, Sir Richard Douglas Powell, Sir James Kingston Fowler, Sir Alfred Pearce Gould, Fleet-Surgeon R. Hill, R N., Mr. James Boyton, M.P., the Mayor of Marylebone, Mr. Andrew Clark, and Mr. J. Bland-Sutton. In proposing the toast of "The Hospital and Medical School," the chairman referred feelingly to the death of Prince Francis of Teck, and eulogised the personal service rendered by him to the hospital. A large sum, he said, had been obtained through the Prince Francis of Teck Memorial Fund, but the board of the hospital was still faced by a lack of money. Prince Francis's place had been taken by his brother, Prince Alexander of Teck. The chairman congratulated Sir Alfred Pearce Gould and Sir James Kingston Fowler on their new honours. He announced that the Queen had promised to open the new cancer wing on her return from India. The new research department had been taken possession of by Dr. Lazarus-Barlow and his colleagues. A new medical ward of 15 beds was to be made by certain alterations, and to this Queen Alexandra had consented to give her name. New out-patient rooms were badly needed. Prince Alexander of Teck, in responding to the toast, thanked the chairman for his kind references to Prince Francis, and said that whatever his brother had done had been entirely actuated by a sense of public duty and a desire to be of service to his fellow creatures. He referred to the proposed scheme, which had been accepted by the weekly board and approved by King Edward's Fund, of establishing special wards for diseases of the skin, eye, and throat, and said there was every probability of this ideal being realised next year. He had lately seen enough to convince him of the value of the connexion of medical schools with hospitals even to the patients themselves, through the progress they maintained and the stimulus they afforded. A new site must be found for the out-patient department, and if some donor would provide £50,000 he would guarantee as fine an out-patient department as could be found anywhere. While the hospital expenditure last year had been exceptionally heavy the improved sanitation that had resulted from it was a permanent gain. Dr. H. Campbell Thomson, Fleet-Surgeon Hill, and Mr. E. L. Pearce Gould also replied. The Chairman of the council, in proposing a vote of thanks to Dr. Comyns Berkeley, the lecturer of the day, urged a more efficient means of communication between the weekly board and the medical staff. Sir James Kingston Fowler proposed the toast of "The Guests," and regretted the absence of Commendatore Marconi, who was to have replied. Mr. Debenham, in replying, referred to his long family connexion with the hospital. Mr. Boyton, M.P. for East Marylebone, said that in the discussion on the Insurance Bill in Parliament he had pointed out that his constituency contained about 1000 medical men. For the most part they were not of the class whose own personal interests would be affected by the Bill, so that their criticisms could not be accused of self-interest, but must be ascribed to a keen sense of what was due to their profession. Dr. D. R. C. Shepherd proposed the toast of "The Chairman," who replied. The following message was read in reply to a wireless sent to the King from the hospital in the afternoon: "Please convey to the chairman, governors, staff, and students of the Middlesex Hospital the sincere thanks of the King, Patron of the hospital, for their kind message of greeting on the occasion of the seventy-seventh anniversary of the foundation of their medical school at the hospital." In the course of the evening some excellent vocal and instrumental music was supplied.

University College Hospital.—The dinner for old and present students of the hospital was held at the Imperial Restaurant on Oct. 2nd, with Sir William Allchin in the chair. Over 120 sat down to dinner. After the loyal toasts, Sir William Allchin proposed "The Prosperity of the Medical School," and in an eloquent and thoughtful speech compared the rôle of the physician of the time of Sir William Jenner, when he was a student at the hospital, with that of the present day. The Dean, Mr. Raymond Johnson, replied in a lighter vein, expressing the gratification that all must feel at the very large increase of entries, and commending to the notice of old and present students the hospital magazine and the endowment of a bed in the hospital. The students have already collected £830 of the £1000 required for this excellent object. The speeches were interspersed with songs and instrumental music of exceptional merit.

Charing Cross Hospital.—The dinner to the past and present students was held in the evening of Oct. 2nd, in the new Adelaide Hall, at Gatti's Restaurant, opposite the hospital, under the chairmanship of Dr. Cuthbert Lockyer. The dinner was largely attended. The toast of "The Hospital and School" was proposed by the chairman, and in responding to it, the Dean, Dr. William Hunter, said that he had just received, by special messenger, a letter from H.R H. Princess Louise (Duchess of Argyll), the President of the hospital, who had opened the session and distributed the prizes in the afternoon, conveying her congratulations to the students on the reorganisation of their school, which will in every way give them greater facility and comfort to carry on their studies and research. Her Royal Highness anticipated that the zeal and enthusiasm shown by the dean and his colleagues in bringing the college to its present state of efficiency would stimulate the students to an even keener desire for success and a wish to send out the ablest men who would leave their mark on the world in the future, bringing lasting fame to the college. She wished the public would realise the great and difficult work of keeping up the efficiency with inadequate means. If they would reflect that it was all for

the benefit of the general public they would be ready to help.

St. George's Hospital.—The annual dinner of past and present students of St. George's Hospital was held at Princes Restaurant under the chairmanship of Sir Isambard Owen, Vice-Chancellor of the University of Bristol, and formerly physician to the hospital and for many years dean of the school. There was a good attendance both of the present medical staff and teachers and of the past and present students, while among the principal guests were Dr. H. A. Miers, D.Sc., Principal of the University of London, who had previously delivered the introductory address, and Professor W. D. Halliburton. Sir Isambard Owen, after the usual loyal toasts, outlined in an interesting speech the growing importance of universities to communities because of the promotion in them of the growth of the corporate spirit, and while he indicated that this spirit had always been present in the medical school at St. George's Hospital, he hoped that it would soon become manifest in all the students of the University of London. He concluded by expressing his conviction that the University of London would in the end become organised to fill the great future which it obviously should have before it. The text of Sir Isambard Owen's remarks was to wish prosperity to St. George's Hospital, and in reply Mr. A. W. West, the treasurer of the hospital, in a vigorous speech, deplored the divorce of medical schools from hospitals and criticised the action of the King Edward's Hospital Fund for London arising thereout. He spoke in a gloomy vein of the probable effects upon voluntary hospitals of the working of the National Insurance Bill, and appeared to express the sentiment of the company when he described the Bill as a most dangerous threat to the voluntary principle. Mr. H. S. Pendlebury having also replied, Dr. E. I. Spriggs proposed the health of Principal Miers in the character of the Orator of the Day. Professor Miers, in an interesting and happy speech, referred to his student days when he was a frequent visitor to St. George's Hospital, while with reference to his present charge, the University of London, he described it as possibly suffering from too much reform. Dr. Llewellyn Powell, anæsthetist to the hospital, speaking as a representative "of the most important branch of medicine," was delightfully humorous in a speech proposing the toast of "The Past and Present Students," replies to which were entrusted to Mr. C. M. Fegen and Mr. Tindall Atkinson. Mr. Clinton Dent proposed the toast of "The Chairman," whose career had for many years been run side by side with his own, as they had been students together at Cambridge, had sat for examinations simultaneously, and for many years worked together on the staff of St. George's Hospital. Sir Isambard Owen having replied, the proceedings terminated.

St. Thomas's Hospital.—The annual dinner of the past and present students was held on Oct. 3rd at the Hotel Cecil and was largely attended. Among those present were Sir Thomas Crosby, the Lord Mayor-elect, Sir Thomas Barlow, and Sir Anthony Bowlby. The chair was taken by Mr. G. H. Makins, C.B. In proposing the toast of "The Hospital and Medical School," Mr. Makins gave some interesting reminiscences extending over the past 40 years, and referred to the changes in the hospital that had taken place during his time. His reminiscences of the very remarkable staff of his time, containing sketches of Dr. Peacock, Dr. Bristowe, Dr. Ord, Dr. J. Harley, Dr. Murchison, Dr. Clapton, Sir John Simon, Mr. Sydney Jones, Mr. Croft, Sir William Mac Cormac and Mr. Mason, were delivered in a humorous vein that caused great amusement. He considered the work of the hospital and school for the past 40 years thoroughly worthy, and he referred with pride to the fact that the next Lord Mayor came from St. Thomas's. The toast was suitably acknowledged by the treasurer, Mr. Wainwright, and the Dean, Dr. H. G. Turney. Referring to Sir Thomas Crosby, whom he designated as the Grand Old Man of the dinner, Dr. Turney said that he was first medical Lord Mayor of London. On turning back to the school records for the year 1851, he found that Sir Thomas Crosby had in that year taken the several prizes for physiology, descriptive anatomy, medicine, and surgery. In 1852 he had again taken the physiology prize, and had added thereto those for forensic medicine, practical chemistry, comparative anatomy, and the Cheselden bronze medal for surgery and surgical anatomy. Others who had gained distinctions were Inspector-General Sir T. D. Gimlette; Sir H. B. Donkin; Acting Surgeon S. W. Grimslade, gold medallist at Haslar; Professor Leathes and Professor W. E. Dixon, new Fellows of the Royal Society; Dr. W. W. C. Topley, Murchison scholar and physiologist to Charing Cross Hospital; Dr. S. J. Sharkey, medical referee to the Treasury; and Mr. A. Lawson, President of the Ophthalmological Society of the United Kingdom. He also commended the cricket club and congratulated the school on securing the Inter-Hospital Sports Shield. Dr. T. D. Acland proposed the toast of "The Chairman," which was suitably acknowledged by Mr. Makins. Mr. J. H. Fisher proposed "The Health of the Guests," which was acknowledged by Sir Thomas Barlow in a manner that evoked great applause.

London Hospital.—The old students' dinner was held on Oct. 3rd at the Hotel Cecil under the chairmanship of Mr. Douro Hoare, who was supported, among others, by Mr. Otto Beit, Sir Edward Mann, Sir Frederic Eve, Sir Frederic Hewitt, Dr. Percy Kidd, and Mr. E. Hurry Fenwick. The chairman spoke of the work of the hospital and medical school, and announced with satisfaction the inauguration that day of a dental school in connexion with the London Hospital. His sharp criticism of the National Insurance Bill was endorsed by the audience. He regarded the scheme as a step towards the State control of hospitals. Mr. Fenwick proposed the health of the guests, and Sir Edward Mann and Mr. Otto Beit replied, while the toast of "The Chairman" was entrusted to Sir Frederic Eve, who deplored the general falling off in the numbers of medical students throughout the country.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7528 births and 4804 deaths were registered during the week ending Sept. 30th. The annual rate of mortality in these towns, which had steadily decreased from 21·2 to 17·0 in the five preceding weeks, further declined to 15·5 per 1000 in the week under notice. During the 13 weeks of the quarter just ended the annual death-rate in these towns averaged 16·6 per 1000, while in London during the same period the mean annual death-rate did not exceed 15·5 per 1000. The recorded annual death-rates in the 77 towns last week ranged from 5·7 in King's Norton, 8·0 in Hornsey, 8·3 in Devonport, and 8·9 in Croydon, to 22·5 in Dewsbury, 24·9 in Bury, 25·8 in St. Helens, and 28·3 in Walsall. The 4804 deaths from all causes in the 77 towns last week were no fewer than 462 less than the number returned in the previous week, and included 1056 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 1559 in the five preceding weeks. Of these 1056 deaths from the principal epidemic diseases, 886 resulted from infantile diarrhœa, 51 from whooping-cough, 46 from diphtheria, 35 from enteric fever, 19 from measles, and 19 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 3·4 per 1000 against 5·5 and 5·0 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœal diseases, which had steadily decreased from 2714 to 1377 in the five preceding weeks, further fell to 886 last week, and caused the highest annual death-rates of 6·8 in Tynemouth, 6·5 in West Hartlepool, 6·6 in Smethwick, 6·8 in Walsall, and 7·5 in Rotherham. The deaths referred to whooping-cough, which had been 55 and 61 in the two preceding weeks, fell to 51 last week, and included 13 in London, 6 in Sunderland, and 3 in Walsall. The fatal cases of diphtheria, which had been 40, 27, and 42 in the three preceding weeks, rose last week to 46; 16 deaths occurred in London and its suburban districts, 4 in Newcastle-on-Tyne, and 3 in Portsmouth. The deaths attributed to enteric fever, which had been 41 and 40 in the two preceding weeks, fell last week to 35, and included 5 in London, 4 in Liverpool, 4 in Hull, 3 in Bristol, and 3 in Bolton. The deaths referred to measles, which had decreased from 59 to 26 in the six preceding weeks, further fell last week to 19, which was the lowest number registered in any week of the current year; 4 deaths were recorded in London, 3 in Manchester, and 2 each in Stoke-on-

Trent, Wolverhampton, and Bolton. The 19 fatal cases of scarlet fever were 6 in excess of the number registered in each of the two preceding weeks, and included 4 in London, 3 in Liverpool, and 2 in Stoke-on-Trent. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had increased from 1327 to 1532 in the four preceding weeks, had further risen to 1666 on Saturday last; 333 new cases of this disease were admitted to these hospitals during the week, against 217, 264, and 240 in the three preceding weeks. These hospitals also contained on Saturday last 894 cases of diphtheria, 226 of whooping-cough, 157 of enteric fever, and 83 of measles, but not one of small-pox. The 1349 deaths from all causes in London last week were 7 fewer than the number in the previous week, and included 149 which were referred to diseases of the respiratory system, against 97 and 113 in the two preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 169 and 160 in the two previous weeks, further fell to 134 last week, and 301 inquest cases were registered. The causes of 30, or 0·6 per cent., of the deaths registered in the 77 towns during the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified last week in Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, Portsmouth, and in 57 other smaller towns. The 30 uncertified causes of death last week included 9 in Liverpool, 5 in Birmingham, 3 in Gateshead, and 2 each in St. Helens, Preston, Sheffield, and South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 798 births and 499 deaths were registered during the week ending Sept. 30th. The annual rate of mortality in these towns, which had been 16·4, 15·7, and 16·7 per 1000 in the three preceding weeks, declined to 15·2 in the week under notice. During the 13 weeks of the quarter just ended the annual death-rate in these Scotch towns averaged 15·2 per 1000, and was 1·4 per 1000 below the mean rate during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 13·0 in Paisley and 13·4 in Aberdeen to 17·2 in Edinburgh and 19·0 in Dundee. The 499 deaths from all causes in the eight towns were 48 fewer than the number in the previous week, and included 78 which were referred to the principal epidemic diseases, against numbers decreasing from 134 to 95 in the four preceding weeks; of these 78 deaths, 52 resulted from diarrhœa, 13 from diphtheria, 8 from whooping-cough, 3 from scarlet fever, 1 from enteric fever, and 1 from measles, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 2·4 per 1000, and was 1·0 below the death-rate from the same diseases in the 77 large English towns. The deaths attributed to diarrhœal diseases, which had declined from 113 to 65 in the four preceding weeks, further fell last week to 52 and included 47 of infants under two years of age; 25 deaths were recorded in Glasgow, 9 in Dundee, 7 in Edinburgh, and 4 in Greenock. The deaths referred to diphtheria, which had been 10 and 5 in the two preceding weeks, rose to 13 last week, and included 5 in Glasgow and 2 each in Edinburgh, Aberdeen, and Perth. The 8 fatal cases of whooping-cough were 4 fewer than the number in the previous week; 3 deaths were recorded in Glasgow and 3 in Edinburgh. The 3 deaths referred to scarlet fever were equal to the average in the three preceding weeks, and included 2 in Glasgow and 1 in Edinburgh. The fatal cases of measles and enteric fever were registered in Glasgow. The deaths referred to diseases of the respiratory system, which had been 41 and 57 in the two preceding weeks, further rose to 62 last week, and were 1 in excess of the number in the corresponding week of last year. Of the 499 deaths from all causes in the eight towns last week, 181, or 36 per cent., were recorded in public institutions, and 14 deaths were attributed to different forms of violence. The causes of 9, or 1·8 per cent., of the deaths in the eight towns last week were not certified; in the 77 English towns the proportion of uncertified causes last week did not exceed 0·6 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 669 births and 396 deaths were registered during the week ending Sept. 30th. The annual rate of mortality in these towns, which had been 19·4 and 20·4 in the two preceding weeks, declined to 18·0 per 1000 in the week under notice. During the 13 weeks of the quarter just ended the annual death-rate in these Irish towns averaged 18·3 per 1000; in the 77 English towns during the same period the mean annual death-rate was equal to 16·6, whilst in the eight Scotch towns it did not exceed 15·2 per 1000. The annual death-rate last week was equal to 19·9 in Dublin (against 15·6 in London), 16·9 in Belfast, 22·5 in Cork, 19·2 in Londonderry, 23·1 in Limerick, and 11·4 in Waterford; whilst in the 16 smallest of these Irish towns the mean annual death-rate did not exceed 13·6 per 1000. The 396 deaths from all causes in the 22 Irish towns were 48 fewer than the number returned in the previous week, and included 95 which were referred to the principal epidemic diseases, against 134 and 122 in the two previous weeks; of these 95 deaths, 81 resulted from diarrhœal diseases, 6 from enteric fever, 4 from scarlet fever, 2 from whooping-cough, and 2 from diphtheria, but not one from measles or from small-pox. These 95 deaths from the principal epidemic diseases were equal to an annual death-rate of 4·3 per 1000. The mean rate from the same diseases in the 77 English towns was equal to 3·4, while in the eight Scotch towns it did not exceed 2·4 per 1000. The deaths attributed to diarrhœal diseases, which had been 117, 121, and 111 in the three preceding weeks, declined last week to 81, and included 76 of infants under two years of age; 29 deaths occurred in Dublin, 26 in Belfast, and 8 in Cork. The deaths referred to enteric fever, which had averaged 2 in the four preceding weeks, rose to 6 last week, and were all recorded in Dublin. The 4 fatal cases of scarlet fever were 1 in excess of the number in each of the two preceding weeks and included 2 deaths in Belfast. The deaths referred to whooping-cough, which had been 5 in each of the two preceding weeks, declined to 2 last week, which were registered in Dublin and Belfast respectively. The 2 fatal cases of diphtheria were equal to the average in the three preceding weeks, and were recorded in Belfast and Cork respectively. The deaths referred to diseases of the respiratory system, which had been 42 and 43 in the two preceding weeks, were 42 last week. Of the 396 deaths from all causes in the Irish towns last week, 113, or 29 per cent., were recorded in public institutions, and 9 deaths were attributed to different forms of violence. The causes of 14, or 3·5 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes of death in the week under notice did not exceed 0·6 per cent. in the 77 large English towns, or 1·8 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeons: T. T. Jeans to the *Yarmouth*, temporary, on commissioning; and J. Whelan to the *Doris* on recommissioning. Surgeon: R. N. W. W. Biddulph to the *Pembroke*, additional, for disposal on *Doris* paying off.

ROYAL ARMY MEDICAL CORPS.

Colonel R. I. D. Hackett, principal medical officer of the Karachi Brigade, has taken up duty as Principal Medical Officer of the Abbottabad Brigade. Lieutenant-Colonel M. L. Hearn, medical inspector of recruits in the Irish Command, has been selected for appointment as Senior Medical Officer in Ceylon, embarking early in October. The War Office has approved an exchange of positions on the roster for service abroad between Lieutenant-Colonel E. A. Burnside and Lieutenant-Colonel J. C. Morgan, serving at Golden Hill and Dublin respectively. Colonel Morgan has been posted in consequence to Glasgow, with effect from Oct. 1st for duty in Charge of the Military Hospital at that station, in succession to Lieutenant-Colonel F. W. G. Gordon-Hall. Major P. J. Probyn, D.S.O., on return from a tour of duty in Hong-Kong, has been appointed

for duty at Londonderry. Major B. F. Zimmermann, who has been stationed at Topsham, has been appointed to the Medical Charge of the troops at Lancaster. Major G. St. C. Thom, who is serving in India, has taken up duty as Staff Officer of Medical Mobilisation Stores in the Second (Rawal Pindi) Division. Major W. E. Hudleston has been transferred from Parkhurst to the Military Hospital at Portsmouth. Major G. B. Carter, from Rangoon, has taken up duty at the Station Hospital, Maymyo, Burma Division. Major M. P. Corkery has been granted leave of absence home from India for eight months. Major H. S. Roch has been detailed for a tour of service in South Africa. Major J. S. Gallie has been posted to the London District and appointed Medical Officer of the Tower of London. Major A. L. A. Webb has taken up duty as Sanitary Officer at Sierra Leone, West Africa. Captain R. K. White, serving at Fermoy, has been directed to join the course of instruction for promotion to the rank of Major at the Royal Army Medical College, London, commencing on Oct. 31st next. Captain J. H. Robinson, Military Hospital, Curragh, has been placed under orders to embark for India about Oct. 11th for service with the Northern Army. Captain D. S. Skelton has been appointed to the Northern Command, England. Captain R. C. Wilmot, from the Portsmouth District, has taken up duty at Colchester as a Specialist in Ophthalmology to the district. Captain R. J. B. Buchanan has been selected for appointment as Clinical Pathologist to the Queen Alexandra Hospital at Cosham. Captain J. G. Bell has joined for duty at Seaforth. Captain J. E. H. Gatt has been transferred from Allahabad to Benares. Captain A. E. B. Wood has been posted to the Woolwich District. Captain H. B. Kelly has been appointed Specialist in Advanced Operative Surgery to the Dublin District, with headquarters at the Royal Infirmary, Phœnix Park, Dublin. Captain T. S. Dadding has taken up duty at the Military Hospital, Colchester. Lieutenant F. B. Dalgliesh, from the Station Hospital at Mhow, has been granted six months' leave of absence home from India on medical certificate. Lieutenant H. V. Stanley, from Dublin, has taken up duty at Kilbride Camp. Lieutenant T. J. Hallinan has been transferred from Cork to Kinsale. Lieutenant G. P. Taylor, from Glasgow, has joined at Irvine.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel P. Hehir has been selected to officiate as Principal Medical Officer of the Burma Division. Lieutenant-Colonel A. W. T. B. Buist has relinquished charge of the duties of superintendent of the Ambala District Jail. Lieutenant-Colonel B. C. Oldham, medical inspector of colonial emigration, has been granted 15 months' leave of absence home from India by the Home Department. The services of Lieutenant-Colonel C. F. Fearnside, senior medical officer at Fort Blair, have been replaced at the disposal of the Government of Madras. Lieutenant-Colonel P. Carr-White, agency surgeon, Madras Presidency, has been granted privilege leave of absence for 30 days. Major H. A. Forbes Knapton has been succeeded in the charge of the duties of Deputy Sanitary Commissioner of the Central Registration District, Bombay, by Captain A. F. Hamilton. Major P. Dee has been selected for appointment as First Class Civil Surgeon, Mandalay. Major P. St. C. More has relinquished charge of the Campbellpore Jail. The services of Major V. H. Roberts, medical officer in charge of plague preventive measures in the Rohtak District, have been replaced at the disposal of the Educational Department of the Government of India. Major C. F. Weinman, officiating resident physician at the Medical College Hospital, Calcutta, has been appointed a Second Class Civil Surgeon, and posted to Purnea in succession to Captain H. R. Dutton, transferred. Captain J. D. Sandes, probationer in the Chemical Examiner's Department of Bengal Presidency, has been appointed to officiate as Resident Physician at the Medical College, Calcutta, during the absence on deputation of Captain W. V. Coppinger. Captain R. B. Nicholson has been appointed to the Medical Charge of the 36th Horse. Captain H. Halliday has been posted to Lyallpur as Civil Surgeon on return to India from leave of absence. Captain W. S. Nealor has been appointed to the Substantive Medical Charge of the 123rd Outram's Rifles. Captain J. Husband has been selected for appointment as Medical Officer in Charge of the 30th Mountain Battery and the Frontier Royal Garrison Artillery. Captain H. B. Steen has taken up duty as First Resident Surgeon at the Presidency General Hospital during the absence on deputation of Captain J. W. D. Megaw. Captain W. C. Ross, deputy sanitary commissioner of the Bihar and Chota Nagpur Circle, has been granted three months' privilege leave of absence. Captain J. Masson, officiating civil surgeon of Serampore, has been appointed second resident surgeon at the Presidency General Hospital, Calcutta, in succession to Captain H. B. Foster. Lieutenant A. L. Sheppard has taken up duty as medical officer in charge of the 23rd Pioneers. Lieutenant W. O. Walker has been selected for appointment as medical officer in charge of the 27th Light Cavalry.

DEATHS IN THE SERVICES.

Deputy-Surgeon-General Sir Henry Jules Blanc, K.C.V.O., aged 80 years, at Paris on Sept. 30th. He served in the China War, 1860–62, as assistant surgeon with the Jagir Corps. In 1866–68 he accompanied a mission to Abyssinia on special duty, and was taken prisoner and kept in chains for nearly two years by the Emperor Theodore. He subsequently received the thanks of the British Government, and was awarded a gratuity of £2000 with the medal. Later he joined the British troops and was present at the storming and capture of Magdala (medal). After acting as senior surgeon and professor of surgery at the Grant Medical College, Bombay, he retired in 1887. He was created a K.C.V.O. in 1901.—Surgeon-Major John Raby, retired pay, late Bombay Medical Service, on Sept. 22nd, at Devonia, Paignton, aged 70. He joined the Bombay Medical Service as assistant surgeon in 1866, and in the following year accompanied the Bombay troops to Abyssinia, and took part in the expedition under Sir R. Napier. He retired in 1879.

VENTILATION IN THE NAVY.

The *Naval and Military Record* of Sept. 27th published a letter purporting to come from a chief petty officer, the highest grade on the lower deck, complaining of the bad ventilation of the newest ships in the navy and of the consequent wetness of their decks all through the winter, and asking that some officer should be directly responsible for the proper and unobstructed use of the ventilating machinery on board at all times. The new principal medical officers of the fleets have here at once employment worthy of their position. We shall expect to hear quite a different tale next winter, for those officers know as well as we that "a dry ship is a healthy ship," and they now have power to make their representations to the highest authorities.

NAVAL MEDICAL DINNER.

It is proposed to have the naval medical dinner in London about the third week in November, and further details will be given when the date is decided upon.

THE HEAD-DRESS OF THE ARMY.

The Army Council has decided that the service dress-cap is to be the head-dress for wear by all ranks in the field in temperate climates for all branches of the Expeditionary Force. The present pattern of service dress-cap is a modification of what used to be known as the "Brodrick" cap with the addition of a peak. It is a comfortable and in many ways a very suitable cap, but it does not give any protection to either the head or neck from the sun or from missiles such as stones when troops are on strike duty. A good head-dress for troops should provide protection to the head and eyes from the heat and glare of the sun, should be waterproof and afford little resistance to wind, should be possible of ventilation, light, durable, and comfortable, and should not press unduly on the scalp. The solution of these difficulties remains to be effected, as it is almost impossible to combine all the above advantages in a head-dress appropriate to all climates and at the same time suitable for peace and war.

ENTERIC FEVER AT WHITTINGTON BARRACKS.

The *Times* states that two deaths have taken place as the result of the outbreak of enteric fever amongst the men of the 2nd Battalion Royal Warwickshire Regiment, who are stationed at Whittington Barracks, Lichfield.

THE JAPANESE NAVAL MEDICAL DEPARTMENT IN THE RUSSO-JAPANESE WAR.

THE second instalment[1] of the translation of the Japanese naval medical report of the late war by Dr. Chemin, staff-

[1] The first appeared in THE LANCET of Sept. 23rd, p. 914.

surgeon in the French navy, appears in the September number of the *Archives de Médecine et Pharmacie Navales*. It should be read by every naval surgeon. This month he recounts the medical experiences associated with the sinking of ships by submarine mines, and rules are given for dealing with such emergencies. The less freeboard a rescuing boat has the better, for to get a half-drowned man over the high side of a big boat like a launch is a matter of great difficulty and takes up much time, time which is then very valuable, for the more quickly each man can be got on board the more men will be rescued. When a ship is sinking, men who jump into the sea, especially in cold weather, should not remove their clothing, for the air within it is only gradually displaced by water, and until that occurs it goes on acting as a non-conductor of heat, and so for the time delays and diminishes chill and shock. A man in the water should not try to swim except for a definite purpose, but be content to float, and be satisfied if he can just keep his mouth above water. The best life-buoy is a lashed-up hammock; it does not turn over and over like a cask, and there is always the lashing to hang on to; and a man, especially if exhausted, should never let go of his hammock, however near the boat he is, till his rescuers have hold of him. When a man has been rescued get his wet clothes off, wrap him in dry blankets (have some ready in the boats), give him a hot drink, and lay him down in a warm part of the ship (flats or ammunition passage). When the *Hatsuse* (three surgeons and seven nurses she had) was lost, 340 men were taken out of the water by boats from other ships. It was noted that when the boats came no man asked for help for himself, but they all eagerly hailed their rescuers, telling them where to find the officers.

"THE MILITARY SURGEON."

The *Military Surgeon* (Washington, D.C.) for September has as its first paper an article on Cholera by Dr. J. M. Hurley, who served through the Civil War and several cholera epidemics. He sketches the history of the cholera epidemics of Canada and the United States in detail and gives an excellent clinical account of the disease. He notices particularly the movements which occur from post-mortem contractions of muscles. He has known them to continue even for 24 hours. They often make watchers doubtful if the patient be really yet dead. Major J. H. Ford, Medical Corps, U.S.A., declares that in the manœuvre camp at Galveston 4000 men, all inoculated against typhoid fever, had not one case of the disease during the three months of the camp, while the incidence on 4000 persons living in the closely adjacent Galveston was in the same period 19. The most prevalent diseases were venereal; fortnightly inspections were made and prophylactic packets were issued, but in insufficient numbers. Captain E. B. Vedder, of the same corps, recommends ipecacuanha with the emetine left in for the cure of amœbic dysentery. The official U.S.A. army regulations for the use of salvarsan by intravenous injection and for antityphoid inoculation are given.

UNIVERSITY OF LONDON.—Professor E. A. Minchin, M.A., professor of protozoology in the University, will give a special course of about 15 lectures on "Trypanosomes and Allied Flagellates" at the Lister Institute of Preventive Medicine at 5 P.M. on Tuesdays and Fridays during the second term (January to March, 1912). These lectures, which are free, will be addressed to honours B.Sc. students and to medical men, and will be followed by exhibits of preparations as occasion requires. Further details will be published at a later date. A course of four lectures on "The History of Plague" will be given by Dr. Charles Creighton at the University, South Kensington, on Fridays, Oct. 20th, 27th, Nov. 3rd and 10th, at 4 P.M. Lecture I. will deal with "The Great Plagues of the Sixth and Fourteenth Centuries"; Lecture II. with "The Breeding-places of Plague"; Lecture III. with the "History of Plague in India"; and Lecture IV. with the "History of Preventive Measures and their Theory." A course of eight lectures on "The Manipulation and Theory of the Microscope" will be given by Mr. J. E. Barnard, F.R.M.S., at King's College, on Wednesdays, at 5 P.M., beginning on Oct. 11th. The lectures are addressed to advanced students of the University and to others interested in the subject. Admission free, without ticket.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—May I be allowed to refer to a few of the points raised by Mr. Albert Benthall in his letter published in THE LANCET of to-day's date. To deal with his second paragraph. When and where has the Chancellor offered "to grant a very much higher scale than at present in force in contract practice"? The ordinary scale is about 4*s.* per head per annum *for examined lives*. The Chancellor said in Parliament that 8*s.* 6*d.* was a most extraordinary demand; he also intimated that £4,500,000 would be set aside to provide medical aid for 15,000,000 people. This works out at 6*s.* per head, and may be presumed to include drugs, appliances, serums, vaccines, &c. These 15,000,000 will include all lives, not examined, even chronic invalids so long as they are not too bad to do some kind of work. In my opinion the present club pay is the better bargain of the two. I can nowhere find evidence that the Chancellor's "offer to relieve the profession of the expense of drugs" has been declined. On the contrary, Clause 14 (5) provides for dispensing as a separate charge from treatment.

I quite agree that the neglect to adequately safeguard club doctors, the leaving the whole matter of payment an open question, the constitution of health committees, and their substitution for Friendly Societies, are very weak points in an already weak position. I would go farther and say that in my opinion the six-point programme is in itself a confession of weakness; a compromise which has been still further compromised. I gather from the tone of his letter that Mr. Benthall thinks gravely of the present position of the profession. So do I. I think that the opening rounds of the fight have left us in a worse position than before. I think, apparently with Mr. Benthall, that our present tactics will not carry us to victory. But when Mr. Benthall comes to the remedy I am bound to say that I consider it worse than the disease.

Chief among Mr. Benthall's arguments is the perfectly true one that under the new *régime* we shall be at the mercy of Friendly Societies, lay committees, work-people's representatives, *et hoc genus omne*. His remedy is that we should all become State servants, at the mercy of Parliamentary officials, under the absolute control of a Government which, whatever colour it may be, depends for its life on the votes of the very classes we would escape from. The justice of our plea for relief from Friendly Society control was recognised in Parliament by the vote, 387–15. The expediency of conciliating these societies was proved by the Harmsworth amendment, accepted by Government without demur. And it will always be so. The rights of thousands will weigh as nothing in the eyes of any Government when compared with the votes of millions. Our servitude will be far greater as State servants than as club doctors. A State servant is a dumb, muzzled servant, who cannot speak his mind on any public question; he has no politics; he is no longer a citizen; his independence is gone. I think that the establishment of a State medical service would be a calamity for the public and the profession. But Mr. Benthall says that this is the only alternative. Here again I must differ. The alternative to club slavery and to State slavery is independence. Abolition of contract practice is the only logical outcome of the frequent complaints uttered against contract practice by doctors, Poor-law Commission, Chancellor, &c.

The worker up to now has been a poor man whom we have readily recognised as being unable to pay adequate fees, and whom we have been glad to meet much more than half way by attendance at a nominal sum. As a State beneficiary he will be a rich man, and therefore in a position to pay us proper fees. For many years we doctors have been underwriting the insurance risk, because the man has been poor. Now the State should take the burden from our shoulders and undertake their own insurance risk.

Mr. Benthall asks: "Is it possible to secure the best medical service to the people without undue expense to the State, and with honour and sufficient emoluments to medical

men?" My answer is, Yes, it is possible, but not with a State service, which will probably not be efficient, nor will it be honourable of us to give up our birthright of independence. The highest efficiency of medical practice is an adequately paid private practice. If the highest efficiency be gained the expense will not be undue. If the State wants the highest efficiency, the State, not the profession, must pay for it.

It is possible to get out of the present imbroglio with honour, to secure an efficient service to the workers, and to secure acceptable terms of service for the profession, but, in my opinion, this can only be done by adopting the policy of "payment per attendance." This policy has been endorsed by an immense number of practitioners in this country, and only now the German insurance doctors have given notice that they have had enough contract practice and will not have any more of it. Can we not profit by the experience of our German brothers? Can we not say this contract system stands condemned in this country and in Germany, and we will not take service under it? Our terms are: No insurance risk and payment per attendance. If you do not like them you can leave them.

I am, Sir, yours faithfully,

H. F. DEVIS.

Bristol, Sept. 30th, 1911.

To the Editor of THE LANCET.

SIR,—I have read with great interest Mr. Benthall's letter in your last issue. With most of his remarks I am in perfect agreement, and I think he shows clearly the disastrous effect the present Bill is likely to have on the future of the profession. Although personally a strong opponent of Friendly Society control, there is much in his contention that control by the Local Health Committees may not be one whit better, but only Friendly Society control "writ large." With regard to a "strike" being "an insult to the profession, and impracticable," unless Mr. Benthall has in his mind a medical strike on all fours with one of the recent industrial strikes, I cannot agree with him. No strike of that nature has ever been contemplated. There would be nothing impracticable in the great body of the profession refusing to undertake any of the medical duties laid down by the Bill, if passed in opposition to its demands. Unless the British Medical Association is to stultify itself, some such step must be taken if the requirements of our profession are surrendered to the clamours of the Friendly Societies.

With regard to a State Medical Service, that is a matter for further consideration, and there is, in my opinion, another alternative, which would still leave open the question of the formation of such a service. In Ireland the Irish Parliamentary Party is going to demand that medical benefits be excluded from the Bill. It is said the profession in Ireland is opposed to this; but if any such policy could be carried out here I cannot help thinking that it would be heartily welcomed by the great majority of the profession. Whatever evils exist now, few, I think, would wish to change the present state for the uninviting prospect offered by this Bill or its probable developments. The evils instanced by Mr. Benthall are appalling enough, and he does not mention the profound blow that must be given to the welfare of the profession, in the practical absence of an income-limit, by changing the greater part of the present private practice into club practice. A State Medical Service for those unable to pay, which might after all be only a reformed Poor-law Medical Service, would be a small evil compared with such a revolution. With the Friendly Societies and medical profession diametrically opposed on fundamental principles, which do not admit of compromise, it is next to impossible to expect that any system of medical benefits can be usefully included in the Bill, and the best alternative is that the Bill —if it is to pass at all—should restrict itself, as I believe was the original intention of its promoters, to benefits other than medical.

I am, Sir, yours faithfully,

London, Sept. 30th, 1911. MAJOR GREENWOOD.

To the Editor of THE LANCET.

SIR,—I am in a good deal of agreement with Mr. Benthall's remarks in your current issue regarding the minimum capitation grant; but the profession seemed to be almost unanimous in excluding any amendment to the Bill for effecting this purpose. For instance, at a meeting of the local profession here I brought this matter forward but failed to find a seconder for my proposal. I do not, however, remember to have read any speech or statement by the Chancellor in which he offered a "much higher scale" than the present average. No definite minimum scale was laid down in introducing the measure; and afterwards on many occasions, especially at the special meeting of the British Medical Association, he advised the doctors not to try for the insertion of such a provision in the Bill. Rightly or wrongly, his desire seemed to be that we would not be tied as to our future action, and that by our own solid and unbroken combination we would be able to safeguard ourselves as regards our duties and remuneration. Personally, I think that Mr. Lloyd George, since he properly understood representative medical opinion, has had a sincere desire to do us justice, and that the more satisfactory and fair our payment eventually would be the better he would like it. But the profession does not seem to see it in this light. Again, Mr. Benthall raises the question of the "free choice of doctor." But, at every branch meeting of the British Medical Association, to which all practitioners in the area, members and non-members, were invited, this provision was carried with practical unanimity. If the views of the profession are thus put forward and afterwards repudiated, how can any statesman enter into negotiations with us in the future? It is unfair to assume that the interests of those holding club appointments have not been properly considered.

Now, when a comparison is instituted between the present medical attendance under the Friendly Societies and that contemplated under the National Insurance Bill, and a choice asked to be made between the two, I have little doubt on which side the bulk of the general practitioners would be found. Nor can I agree with Mr. Benthall that the control of the Local Health Committees, for which the united profession has asked, would have nearly as many objectionable features as that of the Friendly Societies. On this head, indeed, no acknowledgment is made of the Chancellor's repeated promises to give the profession increased representation on the Insurance Commission, the Advisory Committee, and the Local Health Committees; nor is mention made of the Local Medical Committees which it is proposed to set up in each area, and which will directly represent the medical men on the panel. Fair-play demands that these concessions should be acknowledged. It is, of course, true that the Friendly Societies may have a majority on the Health Committees, but even then much of the control of the doctors will be carried out by well-defined rules made by the Insurance Commissioners. But even from the point of view of the general practitioner's interests it would be better for the Friendly Societies to have such a majority than the public health authorities who, from the introduction of the Bill, have wished to get the service into their hands and appoint whole-time medical officers to the great detriment of the interests of the general practitioners.

We have thus a medical service with doctors discharging "very responsible public duties," strictly regulated by the rules of the Insurance Commissioners, guarded by the ethical rules of the Local Medical Committee, and with the insurance doctor more independent, paid a better capitation fee, and having more security of tenure. And such being the case it is difficult to understand why malingering should increase; and from my own experience of nearly 25 years' work, including club and other forms of practices solely amongst the working-classes, I hold that a much greater check will be kept on these evil practices under the National Insurance Act than under the Friendly Societies.

In his letter Mr. Benthall pleads for a State medical service, and certainly this might have its advantages for the present generation of medical practitioners; but I think such a system is much more likely to be evolved from the medical service under the National Insurance scheme than to be immediately proposed by any practical statesman, taking into account present experiences. Lastly, as Mr. Benthall has entered a plea for the present club doctors, I hope I may be allowed to plead for those practitioners who believe in the beneficence of the amended National Insurance Bill. More than three-fourths of the work under the Act will fall to the lot of those practitioners who practise in the great industrial and working-class centres. To those, then, threatened on one flank by ever-increasing hospital abuse and on the other flank by Socialistic Poor-law reform and an extension of the present club system, and daily having their incomes reduced to almost vanishing-point from other causes too numerous to enumerate, I think the Bill will bring an enhanced income and substitute security for precariousness. It

is exactly those struggling practitioners, before whom Mr. Benthall would not spread temptation, who will be made more secure financially, and therefore more independent to discharge their duties under the Act. It is only doing bare justice to the heads of the British Medical Association to say that, since the introduction of the Bill, their policy has been to get from this measure the greatest good for the greatest number; but whilst I admit this, I believe that criticism of the Bill, both lay and medical, has been often one-sided and unfair, and frequently of the blind-alley kind. No attempt seems to have been made to consider the Bill in an impartial, calm, and reasoned manner, and from the point of view of the present position of the general practitioners who, as I have stated above, will attend the largest number of patients under the scheme. No acknowledgment is made of the fact, admitted by hospital managers, that the out-patient departments of the hospitals will be depleted by reason of the number of patients who will then be the paying patients of the insurance doctor instead of the recipients of charity; or of the number of present parish patients who will in the future be placed under the insurance scheme. And then we are told nothing, by those critics, of the one or two millions of money for maternity benefit which may, if we wish, go into our pockets.

And are we to forget the "Battle of the Clubs" (so graphically described in THE LANCET), or, to come to questions more immediately connected with the present crisis, are we to leave out of count the undoubted fact that in any case, even if the Bill is lost, there will be a large accession in numbers of the members of the Friendly Societies, partly due to the increased business stimulus given by the discussions on the Bill, but, even more due to the fact that the industrial insurance companies, the dividing and collecting societies, &c., may, Bill or no Bill, start Friendly Society work on their own account, safeguarding themselves, if necessary, from any hostile action of the General Medical Council by the adoption of a system based somewhat on the lines of the National Deposit Friendly Society. By this means it is said that, including women and children, the number of club patients in the kingdom will soon reach a total of 10 or 12 millions—a figure nearly approaching that contemplated under the Insurance Bill. And who will say that the present club doctors and others will not continue to give attendance to those new members in the future as they have attended the old members in the past, especially when we are informed that even recently men were working against each other to secure a club appointment with a 3*s.* 6*d.* per annum capitation fee?

In conclusion, I am fully aware that many medical men would kill the Bill and use some polite word about the consequences. But I will not be "in at the death," because I believe in the scheme, and I think the profession will make a huge blunder if by unreflective action this disastrous result is brought about.

I am, Sir, yours faithfully,

Mile End-road, E., Oct. 2nd, 1911. M. S. HARFORD.

To the Editor of THE LANCET.

SIR,—From the almost universal dissatisfaction expressed regarding the Insurance Bill, it is now evident that failing its withdrawal it will secure at most a reluctant acceptance in the House of Commons. The present is therefore, I think, an opportune moment for the profession to come forward and proffer its assistance in framing a measure which would be in its best and truest sense a State Medical Service. Each of the three parties concerned—the State, the public, and the medical profession—are now cognisant of each other's difficulties as well as of the advantages and disadvantages in such a scheme; indeed, the ignorance of Mr. Lloyd George on these matters was the primary cause of the present *impasse*.

Should such a proposition be accepted by those concerned, the medical element in such a conclave needs some guarding. Grateful indeed as we are to the British Medical Association for its action in the later negotiations with the Government, there is a feeling amongst many of us that in the earlier stages it was the *vis a tergo* of the justly irate general practitioner that saved the situation by strengthening the resistance of that Association.

Following the recent precedent of a Royal Commission on Railway Disputes the Chancellor of the Exchequer may perhaps see his way to appointing a commission comprised of delegates from Friendly, Dividing, and Insurance Societies, hospital officers, chemists, and, last, but not least important, general practitioners, who, after all, are the mainspring of the machine. While maintaining those points which we have hitherto deemed vital to our existence, I think in many other directions from no other source could Mr. George obtain more valuable help and wider experience in making straight the way to the loyal and lasting acceptance by the entire medical profession of a very necessary measure of social improvement.

I am, Sir, yours faithfully,

Norbury, S.W., Oct. 3rd, 1911. FRANCIS MURPHY.

THE HUNTERIAN SOCIETY'S MEDAL.

To the Editor of THE LANCET.

SIR,—The Hunterian Society awards annually a silver medal for the best essay by a general practitioner embodying the results of his own observations. May we remind intending candidates that the last day for the present competition is Dec. 31st, 1911. Any further particulars may be obtained from us. Thanking you,

We are, Sir, yours faithfully,

A. P. GIBBONS,
A. C. JORDAN, } Honorary Secretaries.

17, Finsbury-circus, E.C., Oct. 3rd, 1911.

THE THERAPEUTICS OF SCARLET RED.

To the Editor of THE LANCET.

SIR,—A recent search in its literature inclined me to think that scarlet red was almost unknown in this country, and your annotation on its properties may possibly bring it into commoner use. My introduction to it was through a letter from Mr. J. E. R. McDonagh, which appeared in your columns on Nov. 27th, 1909, and suggested its employment for ulcers. I have had no opportunity of trying it in this condition, although since April last I have prescribed it in almost 80 cases in this hospital. In the great majority of these it was given for intertrigo of the ears or of the napkin area, and certainly seemed to produce marked improvement in even 24 hours. One case in which I used it had an irregular raw area (measuring about 10 by 6 cm.) on the scalp over the left parietal bone due to a burn. This was treated with scarlet red and in 19 days was completely covered with smooth, supple skin, on patches of which hair is now growing. To set off such a satisfactory result I may mention one case of suppurating hip-joint disease the wound of which had completely broken down, and one case of fæcal fistula with much skin irritation. In both these scarlet red failed, and in the latter made the condition worse in the short time it was applied. This emphasises the necessity of having the surface clean, as you quote from Schmieden. My experience is limited to one form—that procurable from Zimmermann. I have noticed that after a time a gritty sediment forms in the preparation. This seems to show that it is preferable to make it up frequently in small quantities at a time.

I am, Sir, yours faithfully,

Park Hospital, Hither Green, Lewisham, S.E., Sept. 30th, 1911. JAMES RAE.

UNPAID MEDICAL ASSISTANCE ON BOARD SHIP.

To the Editor of THE LANCET.

SIR,—I should like an expression of opinion on the following. On board the steamer in which, as a passenger and not as a medical man, I recently returned to England, the surgeon sought my advice as to a stoker who had been in hospital some days. I at once volunteered to see the case and advised immediate surgical intervention. The surgeon then asked me if I would give the anæsthetic. I did so, and intimated that, while quite willing to help a *confrère* on a point of diagnosis, I considered I was entitled to a fee from the shipping company for the administration of the anæsthetic.

The surgeon was in agreement with my view and promised to arrange the matter with the captain of the ship. The latter, however, ridiculed the idea, and on my speaking to him stated that the services were rendered to the ship's surgeon personally and not to the company. He sent for the surgeon, and on his reply that he had asked for my services

said: "Then you must pay the fee." The captain's view, as he stated it, was that he or the mate could have given the anæsthetic. The manager of the company in London takes the same view and refuses remuneration. The surgeon himself offered me a fee, which, of course, I declined to accept.

The question arises: Can a ship surgeon pledge the credit of his company to secure the services of a qualified anæsthetist for urgent operations on board?

I am, Sir, yours faithfully,

London, Sept. 26th, 1911. C. J. S.

*** We cannot say what view would be taken in a court of law of this claim. That a ship's surgeon ought to be able to provide himself with the services of an anæsthetist, if one is available, without having to pay the fee personally is clear. It is equally clear that no passenger, because he happens to be a qualified medical man, ought to be allowed to give anæsthetics to a steamship company's servant without remuneration. The lesson is that medical passengers asked to assist in an operation on board ship, the patient being one of the ship's company, should state their fee to the captain and learn that they will receive it. By the way, what would happen if a captain or mate administered chloroform to a stoker and killed him, having refused to pledge the company to pay for the help of a qualified medical man? The course of modern litigation suggests that the company might have to pay say £200 to a widow instead of 2 guineas to a practitioner.—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The British Hospitals Association and the National Insurance Bill.

THE second annual conference was held in the Town-hall, Manchester, on Sept. 28th and 29th. Of the three subjects set down for discussion by far the most important was the question of the National Insurance Bill and its probable practical effects upon the voluntary hospitals and their work. The whole of the morning of the first day's meeting was devoted to this subject.

The chairman of the conference, Sir William Cobbett, who is also chairman of the infirmary board, delivered a long and closely reasoned address. He said that the effect of the Bill in the main would be financial. It had been suggested that it would make a considerable difference to the amount of work that hospitals would have to do, and that it would curtail the work of the out-patient department. It seemed safe to assume at present that the work of the out-patient department, though it might be diminished to some extent, would not be enormously affected. All those persons who were at present treated as in-patients would hereafter be insured persons, and all insured persons would be eligible as in-patients. On the other hand, there seemed no reason for supposing that in-patient work would be diminished, and the in-patient work was the expensive work of hospitals; therefore he thought that the Insurance Bill would not diminish the work of the hospitals in future, and their expenditure would be just as large. As to the effect of the Bill on the finances of the hospitals, it would lessen the amount of their subscriptions through the taxation for an allied purpose of the people who at present voluntarily supported them. He controverted the opinion of the Chancellor of the Exchequer that the Bill did not touch the hospitals, but designedly left them alone. The Chancellor, he said, had tapped and diverted two of the sources from which voluntary hospitals obtained a very large proportion of their donations and subscriptions—the working man and the employer, and it did not follow that the opinion which the Chancellor had formed was the correct one. As to the effect on subscriptions, almost without exception the opinion of the administrators of hospitals was that the Bill must necessarily have a serious and injurious effect on the finances of hospitals. Was it not a reasonable thing for hospitals to ask that some precautionary provision should be inserted in the Bill, so that in two or three or four years the hospitals should not be found in a crippled condition, so that they should not have to close their doors? The association had proposed to the Chancellor that he should amend his Bill in such a way that the voluntary hospitals should receive proper payment in respect of each in-patient treated within their walls.

Mr. Lupton, chairman of the Leeds Infirmary, discussed the effects of the Bill on the hospital system itself, as apart from the effects of the Bill on the finances of the hospitals. The great hospitals were in the great centres of population, and it was only in such centres that sufficient pecuniary assistance could be obtained for their institution, and where men qualified to devote themselves to the highest type of medical work could afford to group themselves. If they were to retain the great benefits of the present voluntary system, they must take care that if subventions from the public purse proved necessary such subventions in the case of the larger hospitals should come, not from the funds of the localities where such hospitals were situated, but from the National Exchequer. If the hospitals were municipally subsidised and controlled the tendency would be to close them to people living outside the municipality. In that case he failed to see how such help was to reach the people who lived in remote villages and hamlets.

Dr. D. J. Mackintosh, superintendent of the Western Infirmary, Glasgow, suggested that the Bill might be amended to prevent anyone whose income was over the insurance limit from admission to a voluntary hospital, and by making provision in the Bill for the Insurance Commissioners to defray the cost of treatment of each person admitted to hospital. The alternatives, he said, were for the Government to make such amendments as would not only safeguard the voluntary hospitals but render them increasingly efficient, yet less liable to abuse, or for the State to take them over, finance them, and see them carried on.

Amongst the other speakers were Mr. Howard J. Collins, of the General Hospital, Birmingham, and Mr. J. C. Buchanan, secretary of the Metropolitan Hospital, London, who urged that the British Hospitals Association should combine with the British Medical Association to draw up a scheme which should define the work that the hospitals would do best in relation to other agencies, and thus assist the Government to carry out its repeatedly expressed intention of maintaining the voluntary system. Sir Henry Burdett urged that more time should be allowed the country for the consideration of the Bill. He strongly favoured the Bill. He was of opinion that it would be a grave peril and a bitter wrong to substitute State aid for the voluntary system. The financial effect of handing voluntary hospitals to the control of the State would mean a difference of 8*s.* 6½*d.* per head of the population. He desired to see Clause 15 of the Bill, which provided for sanatorium benefit, altered to provide for hospital benefit.

On the second day of the meeting the following resolution was passed:—

That this association of hospital managers and administrators is convinced that the National Insurance Bill, if passed in its present form, will seriously prejudice hospitals all over the country, not only financially, but in their relation to the medical profession, and unites in calling on the Government so to amend the Bill that the continued existence of voluntary hospitals may be safeguarded financially, and their efficiency as curative institutions and schools of medicine may be maintained and developed.

Papers were contributed by Mr. Charles Hopkinson on the Distribution of Hospital Saturday and Sunday Funds, and by Dr. Ernest S. Reynolds on the Representation of Honorary Medical Staffs upon Boards of Management of Voluntary Hospitals.[1] The latter urged that the purely business affairs of a hospital should be left entirely to the lay members. Retired members of the medical staff should not act as representatives. The representatives should be relatively few in number, so as to be in a minority. They should attend regularly, should not serve for more than two years in succession, and their function should be to advise or to explain on matters relating to the well-being and treatment of patients, or to the teaching of students. The council of the association was invited to hold the next meeting of the association in Birmingham.

Report of the Medical Officer of the Grammar School.

The annual report to the governors of the Manchester Grammar School by their medical officer, Dr. Alfred A.

[1] Dr. Reynolds's paper is published in full at p. 1028 of the present issue.

Mumford, for the year ending July, 1911, gives as complete a record as possible of the facts of physical growth. These facts are compared with progress in the school. The comparison is placed before the special form masters responsible for particular groups of boys. Each boy has a card on which the details are entered. Actual physical measurements have been efficiently carried out in the school since 1881. Every new boy is medically examined on entry as to eyesight, hearing, teeth, past and present states of health, condition of lungs and heart. Comparing the physical development during the last five years with that of a generation ago—i.e., during the period 1881–86—there has been a remarkable gain in nearly all directions, especially as regards height and weight, amounting to more than one inch in height between the ages of 13 and 16, and to an average increase of more than 4 lb. in weight. At the age of 16 the boys are 1½ inches taller and 8 pounds heavier than a generation ago. The improvement is less marked at 17 and 18 years of age, and disappears in those who stay till 19. These calculations are based on 6000 measurements. This remarkable change has more than school significance and has many causes, chief among them being the steady diminution or postponement of early infectious diseases in childhood, due to the progressive operation of the Public Health Act of 1873. A second factor has been the changed attitude towards physical exercise, particularly during the younger ages, that prevails throughout the school to-day. Other causes conducing to the general improvement in physique are the better housing, the increased knowledge and use of foods, and a greater realisation of parental responsibility for the child's health. Dr. Mumford urges that 13 years is the best age for a boy to come to the city school, for then the brain is still in the plastic and receptive stage. He should stay a minimum of four years. It appears, however, that more than 31 per cent. of the boys stay only two years or less.

Post-Graduate Lectures in Manchester.

A series of post-graduate lectures and demonstrations will be given at the Ancoats Hospital, Manchester, throughout the coming year on Thursdays, at 4.15, commencing on Oct. 12th. All members of the medical profession are cordially invited to attend.

Ancoats Healthy Homes Society.

The report of the Ancoats Healthy Homes Society for 1910–11 states that during the 22 years in which the society has been in existence "a vast improvement has taken place in the condition of the district. Whole insanitary areas have been cleared away by the health authorities, the death-rate has been considerably reduced, and Ancoats generally has been made a more tolerable place for those who live there." During the coming winter the society will arrange for lectures on health topics on such subjects as whooping-cough, enteric fever, measles, and consumption. The chief object is to reach the mothers in the district. Each neighbourhood is visited in turn, and fathers and mothers are invited to attend at the hall "just as they are" and bring their children. The lecture is followed by a concert.

Sunstroke as an Employment Accident.

A case of considerable importance has just been decided by the arbitrator at the Preston county court—a claim on behalf of Margaret Wignall for £171 compensation for the death of her husband, a carter in the employ of a firm of hay and straw dealers. Wignall died from meningitis the result of sunstroke. The applicant contended that the sunstroke occurred during the time the deceased was carrying trusses of hay from a stack to a lorry. Wignall carried 72 trusses of hay, each weighing five stones, in one hour and twenty minutes. The arbitrator, Mr. Mansfield, considered that in Wignall's work there was something substantially beyond the ordinary normal risk, that the injury he suffered was largely the result of his work, and that it was thus an accident arising out of the man's employment. An order was made for the sum claimed.

Oct. 3rd.

GUILD OF ST. LUKE.—The eighth annual festival service of the Birmingham Ward will be held in Gloucester Cathedral at 4 P.M. on Thursday, Oct. 26th, when the sermon will be preached by the Bishop of Gloucester. All practitioners are invited to attend, and further particulars respecting the Guild can be had on application to Dr. W. T. Elliott, 65, Temple-row, Birmingham.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

New Medical Chairs in Connexion with the University of Glasgow.

IT will be recollected that in connexion with the clinical teaching at the University of Glasgow a scheme was put forward to reorganise the whole arrangement of affairs, and to try to make use of the abundant clinical material at the Royal Infirmary. The fact that the Western Infirmary is within a stone's throw of the University buildings naturally made it more convenient for medical students to take out their clinical work there. The tendency for students to remain there for all their clinical teaching was perhaps naturally increased by the knowledge that many of their teachers there, owing to the fact that they held university chairs, were, in some instances at least, their examiners at the final examination. Owing to the overcrowding at the Western Infirmary cliniques it was decided to bring out a scheme which would help to divert part of the stream of students to the Royal Infirmary, which, although at some distance from the University, is being rebuilt with all the facilities necessary for the training of students. Hitherto all students at the Royal Infirmary have been practically drawn from St. Mungo's College, an institution in close proximity to the infirmary, governed by its own board of directors, and laying itself out more especially for the training of dental students and those who were aiming at the triple qualification granted by the faculties at Glasgow and Edinburgh. The only feasible scheme to make the Royal Infirmary a clinical training ground which would attract students going up for a university degree was to put it as much as possible on the same footing as the Western Infirmary by founding chairs of medicine, surgery, pathology, and midwifery, the occupants of which would have wards at the Royal Infirmary, would conduct all their teaching there, and at the same time would have seats in the Senate and be examiners at the University. To find money for the founding of these chairs approaches were made to the governors of St. Mungo's College and also to the trustees under the Muirhead trust, who administer money left by the late Dr. Muirhead for the furthering of medical education in Glasgow. After some difficulty an arrangement was come to, and a provisional order was carried through Parliament to allow of the necessary alterations being made. The last step in the process was carried out last week, when the curators appointed various medical men to the new chairs. To the St. Mungo chair of Surgery Dr. Robert Kennedy was appointed, Dr. J. Munro Kerr to the chair of Obstetrics and Gynæcology, Dr. Walter K. Hunter to the Muirhead chair of Medicine, and Dr. John H. Teacher to the St. Mungo (Notman) chair of Pathology. These arrangements have all been made before the opening of the winter session, and it remains to be seen whether the scheme will have the desired effect of distributing the medical students more or less equally between the two institutions. If the Senate decrees that all clinical classes are to be absolutely limited to a certain number, and fixes the number at such a figure that a proportion of the students will find it impossible to get their training at the Western Infirmary, then the scheme will accomplish what it was intended to do. If, on the other hand, no such rule is made by the Senate and it is left to the free will of each individual student which hospital he will attend, it is probable that, partly from the nearness of the Western Infirmary to the University and partly also from tradition, the bulk of the students will still remain at the Western Infirmary.

Legacy for Scottish Hospitals.

Considerable satisfaction has been aroused in those more intimately associated with hospitals in Scotland over the will of Mr. Edward Davis, a native of Glasgow, who died last month at Cheltenham. The residue of the estate, which is a large one, has been bequeathed to charitable institutions in Scotland. It is expected that a sum of £75,000 may be at the disposal of the trustees, and hospitals should benefit largely.

Scarlet Fever in the Mearns.

There has been an outbreak of scarlet fever in Gourdon, with one death, in consequence of which the public school has been closed. At Bervie, also, the two schools have been closed for the same reason by order of the medical officer.

Banff and Medical Inspection of School Children.

A meeting of the Banff school board was held on Sept. 22nd, when the adjourned consideration of the county scheme for medical inspection of the schools was taken up. The position of the matter, as explained by the chairman, was that at the last meeting the adoption of the scheme sent down by the county committee on secondary education was moved and seconded, and a direct negative was moved by Dr. Murray. Fifteen out of 25 schools had agreed to the scheme, and no school had objected. Referring to the criticism by the board of the action of the secondary committee in getting the approval of the department to this scheme before sending it down to school boards, the chairman, on behalf of the committee, explained that this was the only scheme the department was likely to approve of, it being the scheme the department recommended, and it was a mere formality sending it for approval to the department. After some discussion, Dr. Murray said it was the school boards who were required by the department to provide for the medical examination of the pupils attending their schools, to such an extent and subject to the requirements as may from time to time be prescribed. The school board may employ a medical officer and a nurse. It was not the secondary education committee who had the appointment at all. It was the school board. Regarding the cost of the scheme, Dr. Murray said it was stated as £600 for the first year; but it would be very much more. Dr. Murray said they could carry on a scheme of their own at an equally low cost and it would be better done. He wished to say this final word, that if the board departed from what they had previously done they were flinging an insult on the medical profession in this district. Eventually the scheme was carried, the chairman expressing the opinion that any board could withdraw on a year's notice.

Oct. 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Sixtieth Report of the Inspectors of Lunatics (Ireland).[1]

THE total number of the insane in establishments and in unlicensed houses upon Jan. 1st, 1910, was 24,144. On Jan. 1st, 1911, the total number was 24,394. These figures do not include the insane wandering at large or those residing in private dwellings who are not certified. The figures show that there was an increase of 250 during the year—the increase for the previous year having been 213. The increase was, however, 78 less than the average increase for the preceding ten years, which was 328. The ratio of the increase in the number of the registered insane from year to year, in proportion to the population, is somewhat greater owing to the fact that the general population has been decreasing. From Dec. 31st, 1880, to Dec. 31st, 1910, there was an increase of 11,412 in the total number of lunatics. The inmates of district and auxiliary asylums increased by 11,936; the inmates of private asylums and institutions increased by 287; while the criminal lunatics in Dundrum Asylum decreased by 9, and the lunatics in workhouses decreased by 942. The decrease in the numbers in workhouses is continuing satisfactorily. The admissions numbered 3576, and of these, 2844 were admitted for the first time, while 732 had previously been under care. The total number of patients discharged was 1759, and of these 1307 were recovered, being a percentage of recoveries on the admissions of 36·5, and on the daily average number resident of 6·4. The number of deaths during the year was 1479. The death rate per cent. of the daily average number resident was 7·2. The rate varies from 10·2 in one asylum to 4·4 in another. In 197 cases only were necropsies performed. The number of examinations made, small as it is, tends still further to decrease, the numbers for 1910 being 25 less than for 1909, while the numbers for 1909 were less than those for 1908. The Commissioners again draw attention to the overcrowding which they find in so many asylums and to the consequent necessity for further accommodation. Year after year the same reports and recommendations are made, but apparently they fail to make much impression upon the local authorities.

[1] The Sixtieth Report of the Inspectors of Lunatics (Ireland) for the year ending Dec. 31st, 1910. London: Published by H.M. Stationery Office. Pp. 168 + xxxviii. Price 10½*d*.

Financial Position of the National University of Ireland.

The Dublin Commissioners under the Irish Universities Act, 1908, in a recent report have made clear the necessity for further endowment if the National University is not to meet with disaster. The income of the part of the property of the late Royal University which was conveyed to the National University is not sufficient at present to meet the charges on it, so that the University has as its annual income only the £10,000 a year awarded under the Act and the fees received from its students and graduates. The expenditure of the University in 1910 was, however, £15,534, a sum which exceeded by £1640 its total income for the year. With regard to the finances of University College, Galway, one of the constituent colleges of the National University, the Commissioners make some strong remarks:—

> We felt it our duty to state in our former report that the scheme proposed in the statute for that college did not in any degree conform to our conception of even a passable equipment for a constituent college of the University; that it represented in our opinion merely a makeshift, which we had found to be at the moment practicable, but which was regarded by us not only as unsound, but as constituting an anomaly in the framework of the University system, and from an educational point of view in many respects inadequate. We regret to say that these observations continue to apply to the College. There has not been any increase in its income, and we continue to regard with much apprehension its dangerous pecuniary condition.

Jubilee of the Mater Misericordiæ Hospital.

The golden jubilee of the Mater Misericordiæ Hospital was recently celebrated. The foundation-stone was laid in 1852, and the building was opened, with 40 beds, in 1861. A wing was added in 1872 and another in 1886, so that at present there is accommodation for nearly 350 patients. It was founded and is still maintained by the Sisters of Mercy. One of the original staff of the hospital, Sir Francis Cruise, is still attached to the hospital as consulting physician, and to his constant attention and high reputation much of the success of the institution is due. An interesting point regarding the members of the present staff is that, with the single exception of Sir Francis Cruise, they have all been students of the hospital, which has also supplied teachers to more than one of the other Dublin hospitals. The jubilee was celebrated by the saying of solemn High Mass in the chapel of the hospital, followed by the Benediction of the Blessed Sacrament and the *Te Deum*. A large company was entertained at luncheon, and the Bishop of Canea, who presided, conveyed the Apostolic Benediction from the Pope to the institution, its staff and benefactors. The hospital, though the youngest, is one of the largest in Dublin.

Hospital Supplies and the Strike.

Several of the Dublin hospitals have suffered from their inability to receive supplies during the railway strike. Eggs for the Royal Hospital for Incurables were held up at one station for several days, but were eventually rescued by amateur efforts. Dressings for Sir Patrick Dun's Hospital were similarly held up until a party of the students rescued them. Last week the bakers in the employ of several of the most important bread firms in Dublin went out on strike, while the unaffected firms found themselves unable to supply any but their regular customers. As a result many private houses and public institutions found themselves without enough bread, and several hospitals suffered severely. The Master of the Rotunda, for example, announced publicly that the hospital was entirely deprived of its bread-supply. The matron of Sir Patrick Dun's made a similar announcement, while the Mater Misericordiæ, Mercer's, and Dr. Steevens' hospitals were all in the same painful plight. It was generally held that the action of the strikers was unjustifiable. Within a few hours of the public appreciation of the position of the Rotunda offers of help and parcels of bread began to arrive. From Dublin itself, from the country towns round, from Belfast, and even from London, consignments of bread arrived, while a working baker offered his services to the institutions gratis during the continuance of the strike. Arrangements have now been made to safeguard the supply of the hospitals, which have in the meantime received a remarkable proof of the public feeling of gratitude towards them.

County Down Medical Officers and the Insurance Bill.

A meeting of the North County Down dispensary medical officers was recently held to consider their position under the

National Insurance Bill. The following resolutions were passed unanimously:—

1. That we object to any conditions as to service or remuneration being forced upon us by virtue of our office as dispensary doctors which should not be acceptable to medical men outside our service.
2. That we pledge ourselves to resist any such tyrannous and unjust attempts, by every legitimate means in our power, to try to compel us to accept such terms, and to deprive us of the same freedom of contract as other members of our profession.
3. That we approve of Poor-law legislation being undertaken on the basis of the able and exhaustive report issued by the Poor-law Vice-regal Commission as likely to be more effective and more just than any other scheme before the country, and more suited to its needs and the genius and circumstances of the Irish people.

The Water Famine in the North of Ireland.

At a meeting of the waterworks committee of the urban council of Monaghan, held on Sept. 27th, it was decided to cut off the supply of water to the public institutions—which includes the Monaghan and Cavan Asylum, where there are over 900 patients—and to supply the water to the ratepayers alone for a limited period. The Monaghan water-supply has almost completely failed, the reservoir being nearly empty, and the only water available is some which is being pumped at much expense from Greagh Lake. In Londonderry it is believed that at the present rate of consumption the quantity of water in the reservoirs cannot possibly hold out more than a month. It has been decided to take steps to procure an additional supply. In the meantime, the supply of water was cut off from last Saturday to Monday, and the chairman of the water commissioners stated at the last meeting that the next expedient would be to shut off the supply on four or five days each week.

River Pollution.

One of the linen industries at Portadown has demanded from the Portadown town council the right to the free flow of water of a river into which town sewage passes, an abatement of the nuisance in the river, a supply of water from the Portadown town supply, a clearing out of the sewage from the river opposite their premises, and a payment of £120 to cover their liquidated damages and costs up to the present. If this is not done, an injunction is threatened. The chairman of the town council of Portadown says that to comply with the requirements would mean that the council would have to undertake a main drainage scheme costing £40,000 to £50,000. Certainly these demands raise the question, Should a free supply of town water be given to every factory-owner who complains? The whole problem, a very serious one, is to be considered by the Portadown council in committee. It has already obtained a good water-supply, and will in the end be wiser, despite the great cost, to obtain a main drainage scheme.

Salaries for Urban Councillors.

At the Dungannon urban council, on Oct. 2nd, the following resolution, extraordinary in every way, was unanimously adopted:—

That we call upon the Government to pass an Act of Parliament to demand State payment for all municipalities in Ireland, and to place us on the same terms as the Members of Parliament in England, as I (i.e., proposer of the motion) consider that we, the county councillors, rural district councillors, and urban councillors, are a greater service to the State than most of the Members that are getting £400 a year.

Oct. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Consumption of Alcohol in France.

FOR many years the consumption of alcohol increased to an alarming degree in France. Physicians and hygienists especially were disquieted, for the results speedily became visible as much in a predisposition to contract different diseases in an aggravated form, as in the fatal influence that alcohol gradually exercises on the mind and in the indolence that its abuse induces. Dr. Jacques Bertillon, however, has now made reassuring utterances in a communication on the Diminution in the Consumption of Alcohol in the Larger French Cities to the Academy of Moral and Political Sciences on Sept. 30th. He exhibited to the Academy 33 diagrams relating to as many cities, from which it appears that the consumption of brandy has considerably diminished since the application of the law reducing the tax on wine and beer and increasing that on distilled beverages. The history of alcohol in France shows that a moderate increase of a tax has no sensible influence on the consumption. As a consequence, however, of the enormous imposts placed on distilled drinks, the consumption of alcohol has greatly diminished in the towns, but not in the country. This is due to the fact that the increase of the town toll is there added to that of the tax; while the duty on wine being lowered, the retailers are interested in selling wine rather than brandy. Formerly the consumption of brandy was almost the same in all the groups of cities—namely, from 7 to 8 litres of absolute alcohol per head—while in the country districts it was only 2·84 litres. It has now fallen to 6 litres in the small towns of from 4000 to 10,000 inhabitants, and to a still smaller figure in the more important towns; while in towns of more than 90,000 inhabitants it has fallen to 4·23 litres. The fall has been most marked in the large towns; in the country districts it has been negligible or absent.

The Effect of the Drought on the Eyes.

Among the numerous inconveniences entailed by the great heat of the past summer has been the great dryness that has prevailed everywhere. In the large towns, particularly where the principal streets, avenues, and boulevards are paved with wood, a serious and unexpected consequence has appeared. The transit of numerous vehicles over this wood pavement, inoffensive though it may be in normal times, ceases to be so in periods of prolonged dryness. The constant friction of the wheels on the wood paving disperses through the air minute particles which get into the eyes. These particles are the more painful in that, being pointed, microscopical though they are, they cause minute abrasions. Numerous cases of eye-trouble have been thus produced. This great heat is naturally accompanied by a more glaring light, due to the excessive brilliancy of the sun, which reflects most painfully on the eyes. On all hands, therefore, oculists have been recommending for eye-glasses the use of yellow glasses which allow some light to pass through; they give a considerable sensation of comfort and allow of a clear appreciation of distances and increase the relief in which objects stand out.

Oct. 2nd.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENT.)

The Thirteenth Annual Conference of the American Hospital Association.

THE Thirteenth Annual Conference of the American Hospital Association, held in New York from Sept. 19th to 22nd under the presidency of Dr. W. L. Babcock of Detroit, was highly successful. The audience was largely composed of women, mostly superintendents or matrons of hospitals, or nurses. They took their part in the papers and discussions with great ability. As speakers they compared favourably with the men. The programme was long, so it must suffice to refer to only some papers of outstanding public concern. Mr. George McAneny, president of the Borough of Manhattan, in welcoming the members to New York, took as his subject hospital reform. He sharply criticised New York's divided system of hospital supervision and advocated a centralisation of the hospitals of the city. He deprecated the action of the city authorities in amending the provision included in the new charter for centralising the control of some of the city hospitals, asserting that it had put the situation back into its former position.

The first, and perhaps the most generally interesting, paper read was by Dr. J. N. E. Brown, of Toronto, until recently superintendent of the Toronto General Hospital. Dr. Brown had just returned from a tour of inspection of hospitals in Great Britain, Germany, France, Austria, and Holland. He referred to the various systems of hospital support, and considered that State or municipal support of such institutions, as in vogue on the continent, was superior to the voluntary method of Great Britain and the partially voluntary method of America. Dr. Brown also appeared to be favourably prepossessed with the European method of hospital administration, and stated that in his opinion "a medical man, *cæteris paribus*, makes the best sort of director of a large hospital, but when appointed to fill such a position he should be relieved of work which belongs to the medical staff. The proper administration of a large hospital demands the sole attention

of the head." He briefly described the organisation of European hospitals, and expressed himself in favour of the European system generally. As to hospital construction, Dr. Brown thought that the architects of the best of these institutions in Europe had little to learn from their American and British *confrères*. He was especially impressed with the situation of many of the large continental hospitals, placed in large and beautiful grounds, affording plenty of fresh air and secluded from noise. Another feature of some of the Dutch and German hospitals which greatly struck Dr. Brown was the ample provision of bath-houses and of disinfection-houses. Finally, the much-vexed question of ventilation was dealt with, and many of the methods, elaborate and otherwise, for securing a constant supply of fresh air in the wards of hospitals were described at length.

Mr. Edward F. Stevens, A.A.I.A., of Boston, Mass., Dr. Brown's companion during his European pilgrimage, dealt at considerable length with the details and equipment of British and continental hospitals, and compared these with the details and equipment of American hospitals. Mr. Stevens showed on a screen illustrations, exterior and interior, of numerous hospitals visited.

Another excellent paper was read by Mr. J. M. Cosgrave, manager of the Winnipeg General Hospital, on the Development of Typhoid Fever among Hospital Workers. It really was a vindication, if such were needed, of preventive anti-typhoid vaccination. Mr. Cosgrave said that until anti-typhoid vaccine came into use it had been almost impossible to prevent the spread of the disease among nurses and hospital employees; but since its use became general typhoid fever among hospital employees had almost ceased. Dr. H. W. Austin, of the United States Public Health and Marine Hospital Service, also eulogised the efficacy of the vaccine, and said it was being used more and more in the navy hospitals, and with success. Dr. Morrell of Baltimore told of the results of its use in the United States army camp at San Antonio during the manœuvres, and said that among 1200 men who submitted to the treatment only one contracted the disease, and that in a mild form. Dr. Willie G. Neally, assistant superintendent of the New York Hospital, emphasised the importance of properly administering anæsthetics, which was frequently as essential to operative success as the work of the surgeon.

Mr. Robert W. Hibberd, secretary of the State Board of Charities of New York, complained that the hospital facilities of New York city were woefully inadequate to the needs of the population. He further stated that the system of management was far too complicated, and he also was of opinion that centralisation of the hospital organisation was required. The plans of the State Board of Charities, the great hospital department of the city, which cares, probably, for three times more patients daily than the other hospital departments, he said, contemplate that Blackwell's Island shall eventually become a great hospital park for the care of the adult sick poor, that Randall's Island shall be made into a park for sick children, that the King's County Hospital property shall be dealt with in a similar manner, and that the relatively able-bodied poor, who are really the ones cared for by the department, shall be maintained at the Farm Colony on Staten Island, where they may be given plenty of work suited to their strength and capacity. Mr. Hibberd concluded that New York was a generation behind the age in its public hospital and ambulance facilities. To bring it up to date it urgently required a unified hospital and ambulance system.

Mr. Abraham Flexner, of the Carnegie Foundation, one of the authors of the report on the medical schools of America, read a paper on hospital organisation and research, wherein he reiterated the charges made in his report against small and inefficient medical schools. Mr. Flexner pointed to the satisfactory fact that 20 medical schools of this class had gone out of existence during the past year, owing to the campaign among the hospitals which permitted them to flourish. Mr. Flexner concluded by naming several medical schools which, he said, ought to be closed. Mrs. Margaret Engelhart, president of the Association of the Frances Willard Hospital of Chicago, took exception to Mr. Flexner's strictures on certain of these medical schools, and stated from personal knowledge that at least one of them produced as fine a student body as could be desired, and that a graduate of that school would be welcome on the staff of the Frances Willard Hospital. The Rev. A. S. Kavanagh, superintendent of the Methodist Episcopal Hospital, Brooklyn, read the report of the committee on hospital efficiency, hospital finance, and economics of administration, and incidentally paid a well-merited tribute to the work done by Dr. Doty as health officer of the port of New York. This expression of the gratitude of the citizens of New York to Dr. Doty was peculiarly fitting, in that recently Dr. Doty has been fiercely assailed with charges of neglect of duty by political opponents.

Sept. 25th.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the First Professional Examination of the Conjoint Examining Board held on Sept. 26th, 27th, 28th, and 29th, the following candidates were approved in the under-mentioned subjects:—

Chemistry and Physics.—William Fletcher Barrett, Birkbeck College; Christopher Frank Good, London Hospital; Frederick John Good, London Hospital; Elma Jamilla Ishmael, London School of Medicine for Women; Reginald Jenner-Clarke, London Hospital; Paul Rustat Ellis Kirby, Brighton Technical College; Louisa Margaret Lister, Bristol University; John Frederick Munton Payne, London Hospital; Thomas Melville Payne, University College, Cardiff; Nirendra Mohan Sen-Gupta, London Hospital; Violet Annie Shaw, Birkbeck College; and Cecil Pembrey Grey Wakeley, Dulwich College.

Chemistry.—Hugh Stanford Bryan, London Hospital; Joseph Adrian Hart, London Hospital; Reginald Fitzroy Jarrett, London Hospital; Thomas William Le Mesurier, London Hospital; William Dundas McRae, London Hospital; Dudley George Pearce, Guy's Hospital; Walter Davies Pearman, Birmingham University; and Ernest Wayte Terry, Manchester University.

Physics.—Henry Searle Baker, St. Bartholomew's Hospital; Gauri Dayal, Bombay and Manchester Universities; Eldon Munro Litchfield, Otago University; George Samuel Bousfield Long, Guy's Hospital; Gerald Richardson Sharp, London Hospital; and William Walford Salisbury Sharpe, St. Mary's Hospital.

Biology.—Richard Ambler, Middlesex Hospital; Henry Searle Baker, St. Bartholomew's Hospital; William Fletcher Barrett, Birkbeck College; Christopher Frank Good, London Hospital; Ernest Gwyn Howell, University College, Cardiff; Reginald Jenner-Clarke, London Hospital; Theodore Louis Kan, King's College; Percy Gunn Russell, Middlesex Hospital; and Violet Annie Shaw, Birkbeck College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the Preliminary Science Examination for the Licence in Dental Surgery, held on the same dates, the following candidates were approved in the subjects specified:—

Chemistry and Physics.—Ernest Bailey, Harris Institute, Preston; William Milton Bull, West Ham Technical School; Arnold Court, Banbury Municipal School and Birmingham University; Frederick Andrew Craine, Middlesex Hospital; Herbert Ronald Cullwick, Wolverhampton Grammar School; Launcelot Machin, Guy's Hospital; and David Stewart, Salford Royal Technical Institute.

Physics.—Ellis Larner Cooke, Battersea Polytechnic; John Langley Garrard, Guy's Hospital; William Henry Churchill Gordon, Guy's Hospital; Sidney Francis Greenfield, Northern Polytechnic Institute; and Edgar William Smith, Charing Cross Hospital.

Chemistry.—Walter Lawton Cocker, Halifax Municipal College; Tom Geoffrey Melsome Parker, Middlesex Hospital; and William John Ross, Salford Royal Technical Institute.

GUY'S HOSPITAL MEDICAL SCHOOL.—The following entrance scholarships and certificates have been awarded:—Junior science scholarships: £120, Leonard Snowden Debenham, St. Paul's School, West Kensington; £60, Peter George McEvedy, preliminary science class, Guy's Hospital; certificate: James Gayner Jones, preliminary science class, Guy's Hospital. Entrance scholarship in arts: £100, Thomas Albert Victor Wood, Wolverhampton Grammar School; £50, F. Gilbert Scott, B.A., Merton College, Oxford; certificate: Douglas A. Dyer, Berkhamsted School. In the Dental School the following entrance scholarships were awarded:—Dental mechanics: open scholarship, G. L. Cutts; pupils' scholarship, A. F. Rook.

NATIONAL UNION OF PUBLIC HEALTH AUTHORITIES.—A conference of Public Health authorities, under the auspices of the above union, will be held in the Council Chamber, Caxton Hall, Westminster, at 10 A.M., on Friday, Oct. 13th, to consider: (1) the urgent need for dealing immediately, on national lines, with the question of the prevention and treatment of tuberculosis; and (2) the provisions of the National Insurance Bill, in so far as they affect Public Health authorities, especially those relating to the proposed Local Health Committees. In order to influence

legislative action on both these questions the executive committee feels that it is of vital importance that any resolutions or recommendations submitted to the Government should reflect the united opinion of Public Health authorities throughout the country. The conference will therefore be open to the representatives of all Public Health authorities, whether members of this union or not.

Dr. Watson Williams will deliver the inaugural lecture on the Influence of the Upper Air Tract on Respiration, illustrated by lantern slides, at the Central London Throat and Ear Hospital, on Friday, Oct. 27th, at 3 P.M.

A MEMOIR of Sir John Burdon Sanderson is on the eve of publication by the Oxford University Press. Lady Burdon Sanderson had completed four chapters when she died, and the work has been finished by Mr. J. E. Haldane and Miss E. S. Haldane, who have added some of their uncle's papers and addresses on subjects of general interest.

THE SALE OF CORROSIVE ACIDS.—The Privy Council regulations for the sale of corrosive mineral acids came into force on the first day of this month and should do much to lessen the number of fatal accidents from these poisons among the poorer classes. The need for such regulations has long been felt, and has often been expressed in coroners' courts by medical witnesses and coroners, notably by Dr. F. J. Waldo, who referred again to the matter at an inquest on a case of hydrochloric acid poisoning on Sept. 27th in the City Coroner's Court. The new regulations lay down that sulphuric, hydrochloric and nitric acids, and "salts of lemon" must only be sold by retail in bottles, distinguishable by touch from ordinary bottles and bearing on a label the name and address of the vendor, together with the words "Poisonous" and "Not to be taken." In future the sale of the above acids in violation of these regulations will be subject to a fine of £5. On Feb. 1st, 1912, ammonia will also be included in the list.

DONATIONS AND BEQUESTS.—By his will the late Mr. Henry Overton Wills, first Chancellor of the University of Bristol, made the following bequests to medical charities and organisations, as well as a number of others of a public character:—Bristol General Hospital, £3000; Royal Hospital for Incurables, Putney, £3000; British Home and Hospital for Incurables, Streatham, £2000; Bristol Royal Hospital for Sick Children and Women, £2000; Her Majesty's the late Queen's Nurses, £2000; National Hospital for Paralysed and Epileptic £500; Bristol District Nurses' Society, £500; Weston-super-Mare Children's Convalescent Home, £250; Royal United Hospital, Bath, £500; Western Dispensary, Bath, £200; and Combe Down Convalescent Home, £200. The will also confirms the gift of £100,000 to the University of Bristol. The estate is provisionally sworn at £2,000,000.—An offer of £12,500 has been made towards the scheme for the extension of Chester Infirmary by Mr. Albert Wood of Bodlondeb, Conway.—Miss Best of London has also given £1000 for the endowment of a bed in memory of her sister, formerly a resident at Chester.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BURFIELD, J., M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Norfolk and Norwich Hospital.

HUNTER, WALTER K., M.D. Glasg., has been appointed to the Muirhead Chair of Medicine in the University of Glasgow.

MIDDLEWEEK, FREDERICK FRANCIS, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Honorary Director of Mechano-Therapeutics and Massage at the West-End Hospital for Nervous Diseases.

MILLIGAN, E. H. M., M.D.Q.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Long Eaton District of the county of Derby.

TEACHER, JOHN H., M.D. Glasg., has been appointed to the Mungo Chair of Pathology in the University of Glasgow.

WALKER, C. F., M.D. Lond. (State Med.), B.S. Lond., D.P.H. Vict., has been appointed Resident Medical Officer of the Leicester Isolation Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH, EASTERN DISPENSARY.—Resident Medical Practitioner. Salary £130 per annum, with apartments, coals, gas, &c.

BIRKENHEAD EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £260 per annum.

BIRMINGHAM CITY FEVER HOSPITAL, Little Bromwich.—Medical Superintendent. Salary £250 per annum, with board and residence.

BIRMINGHAM, QUEEN'S HOSPITAL.—Obstetric and Ophthalmic House Surgeon. Salary at rate of £50 per annum, with board, lodging, and washing.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £140 per annum, with rooms, rations, laundry, and attendance.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—Two House Surgeons for six months. Salary at rate of £75 per annum, with board and residence.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £160 per annum, with rooms, &c.

BURSLEM, HAYWOOD HOSPITAL.—Resident Medical Officer (female). Salary £100 per annum, with board, residence, and laundry.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Second House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CHESTER, CITY OF.—Assistant Medical Officer of Health. Salary £250 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £80 per annum, with board, apartments, and laundry.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—Assistant Physician.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and residence.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Two Junior House Surgeons. Salary £80 per annum, with rooms, board, washing, and attendance.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, apartments, laundry, &c.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

EAST SUFFOLK COUNTY EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £250 per annum.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—House Physician and Assistant House Surgeon for six months. Salary at rate of £60 per annum, with board, apartments, and washing.

GLASGOW DISTRICT MENTAL HOSPITAL, Lenzie.—Junior Assistant Medical Officer. Salary £125 per annum, with board, lodging, and washing.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Surgeon to Out-patients.

HASTINGS, EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary at rate of £60 per annum, with residence, board, and washing.

HOMERTON INFIRMARY.—Medical Superintendent and Medical Officer of the Homerton Children's Homes, &c. Salary £500 per annum, with luncheon, tea, &c.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for six months. Salary 30 guineas.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale, W.—Resident Medical Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Assistant Casualty Medical Officer, unmarried, for six months. Salary £30, with board, residence, &c.

HULL ROYAL INFIRMARY.—Two Casualty House Surgeons. Salary at rate of £80 per annum, with board and lodging.

INVERNESS DISTRICT ASYLUM.—Junior Assistant Physician. Salary £140 per annum, with board, lodging, and laundry.

LEEDS GENERAL INFIRMARY.—Resident Medical Officer. Salary £150 per annum, with board, residence, and washing. Also Resident Obstetric Officer and Two House Physicians for six months, each with board, lodging, and washing. Also Three House Surgeons for twelve months. Also Resident Medical Officer for the Ida and Robert Arthington Hospitals for six months. Salary £30, with board, lodging, and washing.

LEEK, CHEDDLETON ASYLUM.—Locum Tenens Assistant Medical Officer for four months. Salary 4 guineas per week, with board, residence, and washing.

LEICESTER BOROUGH EDUCATION COMMITTEE.—Assistant Medical Officer. Salary £250 per annum.

LEICESTER INFIRMARY.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

LIVERPOOL STANLEY HOSPITAL.—Two Junior House Surgeons. Salary £70 and £60 per annum respectively.

LOWESTOFT HOSPITAL.—House Surgeon, unmarried. Salary at rate of £100 per annum, with board, residence, and laundry.

MELROSE, ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary £160 per annum, with board, lodging, and washing.

METROPOLITAN HOSPITAL, Kingsland road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon for six months. Salary of House Physician and House Surgeon at rate of £60 per annum, with board and washing. Salary of Assistant House Physician and Assistant House Surgeon at rate of £40 per annum, with board and washing.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—House Surgeon. Salary £60 per annum, with board, residence, and laundry.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, lodging, and washing.

NOTTINGHAM WORKHOUSE INFIRMARY.—Resident Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, washing, and attendance.
OLDHAM ROYAL INFIRMARY.—Third House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.
OLDHAM UNION WORKHOUSE.—Resident Assistant Medical Officer.
PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant Surgeon.
PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Senior House Physician. Salary £75 per annum. Also Senior House Surgeon. Salary £75 per annum. Also Junior House Physician. Salary £50 per annum. Also Junior House Surgeon for six months. Salary £50 per annum, with residence, board, and laundry.
READING, ROYAL BERKSHIRE HOSPITAL.—House Physician and Second House Surgeon for six months. Salary £80 and £60 per annum respectively, with board, lodging, and washing.
REDHILL, EARLSWOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and washing.
ROYAL ARMY MEDICAL CORPS.—Twenty Commissions.
ROYAL DENTAL HOSPITAL, Leicester-square, W.C.—Clinical Pathologist and Demonstrator on Bacteriology. Salary £75 per annum.
ROYAL EAR HOSPITAL, Soho.—House Surgeon. Salary £40 per annum. Also Assistant Surgeon.
ROYAL EYE HOSPITAL, Southwark, S.E.—House Surgeon for six months. Salary 50 guineas per annum, with board and residence.
ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—House Physician and House Surgeon for six months. Board, lodging, and washing provided. Also House Physician and House Surgeon (females). Board, lodging, and washing provided.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with board, lodging, and washing.
ROYAL NAVAL MEDICAL SERVICE.—Fifteen Commissions.
ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Honorary Dental Surgeon.
ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Senior Resident Medical Officer, unmarried. Salary at rate of £100 per annum, with board, residence, and laundry.
SALFORD ROYAL HOSPITAL.—Casualty House Surgeon for six months. Salary at rate of £50 per annum, with board and residence.
SHEFFIELD ROYAL INFIRMARY.—Three Junior Resident Medical Officers. Salaries £60 to £65 per annum.
STOCKPORT INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, washing, and residence.
STRAND UNION SCHOOL, Millfield House, Upper Edmonton.—Medical Officer. Salary £80 per annum.
TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and laundry. Also Honorary Physician.
TEIGNMOUTH HOSPITAL, S. Devon.—House Surgeon. Salary £80 per annum, with board, lodging, and laundry.
TOTTENHAM EDUCATION COMMITTEE.—Ophthalmic Surgeon. Salary £25 per annum, plus 2*s.* 6*d.* for each scholar examined and prescribed for.
WADSLEY, NEAR SHEFFIELD, SOUTH YORKSHIRE PAUPER LUNATIC ASYLUM.—Medical Superintendent. Salary £750 per annum.
WALSALL AND DISTRICT HOSPITAL.—House Physician and Casualty Officer. Salary £80 per annum, with board, residence, and laundry.
WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.
WHITTINGHAM, NEAR PRESTON, COUNTY ASYLUM.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, apartments, and washing.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Christchurch, in the county of Hants.

Births, Marriages, and Deaths.

BIRTHS.

BENETT.—On Sept. 24th, at Jubbulpore, India, the wife of Captain A. M. Benett, R.A.M.C., of a son.
RABAGLIATI.—On Sept. 29th, at Brookton, Western Australia, the wife of A. H. Rabagliati, M.D., F.R.C.S.E., of a daughter.

MARRIAGES.

FOWLER—CANT.—On Sept. 29th, at 8, Midmar Drive, Edinburgh, William Hope Fowler, M.B., Ch.B., F.R.C.S.E., to Julia, youngest daughter of the late James Cant, Ore Bridge, Thornton. At home, 8, Midmar Drive, Nov. 7th, 8th, 9th, and 10th.
LANE—STEPHENS.—On Sept. 26th, at St. John's Church, Roundhay, Gordon J. Lane, M.D., to Margaret Louise, widow of the late W. Ryan Stephens.

DEATHS.

BLANC.—On Sept. 30th, at Paris, Sir Henry Jules Blanc, K.C.V.O., M.D., I.M.S., F.R.C.P. (retired), aged 80 years.
HARDING.—On Sept. 27th, at Osman House, 118, Cromwell-road, Montpelier, Bristol, John Alfred Harding, M.R.C.S., L.R.C.P., L.S.A., aged 84 years.
STOPFORD-TAYLOR.—On Sept. 29th, at Standishgate, Meols Drive, West Kirby, in her 54th year, Ann Alice, the wife of Dr. Stopford-Taylor, of West Kirby and 26, Rodney-street, Liverpool.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

DR. WILLIAM HARVEY IN THE LAZARETTO.

THE latest volume issued by the Historical Manuscripts Commission consists of a further report (the fifth) on the extensive collection of MSS. of the Earl of Denbigh, preserved at Newnham Paddox, Warwickshire. Mrs. S. C. Lomax, who prepared and edited the report, calls attention, in her introduction to the volume, to an interesting group of about a dozen letters written by Dr. William Harvey, the great physician, to Lord Feilding, and relating to a quite unknown incident in the doctor's life. In 1636, as is well known, he accompanied Lord Arundel on his mission to the Imperia Court. Passing through the "ruined, desolate country of Germany," they arrived at Lintz, where the Ambassador had his first audiences, and where Dr. Harvey went twice or thrice a hunting with the Emperor. While waiting for an answer to England's proposals, Lord Arundel and Harvey went to Vienna, where they visited the Queen of Hungary and the Archduke, "and two very fine little babies, her children." Thence Dr. Harvey went to Baden, near Vienna, to see the baths. "After this, we hear nothing more for three weeks, but it is evident that after parting from Lord Arundel at Ratisbon he arranged to visit Lord Feilding at Venice. We may conjecture that he went by Munich, Innsbruck, the Brenner, and the Putzerthal. At any rate, we find that he eventually reached Villach in Carinthia, crossed into Venetian territory at Pontebba, and travelled by Sacile and Conegliano to Treviso. But there, when he was joyfully expecting to be that night with his friend at Venice, he was stopped by the podesta, on the plea that his passport was not properly *visé*, and that he came from places infected with the plague. The podesta even demanded that he should go into the lazaretto. In vain Harvey protested that he was travelling with pass and recommendations from the Emperor and the English Ambassador, that his business required haste, and that if he had come from infected places he would have been stopped at the Venetian frontier; the officer would listen to no reason." The following extracts from Harvey's letters to Lord Feilding show exactly what occurred:—

"1636, Aug. 3-13. Treviso.—My sweete lord, I came this morning to the gates of Treviso with greate joy, and hoped this night to have had the happines to have beene with you att Venise, butt I have receyved heare a very unjust affront, being stayed and commanded by this podesta to have gone into the lazaretto, without any cause or suspition alledged. I took my first *fede* under the seale of Ratisbone, a place free, and now destined, as your Eccellency knoweth, for the meeting of the Emperor and all the rest of the princes, which yf it had not beene soe, they would not have com thither, it being infected or suspected. Since, in every place as I came, I caused my *fede* to be underwritten, soe that there is no ground for them to lay any suspition upon me. And att this sentence on me by the podesta (that I should goe to the Lazarett) I absolutely refused, and sayd and offered to shewe that I had the pass and recommendation of his Majesty the King of Great Brittane and of the Emperors Majesty and of my lord Embassador his Eccellency, and that I had to goe to princes and men of quality, and that my business required expedition, and desier'd they would not hinder me, butt, as my passes required, further me and that I mought not bring that suspition and infamy on me, besides my own security, to go to such a place as lazaretto, whear they use to putt infected persons, and that I had shown them sufficient *fede*. Notwithstanding all this, heare I am to lye for ought I see in the open base [*sic*] feilds, God knows how long. The podesta refuseth to see or reade my passes, and I cannot cum att him to speake and use my reasons. I am afrayd this lying in the feild will doe me hurt in my health. I beseech your Eccellency to lamen hearof. It is unjust to proceed with any man thus without cause and otherwise then Venetians are used in Ingland or so merrit to be used heare, and otherwise then is fitting for the respects there shold be used in the passes forenamed. I pray pardon this scribbling on the grass in the feild, and procure with all expedition my freedom from this barborous usadg. Your distressed frend and humble servant of your Eccellency.

"1636, Aug. 6-16. Saturday.—I perceyve heare by their behavier to me how much your Eccellency is pleased ther to stirr and labor for me, for yesterday after I had sent my letter to your Eccellency, they sent sum in a coatch to me, as from the podesta, that I should goe to the other place, where I was before (yf I would) or that I should have heare a bed, or that he would doe for me what he could, to which I answeared that since it had pleased him with soe much rigour and cruelty to inflict upon me the greatest misery he could and had brought soe much infamye upon me as to putt me into this lazaretto without any just cause, without any respect of the reccommendations I had from my lord Ambassador his Eccellency or from the Emperors Majesty or from his Majesty

my master, not soe much as to reade them or give notice of them in his first dispatch to Venis, nor to make any difference of a servant of his Majestye the King of Greate Brittan, butt by force and threatning of muskets to compell me into the very nasty roome wheare the vitturin and his two servants and saddels lay and not att my request granting me a bed or any commody scarce straw; his offers now weare unseasonable and like phisick when a man was ded and that I had now hardened my self and accomodated as I did content myself and resolved, since it had pleased God by his hands to humble me soe low, I would undergo it as a pennance and that I had writtan to your Eccellency and hoped by your intercession within sum few days to have release, and therefore determined to receyve and acknowledge all my comfort from you and to troble the podesta with noe other request but that he would with all expedition free me and shew a respect to my master and my bysines; and debating the bysines and urging them for a reason of all this and that it was unjust to detayne any man and not show him the cause, or to receyve a man into ther territoryes and then imprison him, they should have denied me entrance att the first and then I had gone sum other way for they should have putt those townes they suspect into ther bands and then I had shunned them or make known att his entrance to every man what he was to doe, otherwise this was to surprize and catch men; and they knowing not well what to answear sumtime alledged that Villach was suspected, sumtime I had not gotten my *fede* subscribed att Conian or Sacile, sumtime that the vitturin had brought a boy with him, his son to gett a master, whose name was not in the vitturins *fede*, soe sumtime I was stayed for him, sum time (they sayd) he and his horses stayed for me. ..... I write the larger to your Eccelency of those passages because I know not what they may make of my conference in ther letters that ye may know the truth, and indeed my lord I am a little jealous of them, and to take anny beds now of their sending, for since ther manners and cruelty hath been soe shamefull to me, and they have soe little reason for what they have done, it would be like the rest of their proceedings yf they sent me an infected bed to make ther conjectures and suspitions prove true; therefor I choose to ley still to be redeemed by your Eccelency oute of this inocent straw. Yesterday likewise the patron that owed the howse wheare I first took my straw bed (a little poore garden howse full of lumber, durt and knatts, without window or dore, open to the highway att midnight) was to offer me that agayne, because I had chosen that to shun the infamy of this lazaret and the suspition I had that sum infected person had lately bene heare, and from which they forced me with terror of muskets, I write this to show your Eccelency that all they doe heare upon your stirring is butt formal to salve their oun errors. I tell them I desier nothing of them, or expect or will except, but only beseech the podesta that I may be att liberty with all expedition, and that att last he will have respect to princes recommendations and to my bysines; and now as I am writing I humbly thank your Eccelency, your servant is arrived and hath bene with me and is gone to the podesta according to your order. He will tell you of a trick to burn my pass and the injury they have offered me therein. ..... Yf they make difficulty of my comming to Venis, I pray that I may have sufficient *fede* from hence and I will goe by Padua to Florence and see your Eccelency as I retorne. I pray pardon me for propounding this to your Eccelency whoe know better hearin what is to be done which I doute not but you will performe, that I may be free and we rejoyse together heareafter; and in good sober truth I feare least this ill usadg and base place and the unquiett of my mind may not bring sum sicknes on me this extream hott wether therefor I beseech, etc. Your Eccelency's humble servant.

"1636, Aug. 9-19, Tuesday afternoon.—My sweete lord, this place is soe incommodious to me, and affordeth me soe little comfort, as I beseech your Eccelency to pardon me yf I take the bowldnes herein to make my complaynts unto you. The great longing I have to be gon and free maketh me thinke these 4 days past (since I had the comfort to see your servant here) to appeare soe maney yeares, whearin I hoped ether they would have relented of ther cruelty or your Eccelency effected somethinge for my releife. I had thought with joy to have presented my service unto you, and now am sory instead thereof to putt your Eccelency to the troble I knowe ye take for me. The ill diett I have heare and the wors usadg hath produced this ill effect that now these two nights I have had a sciatique in my right thigh and legs that much discorageth me, and maketh me lame. I would fayne Signor Francesco [Vercellini] would come unto me. I will pay for his coatch and expence, to direct and advise me, and to deliver him the busynes I have to him from my lord Embassador and the letters I have els to Venis; and yf he bring my freedom with him, I shale have the more joy; yf not, he may gett me heare some garden house, with fier, bed, and other necessaryes, least I fale wors. Yf his being there effect better for me, then that som man be hired theare to com and goe between, by whom I may heare often what is or can be done, and may certefy me of the receyte of my letters att the least, that I may heare what I may hope or looke for.

"1636, Aug. 12-22, Friday, Treviso.—Although I know your care and dilligence for my liberty, and make noe dowte butt your Eccelency doth what is possible and omitteth noe occasion, yett the longing I have to be out of this thraldom and the dayly hope from you maketh me soe often look oute as having not heard from you sinse your man was with me (on Satterday last), I desier much to know how the case standeth, what is the cause, what I may expect. ..... I hoped much on your Eccelencys complaynt to the Colledg butt now because I heare not I dowte much least they neglect you too. I have now been heare 10 dayes and my *fede* giveth me testimony of health for 40 days almost before that, soe that I cannot guess other than sum malis in this, considering with what cruelty and severity they have proceeded with me. My sciatiq which I gott heare by injurious lodging I thanke God mendeth well. ..... Even as this morning I had finished thes lines, came one from this podesta to vew us how we weare in health and sayth within these 2 dayes we shale have liberty, butt what trust may be given to there words I cannot tell. I fear it is but a shuffel to deteyne me heare yett a weeke longer, which is the extremity they doe to the worst *fede* and meanest man.

"1636, Aug. 13-23.—My sweete Lord, becaus I see heare nothing, nothing butt injury, deceyte, and jugling every day this eleven days, that to-morrow and att night and to-morrow and shortly I shall be released, and doe not heare from Venis any certenty by any hand; and I ley heare in a miserable case; I pray pardon me yf to your Eccelency I seme in this often sending importune; eccept by your Eccelency his means (in whom is my only hope to gett release from these barbarous oppressions) they delight hear soe to exercise there tirenny as I am likelye for every day they promise a weeke.

"1636, Aug. 16-26, Treviso.—I wrote to your Eccelency yesterday what a heavy messadg these of the Sanita hear delivered to me from the Senate att Venis, which was that I must stay heare yett until farther order; and asking how long, they sayd seven or ten or twenty dayes, soe I perceyve they doe butt abuse your Eccelency to beare you in hand that every day I shale have my liberty, and therein they betray me and make me loose my time, with whom yf they had delt playnly and rowndly I mought have gone back att the first to Villach and from thence to Gorilia, and there gotten shipping and beene by this time at Rome or Florence, and sene your Eccelency and dispatched my bysines at Venis comming back. Now yf I stay a weeke or ten dayes more heare I shall loose soe much time as the intent of my jorney wilbe broken, and I must retorne without going farther. Good my lord, I beseech you, putt them spedily and rowndly to it, ether that I presently goe (having now beene 15 days) or that I may retorne, which is a thinge is usuall heare, and a little while agoe they did it, sending ther officer with them untill they weare out of their territorye, and in justice they cannot deney your Eccelency one of these and indeed nether, yf ether they did respect anythinge your intercession or would doe justice. I perceyve I am fallen into the handes heare of most base and evel people, and now they begin to accuse one an other, and when I ask them the cause of my stay they forge lyes, as that I was att Salsburg and that Villach hath the plague, and I know not what, and in this place they have talked soe much that to-morrow and to-morrow I should be free, and when your Eccelency stirred in it, expected noe less than present delivery, that now they begin to disesteeme what your Eccelency's favour can doe for me. ..... I never longed for anythynge in all my life soe much as any way and on any condition to be gone from this base place and barbarous people and fearing lest I should be sick and then they would crye me into the plaug and keep me and cheate and tyrunise ove me. God knoweth how long Signor Francesco was with me on Sunday last and tould me (I humbly thanke you) with what desier and ernestnes your Eccelency dealt for me, and that ye hoped every day; butt other perticulars I could not learne by him, nor since."

After the foregoing there are no more letters from Treviso, nor any record of Harvey's departure from the lazaretto, but there is a note from him to Lord Feilding, dated Sept. 7th-17th, 1636, at Florence, from which it appears that he had been for some time at liberty and was then enjoying "much contentment with health and mirth" and receiving many attentions from the Grand Duke, who had himself shown him many of his rarities and treated him with great favour. One more letter, dated in November, announced his arrival at Ratisbon, where he rejoined Lord Arundel and with him travelled home to England.

A WARNING.

To the Editor of THE LANCET.

SIR,—I wish you would insert in the next issue of your journal a note warning your readers, and especially Edinburgh teachers and graduates, that an impostor is writing on my behalf or in my name asking financial assistance, and as a result has, I understand, been assisted. His proceedings, to my intense annoyance, have assumed wide scope, and I would be glad if anyone who receives one of these letters would communicate with me at once. Thanking you in anticipation, I am, Sir, yours faithfully,

Sudbury, near Harrow, Oct. 3rd, 1911. ROBT. H. MARTIN.

AN INTERESTING NOTE.

To the Editor of THE LANCET.

SIR,—On June 29th, 1911, Thomas Bailey, fisherman, aged 34 years, and his son, aged 13, fell overboard at the mouth of the Ouse. Both were drowned. The father, who could swim, tried to rescue his son, who could not. The bodies were recovered from the water on July 7th, I held an inquest on the body of Thomas Bailey on July 8th, and saw the body and examined it. He died *fascino recto*.

I am, Sir, yours faithfully,

EDWARD M. BELOE, Borough Coroner, King's Lynn.

King's Lynn, Sept. 27th, 1911.

A.B.—In each case the fee belongs to the principal unless a special arrangement has previously been made.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for October, 1911:—

April–October.—Rome Exhibition (United Italy's Jubilee).
,, 29th–Oct. 26th (Turin).—International Exhibition.
May 3rd–Oct. 31st (Glasgow).—Scottish Exhibition.
,, 6th–Oct. 31st (Dresden).—International Hygiene Exhibition (British Section opens June 14th).
May 12th–Oct. 31st (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
May 18th–October 31st (London, Shepherd's Bush).—Coronation Exhibition.
Sept. 19th–Oct. 31st (London).—Earl's Court Exhibition.
,, 23rd–Oct. 21st (London, Olympia).—Electrical Exhibition.
September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Oct. 2nd–7th (Dresden).—Third International Housing Congress.
,, 2nd–7th (Paris).—French Congress of Surgery, Twenty-fourth Annual Congress.
,, 5th–7th (Paris).—Fifteenth Meeting of the French Association of Urology.
,, 6th and 7th (Paris).—French Association of Pediatrics.
,, 9th–12th (Turin).—Twenty-first Congress, Italian Society of Internal Medicine.
,, 9th–13th (Cologne).—Seventh International Congress of Criminal Anthropology.
,, 10th (Paris).—International Sanitary Conference (to Revise the International Sanitary Convention of 1903).
,, 12th–18th (Rome).—Fifth Annual Meeting of the Italian Society for the Advancement of Science.
,, 13th–16th (Turin).—Third National Congress of Professional Diseases.
,, 15th (The Hague).—International Opium Conference.
,, 20th–22nd (Roubaix).—Second National Congress of the Mutalité Maternelle.
,, 22nd and 23rd (Lyons).—Twelfth French Congress of Medicine.
,, 25th–27th (New York City).—Annual Conference of Sanitary Officers of the State of New York.
,, 26th–28th (Rome).—Congress of the Italian Society of Laryngology, Otology, and Rhinology.
,, 31st–Nov. 4th (London, Royal Horticultural Hall).—Twenty-second Universal Cookery and Food Exhibition.
October (Paris).—First Congress of the International Medical Association for the Prevention of War.
,, (Stoke-upon-Trent).—Church Congress.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 4th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Sept. 28	30·19	W.	0·20	94	62	54	52	55	Cloudy
,, 29	30 23	N.W.	...	109	61	45	46	49	Fine
,, 30	29 68	W.	0·12	97	59	49	56	57	Cloudy
Oct. 1	30·19	N.	...	85	52	40	39	42	Cloudy
,, 2	30·14	N.W.	...	92	54	40	40	43	Fine
,, 3	29 84	NNE	...	84	56	43	43	45	Fine
,, 4	29·88	N.E.	...	70	53	45	45	48	Fine

The following journals, magazines, &c., have been received:—Dominion Medical Monthly, Middlesex Hospital Journal, St. Louis Medical Review, Archives of Pediatrics, Ash's Monthly, The Prescriber, Journal of the Royal Sanitary Institute, Indian Medical Gazette, Medical Record, Therapeutic Gazette, Bodenreform, Australasian Medical Gazette, Mercy and Truth, Review of Neurology and Psychiatry, British Journal of Dental Science.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

FRIDAY.

GENERAL MEETING OF FELLOWS at 4.45 P.M.
Election of Candidates for Fellowship.

CLINICAL SECTION (Hon. Secretaries: James Galloway, Charles H. Fagge): at 8.30 P.M.

Cases:
Dr. H. D. Rolleston and Dr. W. P. Tindal-Atkinson: Case of Spondylose Rhizomelique.
Dr. W. Essex Wynter and Dr. J. Murray: Case of Toxic Cirrhosis with Spleno-portal Thrombosis (Banti's Disease); treated by Femoral Drainage.
Dr. James Galloway: Case of Intractable Neuralgia with Myoma Cutis.
Mr. R. C. Elmslie: Case of General Thyroid Malignancy.
Dr. H. Batty Shaw: Case showing Unusual Area of Audibility of a Cardiac Murmur.
Dr. Wilfred Harris: Acute Encephalitis in a Girl æt. 13.
Mr. P. Lockhart Mummery: Three Cases of Excision of the Rectum Three Years after Operation.
Sir Frederic Eve: Case of Resection of a Myeloid Sarcoma of the Tibia with Bone Grafting.
Dr. C. Ward: Case of Pseudo-hermaphroditism.

Paper:
Dr. A. Gregor and Dr. Hopper: A Series of Cases of Acute Anterior Poliomyelitis.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8 P.M., General Meeting. 8.30 P.M., Dr. J. M. Bruce (Incoming President): Opening Address. Dr. L. Guthrie: Recurrent Jaundice with Pyrexia, Splenomegaly, Anæmia, and Pigmentation of the Skin, in a Girl of 11 Years.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor-road, S.W.

WEDNESDAY.—5 P.M., President's Address. Major E. M. Pilcher, D.S.O., R.A.M.C.: The New Bullet.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—8.30 P.M., Council Meeting. 9 P.M., Dr. T. B. Hyslop: Intra-cranial Murmurs and their Relation to Tinnitus Aurium. (First Hunterian Lecture.)

NEW LONDON DERMATOLOGICAL SOCIETY, at the Rooms of the British Dental Hospital (temporary premises), 2, Hampstead-road (Tottenham Court-road end).

THURSDAY.—4.30 P.M., Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. W. Evans: Clinique (Skin). 5.15 P.M., Lecture:—Dr. E. Pritchard: Convulsions in Infants and Young Children.

TUESDAY.—4 P.M., Dr. H. L. Tidy: Clinique (Medical). 5.15 P.M., Dr. J. Collier: Paralyses which are Apparent at the Time of Birth.

WEDNESDAY.—4 P.M., Mr. J. Milne, jun.: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. G. H. Savage: The Relationships between Neurasthenia and Insanity.

THURSDAY.—4 P.M., Dr. A. Morison: Clinique (Medical). 5.15 P.M., Lecture:—Dr. D. McKenzie: Enucleation of the Tonsils.

FRIDAY.—4 P.M., Mr. G. French: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Edwards: Suppurative Diseases in Connexion with the Anal Canal.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. R. Jones: The Common Varieties of Insanity.

WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Morton: The Use of Solid Carbon Dioxide.

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture I.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Clinical Lecture:—Mr. Pardoe: Urinary Surgery.

SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 3.15 P.M., Special Lecture:—Sir Dyce Duckworth: Cirrhosis of the Liver.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Dr. C. Hughes: Anæsthetics.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY AND FRIDAY..—3.45 P.M., Mr. C. Nourse: Accessory Sinuses.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Erythema.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. B. Shaw: Anaphylaxis and its Relation to Disorders of the Thoracic Viscera.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. J. Collier: Diagnosis and Treatment of Meningitis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. J. Collier: Tumours of the Pons.

LANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Mr. E. S. Bishop: Urinary Surgery. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.). Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (14th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

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ABSTRACT OF AN

Inaugural Presidential Address

ON THE

PAST WORK OF THE OBSTETRICAL SOCIETY OF LONDON, AND THE OBSTETRIC AND GYNÆCOLOGICAL PROBLEMS STILL AWAITING SOLUTION.

Delivered before the Obstetrical and Gynæcological Section of the Royal Society of Medicine on Oct. 5th, 1911,

BY AMAND ROUTH, M.D. LOND., F.R.C.P. LOND.,

OBSTETRIC PHYSICIAN TO CHARING CROSS HOSPITAL; PRESIDENT OF THE SECTION.

[AFTER thanking the Council and members of the section for the honour of having been chosen their President, Dr. Routh alluded to his having been made a Fellow of the Obstetrical Society of London in 1882 during the Presidency of Dr. Matthews Duncan. Dr. Routh then continued :—]

The Council in that and the succeeding years, 1882 and 1883, contained such honoured names as Arthur Farre, Henry Oldham, Robert Barnes, John Hall Davis, Baptiste Potter, Graily Hewitt, Braxton Hicks, William Priestley, Edward John Tilt, Spencer Wells, Charles J. Cullingworth (then of Manchester), W. S. Playfair, Henry Bennet, J. H. Aveling, Gustavus Murray, George Roper, Knowsley Thornton, and my father, C. H. F. Routh. All these obstetricians have passed away, but their works live after them, and we as their successors continue to hold them in high esteem.

Fortunately, some on the 1882–83 council still live and are equally held in our affection and estimation: John Williams, Henry Gervis, Alban Doran, Clement Godson, Edward Malins of Birmingham and William Stephenson of Aberdeen: with George E. Herman and A. L. Galabin, then the honorary secretaries; and Francis Champneys, then honorary librarian. I am sure that those of that small band who are with us to-night will agree with me in saying that the members of our present amalgamated section are as well fitted as their predecessors to maintain the prestige and good work previously done by the older societies. Indeed, I doubt if at any time in our history we have had such enthusiastic workers in both the pathological and clinical aspects of our specialties as we have had during the last few years.

The Obstetrical Society was founded at an inaugural meeting at the Freemasons' Tavern on Dec. 16th, 1858, nearly 53 years ago. No member of the original Council and only two of the Society's original Fellows, Henry Walter Kiallmark and David Lloyd Roberts, survive. The former, though in poor health, is still keen for all that concerns his profession, and the latter, who performed his first Cæsarean section in 1867, was able to record a successful one only three years ago (Dec. 30th, 1908)—after 40 years' hard operative work. May our salutations go to these two grand veterans of science!

I may refer to three important movements which during the last ten years have proved very advantageous to our interests. One was the formation on the initiative of Dr. Walter Griffith in 1901 of a standing pathological committee to which specimens of doubtful or interesting pathology are referred by the President. The chairmanship of the committee was held by Mr. Alban Doran till 1904 and since then by Dr. Walter Griffith, and these gentlemen with a committee of able and keen pathologists have done excellent work for the section and for science. Another most important event in the history of the Obstetrical Society was the decision made in February, 1902, to admit ladies as Fellows. We were the first important society to do this, and the results have abundantly justified the innovation. The third event was the happy amalgamation of the Obstetrical Society of London and the British Gynæcological Society in 1907, and the formation of the Royal Society of Medicine with the amalgamated societies as one of the sections.

THE PAST WORK OF THE OBSTETRICAL SOCIETY OF LONDON.

Since the inauguration of the Obstetrical Society in 1858 it has been concerned with the advance of obstetric and gynæcological medicine in two main directions: First, by exercising a socio-political influence; and, secondly, by its more normal scientific work.

As regards its socio-political work its greatest success has been the persistent agitation which it has successfully employed in favour of improved obstetric teaching, both of students and midwives, and it has thus been able as a direct result to help to lessen the terrible infantile death-rate and maternal puerperal mortality which then obtained. This has been done (1) by stimulating the teaching and examining bodies to insist upon the better education of medical students in obstetrics; (2) by constantly urging the Government of the day to educate and register midwives; and (3) by actually providing for the education and examination of midwives till Government itself took the matter in hand. Many of our younger members hardly realise how great an influence the Obstetrical Society has had in the improvement in obstetric training. I propose, therefore, for a few minutes to give a short review of this part of the work of the Obstetrical Society.

Defective Obstetric Training.

In 1860[1] Dr. Edward Rigby, the first President, stated that the Council had presented a most important memorial to the General Medical Council urging upon them the imperative importance of improving obstetric education. At the London University students had then only to attend six labours, and attendance at lectures on midwifery was not compulsory. At the Royal College of Physicians of London there was no examination in midwifery, no obstetric expert being then on the Examining Board. At the Royal College of Surgeons of England candidates had to attend three months' lectures on midwifery, but need not have personally attended any confinements. The Obstetrical Society demanded that the standard of education and examination on midwifery should be as high as that which obtained in medicine and surgery. The immediate result of this memorial was that in the following year the Royal College of Physicians of London arranged to examine and grant a licence in medicine and midwifery, and attendance on a course of midwifery and on clinical diseases of women was made compulsory.

Another result was the institution of a new office in our educational hospitals—namely, that of "obstetric physician," whose duties were at first entirely those of an accoucheur, surgery being practically excluded.

In 1863 the President, Dr. Tyler Smith, urged that obstetric physicians should be allowed to perform the operation of ovariotomy, till then mainly in the hands of surgeons. It was, indeed, many years before obstetric physicians were treated with the respect they deserved. In 1879 we find the President of the Society, Dr. Playfair, deploring this, and alluding especially to the fact that in such a representative body as the General Medical Council there was no representative of obstetrics. As many Past-Presidents had done, he deplored the inadequate education in obstetrics and gynæcology as then required by the examining bodies. He urged that it was the duty of the society to agitate upon the question and not to rest satisfied until midwifery was placed on an equality with medicine and surgery. One of the most forcible inaugural addresses was given by Matthews Duncan when our President in 1881. He alluded especially to the efforts of Dr. Playfair in England and of Dr. Macnaughton Jones, our own immediate Past-President, in Ireland, towards the improvement of teaching in midwifery and gynæcology, and, Dr. Matthews Duncan added, with, I think, a marvellous prevision, "that without an extension of the curriculum to five years, he thought that such an improvement was impracticable." As the first step to progress being made, he again urged that an obstetric physician should be placed on the General Medical Council, and he stated that the Council of the Obstetrical Society had again memorialised the Government on the subject. We may congratulate ourselves that very soon after that deputation the Government (April 20th, 1883) realised the necessity of acceding to our Council's request, and that the first representative on the General Medical Council should have been so able an

[1] Transactions of the Obstetrical Society of London, vol. ii., p. 3.

obstetrician and so expert an educationalist as Matthews Duncan himself.

In 1901 Sir John Williams was appointed Crown representative, and on his retirement this year Sir Francis Champneys was appointed by the Crown.

As a result of obstetric experts being now on the General Medical Council and on all examining boards great improvement has taken place in the teaching of clinical midwifery, especially as regards the attendance of the medical student in lying-in wards. This course was strongly advocated by Dr. W. R. Dakin in his presidential address in 1905, which was given at the psychological moment, for it more or less voiced the opinion of everyone concerned, and the teaching of practical midwifery has now been put on a sounder basis. When all the teaching hospitals can either have their own lying-in wards, with efficient resident teachers, or can utilise adjacent adequately staffed lying-in hospitals, all students will get efficient training. The advantage, however, to the student, in view of his future practice, of attending outdoor maternity cases after he has acquired the knowledge of aseptic midwifery in lying-in wards is also obvious, and should not be allowed to be entirely superseded.

Infantile Mortality.

From the first the Obstetrical Society did what it could to lessen infantile mortality, especially during the "puerperal month," and in 1875 issued rules for the "management of infants," which might be advantageously reissued now.

Much has been done by Sir Francis Champneys and others to save the lives of children born asphyxiated, and Dr. Herbert Spencer has demonstrated that many stillborn or newly-born children die from cerebral and other hæmorrhages. Papers, too, have been read on gynæcological troubles in young children, by Dr. Drummond Robinson on Vulvar Discharges in Infants, by Mr. Sydney Stephenson on Ophthalmia Neonatorum, and on Grape-like Sarcoma by Mr. Henry Curtis and Dr. Herbert Williamson. We have, however, mainly concerned ourselves with fœtal monstrosities, hermaphroditism, and other developmental abnormalities, rather than with the causes, pathology, and treatment of the diseases of the child before and after birth. We know little more of the causes of intra-uterine death of the fœtus than we did when Sir W. Priestley, a past-President of the Obstetrical Society, read his Lumleian lectures on that subject in 1887 at the Royal College of Physicians of London.

Mortality both in utero and soon after birth is still far larger than it should be. Sir W. Priestley calculated that in 1887 in London alone 9000 *abortions* occurred annually due to preventable causes. There is no reason to think that abortions are now less numerous or relatively less preventable than they were. The number of *stillbirths* could then only be guessed at, but we can now, thanks to the Registrar-General's statistics, estimate their frequency with fair accuracy. In 1910, 2312 stillbirths were notified in London, representing 2 2 per cent. of the total births. If this proportion holds good for the whole of England and Wales, the stillbirths in 1910 were 19,736. Our knowledge of practical midwifery tells us that many of these stillbirths occur during delivery, and are preventable. At that date, 1887, the infantile death-rate in England and Wales during the first year of life was 145 per 1000 births. In 1909 the rate had been reduced to 109 per 1000 births, a saving of 36 infants per 1000 births, or a saving of 33,922 infants in 1909 in England and Wales and of 5939 infants in London alone. In 1910 the death-rate was 106 per 1000 births. In order to emphasise the special import of this mortality to our section I append Table I. in which it is shown by the Registrar-General that out of 99,430 infants who died during their first year in England and Wales in 1909, 24,686 infants, about *one-fourth, died during the first three months of life from causes connected with birth.*

TABLE I.—*Infantile Deaths in England and Wales in 1909 during the First Three Months of Life from Causes connected with Birth.*

—	Males.	Females.	Total.
Premature births	10,108	7,899	18,007
Congenital hydrocephalus... ...	41	31	72
Other congenital defects	2,072	1,661	3,733
Injury at birth	564	390	954
Atelectasis	874	631	1,505
Want of breast milk	248	167	415
Totals	13,907	10,779	24,686

Another "cause connected with birth" of both infantile death and local inflammatory processes in new-born infants is "obstetrical infection" at birth. Such infection must be distinguished from congenital infection of the infant, conveyed through the mother, such as syphilis, small-pox, measles, malaria, &c. "Obstetrical infection" of the infant due, for instance, to the liquor amnii being infected before birth, in some cases even when the amniotic sac is intact, is as definite an infection as the ophthalmia of vaginal gonococcal origin. It is not yet well recognised in this country that such infection may be the cause of serious or fatal sepsis of the mouth or nose, which by penetration into the lungs or alimentary canal may cause bronchitis or bronchopneumonia, vomiting, gastro-intestinal disturbances, jaundice, &c.

The following table (Table II.), taken from the statistics of the Registrar-General for 1909, shows that *from all causes*, 11 children out of 1000 births die in the first 24 hours of life, 30 children die in the first fortnight, and about 40 in the first month, 109 dying in the first year.

The accoucheur is responsible for the new-born child during at all events the first fortnight of life, and in that period nearly one-third of those children who do not survive their first year lose their lives.

TABLE II.—*Infantile Deaths to 1000 Births at Different Ages from All Causes in 1909 in England and Wales.*

Die during the first 24 hours		11·5	per 1000.
,, ,, next six days		13·1	,,
,, ,, second week		5·7	,,
,, ,, first fortnight		30·3	,,
,, ,, first month		39·75	,,
,, ,, the first year of life		108 73	,,

Can we not, as the Obstetrical Section of this great society, do something more to lessen this infantile mortality by encouraging the education of women in the rational management of themselves and their children during the puerperium? As showing what can be done by definite special effort to encourage lactation and discourage artificial feeding of infants, I may quote results in St. Pancras and Stepney. In St. Pancras Dr. J. F. J. Sykes and the municipal health authorities began their educational experiment in 1904, when the infantile death-rate was 151 per 1000 births. Last year it was 107 per 1000. In Stepney, under similar circumstances, it dropped from 138 to 109 per 1000 births. Unfortunately a concrete example shows the converse of this progress. We have recently had a combination of drought and railway strikes which shows in a most graphic way how infants who are not breast-fed die wholesale if cow's milk be deteriorated by bacteria-dust, or if, owing to milk from the suburbs failing to be delivered in the large cities, infants have to be fed on other articles of diet. (See Table III.)

TABLE III.—*Deaths of Children under One Year to 1000 Births in London and Liverpool (1911).*

London.				Liverpool.			
Week ending—	Births.	Deaths under 1 year of age.	To 1000 births.	Week ending—	Births.	Deaths under 1 year of age.	To 1000 births.
July 8th	2223	159	72	July 8th	426	62	146
,, 15th	2242	150	67	,, 15th	448	54	121
,, 22nd	2175	173	80	,, 22nd	464	73	157
,, 29th	2133	305	143	,, 29th	383	75	196
Aug. 5th	2295	461	201	Aug. 5th	411	107	260
,, 12th	1880	636	338	,, 12th	399	144	361
,, 19th	2311	705	305	,, 19th	371	165	445
,, 26th	2223	712	320	,, 26th	465	146	314
Sept. 2nd	2200	622	283	Sept. 2nd	461	141	306
,, 9th	2104	555	264	,, 9th	438	133	304
,, 16th	1997	442	221	,, 16th	381	107	281

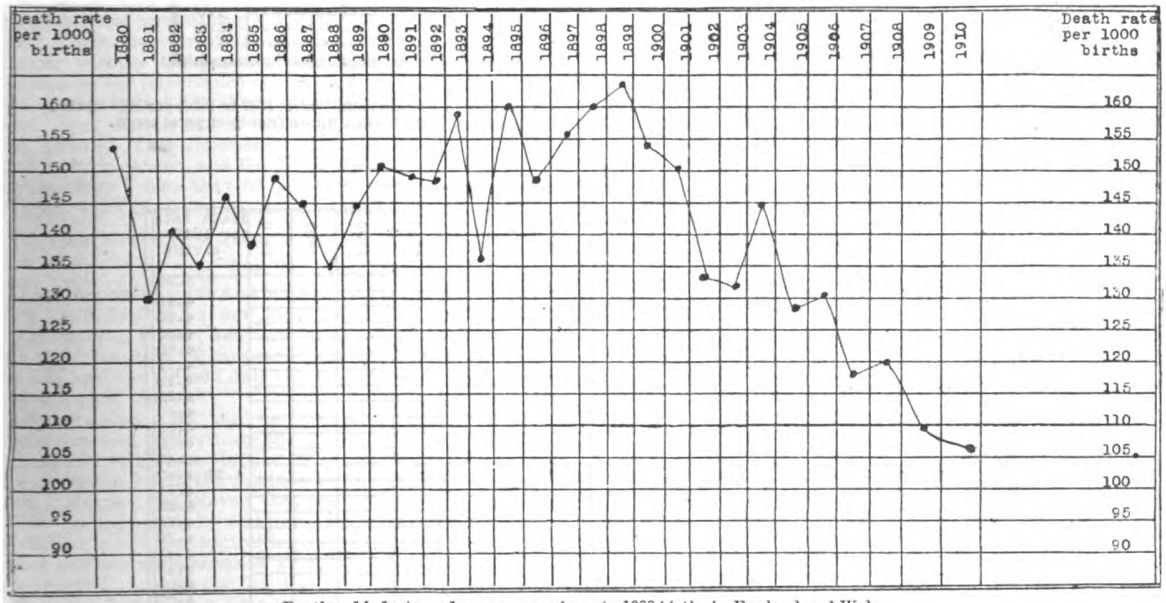
The table shows that in London in the week ending July 15th, 1911, the deaths of infants under one year of age was 150—67 per 1000 births; in the weeks ending August 12th and 19th, when the great heat and the railway strike were in action, the infantile deaths rose to 636 and 705, or 338 and 305 per 1000 births. In Liverpool, where the railway strike was more general and the absence of milk, or its deterioration from delay, was more universal, the infantile deaths on the same dates rose from 54 to 144 and 165, and the death-rate per 1000 births from 121 to 361 and 445. I suppose no one will dispute the fact that if these infants had been breast-fed this terrible mortality would not have occurred. I quote one of the rules drawn up by the Obstetrical Society in 1873 which would be particularly useful in these days, when mothers so often avoid the duty of lactation for selfish reasons, or prolong the function hoping to postpone another pregnancy. The rule says:—

> Nature provides breast milk as the proper food for an infant, and suckling is by far the best way of feeding it. Provided the mother has plenty of milk and is in good health, an infant requires and should have no other food but the breast milk until about the sixth month.

What a blessing to the new-born would ensue if advisory legislation or custom could make such a practice the rule rather than the exception. Cannot the united voice of this section as well as the advice of its individual members do something to stem the tide of non-lactation, which must act to the physical disadvantage of both mother and child, and which at the same time tends to annihilate the intimate mental, moral, and social ties which should bind mother and child together at the beginning of an infant's life?

I append Diagram 1, showing the steady fall in the infantile death-rate in England and Wales during the last 30 years.

DIAGRAM 1.



Deaths of infants under one year of age to 1000 births in England and Wales.

It will be observed that the infantile death-rate between 1880 and 1900 averaged about 145 per 1000 births, and actually got worse and worse till it reached 163 per 1000 in 1899. Since then it has steadily improved, and last year (1910) it was only 106 per 1000, a saving of life as compared with 1899 of 57 infants out of every 1000 born. I believe this result to be largely due to the compulsory education of midwives which the examinations by the Obstetrical Society of London and the Central Midwives Board have necessitated, for about 21,000 midwives have been examined and passed by these two bodies, and it is stated that half the total births are attended by midwives.

Puerperal Fever.

The prevention of "puerperal fever" has been a burning question since the foundation of the Obstetrical Society, and in 1872 a strong standing committee was appointed "for the collection of observations on temperature during pregnancy, parturition, and the puerperal state." By this and various other methods the Obstetrical Society has constantly and consistently endeavoured to save the lives of parturient women, not only by its scientific work, but by endeavouring to get the importance of the science and art of midwifery recognised by medical opinion and by Government and the country generally.

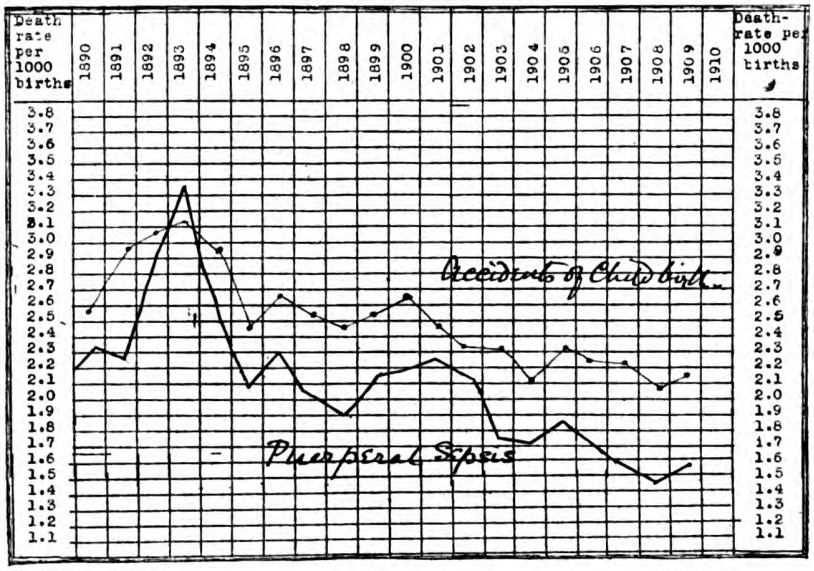
We can now see that a definite improvement has within the last few years taken place in the death-rate due to septicæmia. Undoubtedly the modern conduct of maternity cases in lying-in institutions has led not only to an enormous diminution of the mortality and morbidity due to sepsis in those institutions, but their success has shown what can be done also in general practice. In 1865–1875 the British Lying-in Hospital had a death-rate of 19·4 per 1000; City of London Lying-in Hospital, 14·3 per 1000; and Queen Charlotte's Hospital, 22·3 per 1000. In the Rotunda, Dublin, the death-rate between 1811 and 1875 varied from 13·1 to 32·7 per 1000. The mortality was, however, not always so great, for in some decades even 100 years ago the death-rate in lying-in hospitals was remarkably low from unexplained causes; thus, in the British Lying-in Hospital between 1790 and 1800 the death-rate in 6677 deliveries was only 3·2 per 1000, and at the same date the mortality at the City of London Lying-in Hospital was only 5·7 per 1000. Explanations of these good years in puerperal fever statistics are difficult, but the invariable rapid return of bad years prior to the routine use of antiseptics showed that when septicæmia once developed in a lying-in hospital none of the methods then in use served to check its spread, and as a rule the lying-in hospital had for a time to be entirely closed and redecorated. As late as 1889 Dr. Galabin in his inaugural address as President, when speaking of antiseptics in midwifery, said: "The hope may now be entertained that modern antiseptic methods will suffice to render healthy even a lying-in ward in a general hospital, though it is premature to speak positively on the subject until the experiment has been tried." The experiment has now been tried and has proved completely successful, and lying-in wards in our London and provincial hospitals give us no anxiety.

The question as to how far antiseptic and aseptic midwifery has reduced puerperal mortality and morbidity in general practice is more difficult to decide. Dr. Galabin gave the mortality of childbirth between 1847 and 1885 as 4·82 per 1000 births, and 4·45 between 1875 and 1885, more than half of these deaths being due to puerperal fever. Dr. Cullingworth showed in his inaugural address that the death-rate of puerperal septicæmia in 1896 was not falling

but actually rising. The death-rate in England and Wales from accident and septicæmia in the five years ending 1895 was 5·4 per 1000 births; from septicæmia alone, 2·5 per 1000. When all qualified medical practitioners and midwives practising midwifery have been trained in modern midwifery methods sepsis should be banished.

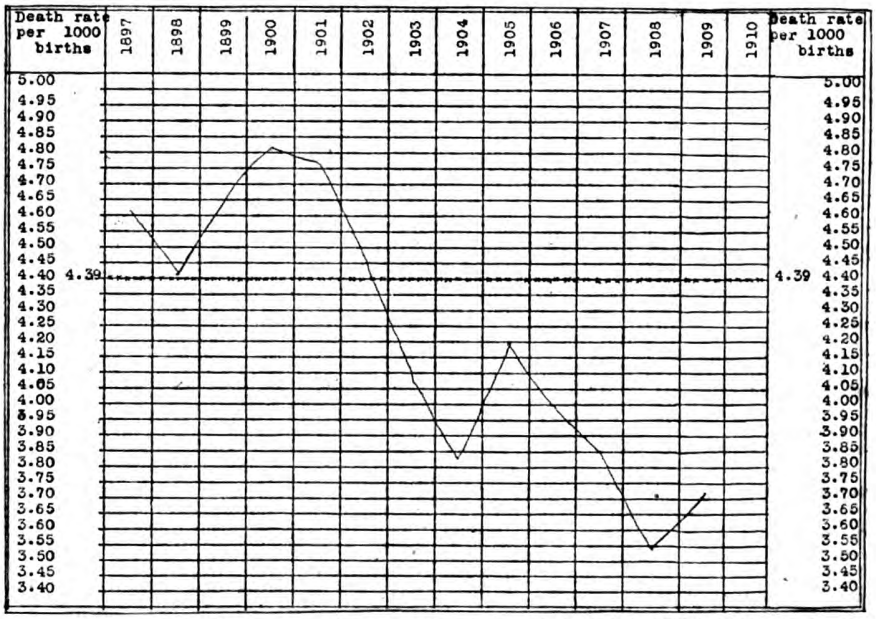
In Diagrams 2 and 3 it will be seen that not only is the proportion of deaths in England and Wales from "puerperal septic diseases" becoming reduced in comparison with the deaths due to other "accidents of childbirth," but that the actual death-rate from puerperal septicæmia is steadily becoming reduced; whilst, curiously and suggestively, the death-rate from other "accidents of childbirth" is stationary or only slightly diminishing. Does this mean that operative midwifery and measures taken to avert sepsis have not tended to lessen deaths due to other "accidents of childbirth"? It is only right that we should consider this possibility, though time does not now permit me to do so, for it would not be to the credit of the profession if it succeeded in its effort to annihilate sepsis, only to add to the maternal risks in other directions by anything like unnecessary interference with the natural process of parturition. In London deaths from "accidents of childbirth" show a much greater relative decline than in England and Wales. Members of the section will agree with me that Diagrams 2 and 3 are, on the whole, very satisfactory evidence of success achieved.

DIAGRAM 2.



Death-rates from puerperal sepsis and from accidents of child-birth respectively in England and Wales, 1890 to 1910, per 1000 births. Dotted line indicates death-rate from accidents of child-birth. Thick line indicates death-rate from puerperal sepsis.

DIAGRAM 3.



Death-rates in England and Wales from puerperal sepsis and accidents of child-birth, 1897 to 1910 inclusive, to 1000 births. The dotted line shows the average death-rate (4·39) for the ten years 1897–1906.

Notification of Cases of Puerperal Septicæmia.

Complete or reliable information as regards the number of cases of puerperal septicæmia in England and Wales has been very difficult to obtain till now, as notification has not been enforced. In future there will be no such difficulty, for a General Order was issued by the Local Government Board on Dec. 13th, 1910, requiring *every* medical officer of health to send in weekly returns of notified infectious diseases, including puerperal fever. Returns are accordingly now received every week from the majority of the 1800 sanitary districts in England and Wales. During the first six months of 1911, 1013 cases of puerperal fever were notified in England and Wales; and 145 cases in London, where there were 68 deaths, a death-rate of 46·9 per cent. of the cases notified.

Other Medico-Political Suggestions.

Other medico-political suggestions have been made from time to time by presidents of the Obstetrical Society. I will only mention two.

Dr. Matthews Duncan in 1881[2] urged that women about to be married should receive legislative protection from syphilis—that, in fact, it should be criminal for a man to marry who had recent or active syphilis. He also wished it to be considered criminal for a woman who has syphilitic sores on her pudenda to fail to warn her accoucheur of the circumstance. He instanced an accoucheur who only survived 18 months after attendance upon such a case.

Dr. Herbert Spencer in 1907[3] suggested that in order to ensure cases of uterine cancer coming earlier under treatment two definite steps should be taken: (1) to diffuse the knowledge of the symptoms of the disease among women, as has been done with good results in Germany; and (2) to urge upon general practitioners that it is a neglect of duty to treat hæmorrhage or discharge which may be due to uterine cancer without making or advising a local examination. To emphasise the importance of such a step I may state that in the years 1901–1909 152,737 women over 25 years of age died from cancer, and of these 35,516 died from cancer of the uterus. This represents 23·2 per cent. of the total deaths from cancer, and Dr. T. W. Eden in his "Manual of Gynæcology" says that 96 per cent. of these are cervical cancer, 4 per cent. cancer of the body of the uterus.

THE FUTURE OF OBSTETRICS AND GYNÆCOLOGY.

I.—*Obstetrics.*

I am becoming more and more convinced that we shall get very little further in our knowledge of the physiology of menstruation, labour, and lactation, and of the causation of the toxic diseases of pregnancy and the puerperium, unless we call into our aid not only the bacteriologist but also the physiological chemist.

Menstruation.—At the very beginning of our study of obstetrics and gynæcology the subject of menstruation has necessarily to be considered. We know very little either of the causation or of the significance and utility of menstruation. Heape[4] has proved that the pro-œstrum stage of the "rut" in animals is homologous with menstruation, and that ovulation is not the controlling factor, and as a result the nerve and ovulation theories as to its cause are now largely surrendered in favour of the theory that its cyclical occurrence is due to a recurring bio-chemical change in the blood. One of the elements in this change appears to be an excess of the salts of calcium, a fact put forward in our Section by Dr. Blair Bell[5] who considers that the uterus of woman is homologous with the calcium chamber of birds and that the calcium metabolism is largely influenced by the internal secretion of the ovary and of the other ductless glands. The whole subject is still obscure and awaits solution at the hands of physiological chemists.

Labour and lactation.—Both labour and lactation can proceed normally without spinal nerve influences, as I showed in a case of traumatic paraplegia. What is the chemical substance which is thrown into the blood stream by uterine or placental metabolism at, or soon after, parturition, and which causes the mammary glands to secrete milk and the liver to secrete glucose to supply that milk with sugar? Is this chemical substance identical with that which starts the onset of labour.

Lutein tissue.—What, for instance, is the influence exerted by lutein tissue? Dr. Cuthbert Lockyer and others have done much to answer this question from the clinical and pathological standpoint. What is its action upon the health of the individual? What is the influence which its excess or diminution has upon the dates and occurrences of such functions as menstruation, ovulation, and the menopause; and on fertilisation, the implantation of the ovum, labour, and lactation? Is lutein tissue one of the essential bio-chemical products, one at all events of the ovarian internal secretions, which by getting into the blood exerts a controlling or exciting functional influence until recently unsuspected?

Physiological chemistry is an extremely difficult science, and none but experts can tackle it. Those interested in the subject should read Dr. A. E. Garrod's paper on "Where Chemistry and Medicine Meet."[6] So difficult is it that it seems to me that until we have chairs and laboratories specially instituted for the study of these branches of biological chemistry in our teaching schools we shall get very little beyond our present scanty and clouded knowledge, not only of the cyclical occurrence of the functions named, but also of the toxæmias of pregnancy and the puerperium. We know nothing of the chemical constitution of the toxins producing hyperemesis gravidarum, albuminuria, eclampsia, the diabetes of pregnancy apart from ordinary glycosuria, the chorea of pregnancy, acute yellow atrophy of the liver, and puerperal insanity. Are these toxins produced from the ovarian or the placental metabolism? What can be the explanation that injection of solution of iodide of potassium into the breasts or amputation of the breasts, as performed by Sellheim, can cure eclampsia?[7]

Amputation seems a brutal operation, yet is it possible that there is a theoretical justification for it, and that the internal secretion of the mammary glands is liable to change and become toxic and cause eclampsia. Dr. Herbert Spencer kindly referred me to his brother, Mr. Trevor Spencer, M.R.C.V.S., of Kettering, who tells me he has seen about 1000 cases of "drop" or "parturient apoplexy" in cows, due, it is supposed, to a toxin developed in the mammary gland. The disease comes on, as a rule, on the first or second day after labour, and used to be almost invariably fatal, but now 98 per cent. of cases are cured within a few hours after an antiseptic solution, followed by air or oxygen, has been freely injected into each quarter of the udder.

We know absolutely nothing of any specific means of treating puerperal fever, although we believe that we know the various specific germs which produce it. Yet how is it that polyvalent serum prepared from streptococci obtained from many cases of puerperal septicæmia is so very seldom successful, and, indeed, serum-therapy seems only really successful, even when a streptococcal infection seems certain, in cases where pus has already formed in the pelvic cellular or perimetric tissue, and to some extent, therefore, localised the infection. As I suggested in my Cæsarean Section monograph,[8] can no way be found by which the infecting germ can be discovered at the onset of infection by differential staining, &c., without waiting for a culture diagnosis? Can no more rapid way than is now possible be then found by which a serum or a vaccine can be made from the patient's own brand of streptococcus or other germ thus found, and so, perhaps, save her life? Or is there some other fact of which we are now ignorant to explain our failure to cure these septic cases by a specific antitoxin? I believe that for some days after infection puerperal septicæmia most frequently remains only a local infection in the uterus and its veins. At present, therefore, I personally rely with much greater confidence upon clearing out the uterus and swabbing with strong iodine solution, and giving large doses of liquor ferri perchloridi to increase the general resistance, rather than upon any attempt to combat the infection itself.

The failure of bacteriological treatment in puerperal[9] septicæmia is all the more disappointing when we see how similar treatment answers for allied conditions. For instance,

[2] Transactions of the Obstetrical and Gynæcological Society of London, vol. xxiii., p. 75.
[3] Ibid., vol. xlix., p. 129.
[4] The Sexual Season of Animals, &c., Quarterly Journal of the Microscopical Society, 1900, vol. xliv.
[5] Proceedings of the Royal Society of Medicine (Obstetrical Section), vol. i., p. 291.
[6] Brit. Med. Jour., June 17th, 1911, p. 1418.
[7] Idem, p. 1444.
[8] Journal of Obstetrics and Gynæcology of the British Empire, vol. xix., 1911, pp. 1 and 236, and Proceedings of the Royal Society of Medicine (Obstetrical Section), vol. iv., 1911, p. 197.
[9] See THE LANCET, August 19th, 1911, p. 531.

we know the good results of vaccine therapy in cases of chronic gonorrhœal cystitis, endometritis, and salpingitis, and I have seen two cases where vaccine prepared from the patient's own gonococci was used during subsequent attacks of acute salpingitis, the attack in each case subsiding at once, contrary to the opinion generally held.

After careful work Dr. A. W. W. Lea of Manchester read a paper before this section,[10] and is of opinion that organisms indistinguishable from pyogenic streptococci, together with diplococci and bacterium coli, are not infrequently present in the vagina of pregnant women. The fact is, however, that we are not yet quite sure of the significance of the germs thus found in the vagina at the onset of labour, whether we believe in Döderlein's theory or not. If we were really sure that the streptococci, staphylococci, bacillus coli, &c., present in the vagina of a healthy woman during labour were liable to infect the woman, it would be our duty to disinfect and sterilise the vagina in every case before labour precisely as we do before vaginal operations. Experience appears to show that this is not necessary, and it seems more than probable that the patient is immune from the germs which are habitually present in her vagina, immune in this case apparently by means of Döderlein's bacillus, and that she only becomes infected when germs are introduced from without, germs for which there is not in her own system an anti-body to resist. A man bitten by the teeth of a cat or dog may get a fatal sepsis, yet that cat or dog can freely and advantageously lick its own wounds.

It is known that the serum obtained from a pregnant woman has different qualities from that of other women, but very little is known of the actual and essential differences except as regards the effect upon animals of inoculations of the serum. Physiological chemists have not yet discovered the chemical constitution or molecular structure of the substances concerned. It is said to be possible to diagnose the existence of pregnancy by a serum test founded upon the power of the serum to hinder the action of proteolytic ferments such as trypsin.[11] It is further shown by Krause and Graff[12] of Vienna that during the first eight months of pregnancy placental serum has a remarkable power of destroying cancer cells and of resisting cancer invasion by manufacturing an anti-cancerous substance. Is this a partial explanation of the rarity of the combination of cancer and pregnancy, and perhaps a partial explanation of the improvement which pregnancy usually exerts upon the spread of tuberculosis, and the almost inevitable downward progress due to the disease after labour? In this connexion I may allude to the fact that the presence of pregnancy prevents perfect reliance being placed upon blood-tests in some cases. Thus, according to Stern,[13] local tuberculin reactions are distinctly diminished during pregnancy. In healthy non-pregnant women 65 per cent. gave positive reaction to the cutaneous and 14·5 per cent. to the conjunctival test, whereas in the seventh, eighth, and ninth months of pregnancy the cutaneous reaction diminished to 36, 30, and 28 per cent., and the conjunctival reaction results were consistently negative.

There is reason to believe that pregnant women[14] have some sort of immunity from scarlatina, and puerperal women a special liability to it. Olshausen[15] could only find instances of seven cases of scarlatina during pregnancy, as compared with 134 within one week after delivery. Boxall[16] in a paper read in this Section did not think that this was due to a delayed period of incubation in pregnant women.

Good work has been done in this Section on the physiological action of the placenta by Professor W. E. Dixon and Dr. Frank Taylor,[17] but very much more remains to be done.

I wish to allude to a few instances showing our ignorance as regards the origin of common diseases, for it is mainly the etiology of obstetric diseases which is now puzzling us.

Hydatidiform degeneration of the chorion.—What, for instance, is the cause of cystic degeneration of chorionic villi? We believe it is of fœtal rather than maternal etiology, but mainly because it may occur in one of twins, the other placenta being normal. Wh.. else do we know about its causation? The frequent association of lutein cysts with this condition, and the established fact that destruction of the corpus luteum in rabbits prevents implantation of the fertilized ovum by preventing the development of the trophoblast, has led to the belief that this excess of lutein tissue may be the cause. Perhaps, as Dr. G. F. Blacker suggests, there may be a common cause both of the proliferation of the chorionic epithelium and of the lutein cells. What explanation again have we of the development of chorion-epithelioma? Is there a benign and a malignant hydatidiform degeneration of the chorion? Can they be differentiated? What is there in chorion epithelioma different to other malignant growths, which in some cases enables a timely hysterectomy to cure the patient even when metastatic growths have developed in the lungs? Is there a benign and a malignant chorion epithelioma as has been suggested?

Ectopic gestation.—Are we any more sure of the causes of tubal gestation than we were before Lawson Tait suggested a previous chronic salpingitis?

Phlegmasia alba dolens.—What, again, is the pathology of true phlegmasia dolens (the lymphangitis type)? Is it an infection or a secondary toxæmia? Its sudden, fairly punctual onset, its course and duration, all point to a specific microbic origin.

Pyelo-nephritis of pregnancy.—What is the true explanation of the pyelitis of pregnancy due to bacillus coli infection? And why is the right kidney almost always primarily attacked? Explanations are plentiful, fanciful, and often mutually destructive.

II.—*Gynæcology.*

Inflamed appendages.—Turning now to gynæcology I would like an authoritative paper from one of our seniors as to when a pyosalpinx or a matted tube and ovary, the result of salpingitis, should be operated upon, and when left alone or otherwise treated. Personally I believe that such cases should very rarely be dealt with by abdominal section, and practically never during the acute stage when the pus in the tubes is virulently infective.

Fibrosis of uterus.—What do we know of the pathology of so-called fibrosis of the uterus? There is no doubt it exists, though till lately it was unsuspected. The best account of fibrosis which I have read is in Dr. Eden's "Manual of Gynæcology," but are the microscopical changes described by him infective, inflammatory, or degenerative? In such cases, with our present knowledge, hæmorrhage becomes almost intractable. Can nothing but hysterectomy stop the bleeding? Would Röntgen rays do good?

Menorrhagia of puberty.—What is the explanation of the menorrhagia of puberty, which is sometimes so severe and intractable as to bring young girls almost to death's door? Is it a uterine or a constitutional disease? There is no direct evidence that it is due to a blood abnormality, yet the best remedy in my experience is prolonged treatment with lactate of calcium.

"*Fungous endometritis.*"—I would like this Section or the Obstetric Section of the International Medical Congress, meeting in 1913, to decide that the word "endometritis" should cease to be used for adenomatous overgrowths of the uterine mucosa. Everyone agrees that it is an obsolete and erroneous expression, yet its use is continued, often with the prefix "so-called," or it is put in inverted commas to show its erroneous ambiguity. The main difficulty is to find a word which will cover all the benign varieties of adenomatous overgrowth which would be included, just as the word "adenoids" covers different types of adenomatous growth in the naso-pharynx of children. In this connexion I may mention that I have very frequently found that women from whose uteri I have scraped unusual quantities of adenomatous tissue suffered from adenoids as children.

Vascular caruncle.—What is the cause of vascular caruncle of the urethra? And why is it so prone to recur? How is it that no nerve tissue has been demonstrated in their structure when they are such painful growths?

Fibromyomata.—Dr. Clay of Manchester,[18] a Fellow of the Obstetrical Society of London, read at one of its meetings in 1863 an account of two abdominal hysterectomies with intraperitoneal treatment of the stump for fibroids done in 1844 and 1863, the first performed in this country, one recovering.

[10] Proceedings of the Royal Society of Medicine (Obstetrical Section), vol. ii., p. 129.

[11] THE LANCET, June 3rd, 1911, p. 1526.

[12] Medical Press and Circular, August 15th, 1911, p. 166.

[13] Zeitschrift für Geburtshülfe und Gynäkologie, Band lxvi., Heft 3.

[14] Dr. G. F. Blacker: Practice of Midwifery, 1910, p. 1001.

[15] Puerperal Scarlatina, Obstetrical Journal, vol. iv.

[16] Transactions of the Obstetrical Society of London, 1888 vol. xxx., pp. 11 and 126.

[17] Proceedings of the Royal Society of Medicine (Obstetrical Section), vol. i., p. 11.

[18] Transactions of the Obstetrical Society of London, vol. v., p. 58.

A study of the transactions of our amalgamated societies shows the steady progress which has been made, until at the present time mortality after hysterectomy for fibroids is almost non-existent unless the operation has been too long delayed, or unless constitutional or local complications are present.

I am, however, entirely opposed to the view that a fibroid which is producing no symptoms should be removed for fear of symptoms or degenerations which may, or may not, subsequently develop. That is not conservative surgery, and unless the patient is going to the tropics, where fibroids always get larger and where menorrhagia is sure to occur, or unless other special circumstances are present, I do not operate till symptoms arise. We are still ignorant of the causation of these fibromyomata.

In his inaugural address in 1887 Dr. John Williams,[19] as he then was, suggested that just as antiseptics in midwifery at that date had given obstetricians the power to prevent chronic disease and suffering in women, so perhaps in 40 years' time some president of the Obstetrical Society would be able to announce that a means of preventing the growth of ovarian cysts, uterine fibro-myomata, and even cancer, had been found. Twenty-four years have since elapsed. Do we as yet know anything more of the causation of these diseases? All observers seem to think that the starting-point is in or around a small capillary.

Lawson Tait,[20] in 1882, believed that the deranged production of muscle cells which began by a growth near to a vascular supply was due to some error of the nerve influence which he believed to govern menstruation.

Dr. Elizabeth Willey[21] drew attention in a valuable paper at this Section in 1909 to the views of Klebs, Pilliet, and others who believed that fibroids begin in the uterine capillaries themselves. Dr. Willey considers that fibroids originate in proliferating muscle cells developed in vascular tissue, and that the stimulus producing the proliferation has some relation to the activity of the sexual organs. Even, however, if these views are right we need to discover the remote cause, which acting probably through the blood-supply, stirs these muscle cells, grouped round the smaller vessels, into activity. The effect of oöphorectomy and the action of X rays point to the exciting influence being an ovarian (Graafian follicle) internal secretion. Can lutein tissue here again be the starting-point in the development of fibroids?

Cancer of the uterus.—Is anything known of the cause of uterine cancer? Do we realise that in the last nine years over 34,000 women in England and Wales have died from cancer of the cervix uteri? This is at the rate of 3777 deaths a year. Since Sir John Williams's Harveian lectures in 1886, but little has been done to try to find the clinical precursors to cancer of the cervix. Sir John Williams proved that there was no causal relation between cervical laceration and cancer, and considered there was then no available scientific evidence that glandular erosions predisposed to malignant change. Those who have had patients develop cancer of the cervix, whose previous clinical history is known as regards changes in the cervix uteri, might easily help us to obtain evidence on the subject. He quoted the views of Ruge and Veit, who had described cases of glandular cancer originating in erosions, and also described cases of his own where cancer had developed from the deeper glands underlying an erosion, but he had always found healthy gland tissue between the new growth and the papillary glands of the erosion. He had seen no case where the surface glands of an erosion became primarily cancerous.

"Cervical erosion."—Our views as to the significance of cervical erosion will depend upon the views we hold regarding the relationships between this so-called erosion and cancer. Although Dr. Bennet's pathology, nomenclature, and his overdrawn accounts of the conditions were alike wrong, he was the first, as Dr. Watt Black told us in one of his presidential addresses, to discover that pelvic inflammation existed in the non-puerperal state. Has not the pendulum of reaction, due in this case to the exaggerations of the discoverer and the ridicule of his critics, swung too far? Are we correct in our present view that we may safely ignore the existence of an erosion? Have we no evidence that it may predispose at a later date to a less benign proliferation of the underlying glands and of their lining of columnar cells, and be, in fact, an early evidence or indication of a tendency towards epithelioma? Prolonged ineffective treatment of an erosion causes great inconvenience to the patient, and, as Dr. Herman has emphasised, adds distinctly to her nervous tension. What, then, should be our attitude in dealing with cervical erosions? I notice that many advise that erosions should be treated drastically; for instance, by scraping deeply and using the actual cautery. Is this because they have a misgiving that they predispose to epithelioma? I have no real evidence one way or another, and personally do not feel able to dogmatise on the subject.

Dysmenorrhœa.—There is no recognised consensus of opinion on this subject. Indeed, I think views as to dysmenorrhœa are less definite now than they were two or three years ago. What examiner in gynæcology would venture to give a question to-day on the varieties and causation of dysmenorrhœa? The elementary question, "What is dysmenorrhœa?" or even "Whether dysmenorrhœa is a symptom or a disease?" would meet with curiously divergent answers, according to the medical school of the student.

Ovarian papillomata.—What is the explanation of the occasional complete disappearance after an apparently useless laparotomy of large masses of ovarian papillomata which have extensively involved both the peritoneal and subperitoneal tissues, the patient recovering perfectly with nothing but a fibrous body to show where the ovary originally was?[22] In the large majority of such inoperable cases death rapidly supervenes, yet the papillomatous growth is microscopically identical with the cases that recover. In other words, how can we tell when such papillomata are malignant or benign?

The future of gynæcology.—What is to be the future of gynæcology? Is it to continue to become more and more surgical? I think not. Is it not more than possible that in the near future some President of the section will give an inaugural address upon "Treatment Other than Operative in Gynæcology," and will base his remarks upon the wonderful discoveries being made in bacteriological, chemical, electrical, and radiographical therapeutics? Even as it is, without considering these new aids in treatment, is there not a tendency nowadays to consider ourselves surgeons only, rather than a happy combination of physician and surgeon, to advise an operation because it is the easiest way to treat a case, or to operate on the rush of both hospital and private practice without previous adequate constitutional preparation of the patient?

Wertheim's operation.—Are we not also prone to go to extremes in the details of some of our newest methods of operating? I doubt much if Wertheim's operation for the very advanced cases of cancer of the cervix uteri will continue to be considered wise, nor do I think it will continue to be adopted for very early cases, but rather be reserved for those middle cases where the extended operation is likely to be permanently successful, and worth the extra immediate risk, or where in an early case it is doubtful whether a vaginal operation would suffice to remove all affected tissues.

Ventrifixation.—When one hears of the large numbers of cases of ventrifixation being done both in hospital and private practice, and the numerical proportion they bear to other abdominal operations, one ventures to wonder whether those who thus so frequently treat prolapse and retroversion have had any real experience of the advantages during the child-bearing age of vaginal pessaries wisely selected and skilfully applied. I have not come across cases requiring ventrifixation in anything like the proportion that some others have, and I do not know how to explain the difference.

Mortality Statistics.

Why is it that statistics of large series of abdominal operations are not improving during the last few years? Zweifel says that the death-rate from all causes after operation has risen from 5·5 per cent. in the period 1887–92 to 7·8 per cent. in the period 1903–09. No doubt this is partly due to the introduction of such heroic operations as Wertheim's for uterine cancer, but when these operations are excluded the mortality is still 6 per cent. He considers that the increase is mainly due to pulmonary embolism which caused 18 deaths in 1832 operations, and he attributes it to the systematic use of Trendelenburg's position. By avoiding

[19] Ibid., vol. xxix., p. 107.
[20] Transactions of the Obstetrical Society of London, vol. xxv., p. 200.
[21] Proceedings of the Royal Society of Medicine, vol. ii., p. 164.
[22] Amand Routh: Transactions of the Obstetrical Society of London, vol. xlix., 1907, p. 216.

flexure of the legs and lowering of the shoulders he only had three deaths in the following 806 operations. Olshausen agrees with Zweifel in his conclusion.

CONCLUSION.

We are at the beginning of a period when other methods of treatment than surgery are being gradually opened up, but are we not rather closing our eyes to those aids which are already known to us? How many of us have tried to arrest hæmorrhage from fibromyomatous uteri in cases refusing, or unsuited for, an abdominal operation by transferring the patient to our electrical colleagues for exposure to X rays? I have done so in both hospital and private cases, especially at menopause ages, with distinct success. The rays arrest ovulation and the formation of lutein tissue, by action on the Graafian follicles, and arrest the growth of fibroids owing to that action and to special action upon the cells forming the fibroid itself. I have not yet had a chance of using X rays in fibrosis uteri.

Again, do we realise that a tube of radium inserted two or three times for 20 minutes into the crater cavity of an incurable uterine carcinoma in many cases causes complete, though so far as is yet known only temporary, relief from pain and discharge? Are we alive to the remarkable effect of electric heat and light baths, which can be easily applied by fixing electric lamps to the ribs of a bed-cradle? These "baths" speedily relieve pelvic pain and promote rapid absorption of both parametric and perimetric exudation after the acute stage is over.

Dr. Curtis Webb's [23] strong advocacy at our section of ionic medication drew attention to another electro-therapeutic mode of treatment which may prove of much utility in the future.

Bacon said: "The whole art of medicine is observation." Observation in medicine in Bacon's time was almost purely clinical, and treatment largely empirical. The enthusiasm and hard work done by our section, and by our younger members especially, are gradually unfolding the obscurities still remaining in obstetrics and gynæcology. The clinical facts now brought before us at our meetings are not, as in the early days of the society, all that is recorded, but practically every such history is accompanied by a pathological, and sometimes with a bacteriological, report also. These, and the addition in suitable cases, such as the toxæmias of pregnancy, of the report of a physiological chemist, will, I hope, ere long enable us to discover the still unknown causes of the many diseases we daily discuss, to some of which I have referred. And when we know the causation, our efforts, both towards prevention and cure, must have their due reward. The discovery of the toxin in a toxæmic case by means of a perfected physiological chemistry will point to its antidote, and diseases which now find us helpless to combat them will readily yield both to prevention and to treatment, and critical diseases, such as puerperal eclampsia, now treated by such different surgical procedures as Cæsarean section, decapsulation of the kidneys, or even by amputation of the breasts, according to the theory or caprice of the operator, will be successfully dealt with by rational methods. I trust that the Obstetrical and Gynæcological Section of the Royal Society of Medicine will help in no small measure to a solution of the many problems which are still eluding us.

[23] Proceedings of the Royal Society of Medicine (Obstetrical Section), vol. iii., 1910, p. 16.

SANATORIUM FOR THE TREATMENT OF TUBERCULOSIS AT WESTON, TORONTO.—In THE LANCET of Dec. 17th, 1910, an account was given of the free sanatorium for consumptives at Weston, near Toronto. Soon after the account was published the greater part of the buildings of this institution were destroyed by fire. That known as the King Edward building, the newest portion, and situated at some little distance from the other buildings, was unharmed. The majority of the patients are now accommodated in the King Edward building, which was designed to hold 30 patients, but now contains considerably more than that number. In fact, the existing accommodation of the sanatorium is not adequate, and steps are to be taken to rebuild on a larger and more substantial scale than formerly. How the money for this purpose is to be raised has not yet been decided upon, but it is stated that a decision will be reached shortly.

Hunterian Lecture

ON

INTRACRANIAL MURMURS IN THEIR RELATIONSHIP TO TINNITUS AURIUM.

Delivered before the Hunterian Society on Oct. 11th, 1911,

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MR. PRESIDENT AND GENTLEMEN,—In selecting "intracranial murmurs" as the subject of this lecture I am fully aware of the difficulties before me. Our knowledge of the various conditions which lead to the subjective appreciation of "tinnitus aurium" is not only very extensive but also somewhat bewildering in its complexity. The term "tinnitus" is applied to certain noises usually heard by the patient only, and not by the observer, and the explanations of their existence have occupied a considerable amount of attention. The sounds are often located in some region of the head (tinnitus capitis) and not in the ears, and it is with the possible intracranial origin of such sounds that I propose to confine my attention.

With regard to tinnitus so frequently associated with some disease in the ear I have but little to say. The noises caused by some foreign body, such as cerumen, in the meatus, by some affection or obstruction in the Eustachian tube, or by some nasal or naso-pharyngeal obstruction, by affections of the tympanic membrane, and such conditions as oto-sclerosis, chronic suppuration of the middle ear, and diseases affecting the labyrinth, are all outside present consideration. It is fully recognised that tinnitus may be caused by various changes in the vascular supply to the brain and auditory apparatus, as exemplified in conditions of syncope, hæmorrhage, heat apoplexy, anæmia, arterio-sclerosis, gastro-intestinal disturbances due to reflex irritation of the vagus, toxæmia, uræmia, alcohol, quinine, tobacco, and other drugs, also to anæsthetics, such as ether, chloroform, &c.[1] Wylie refers to other causes of tinnitus, such as variations in the quantity, quality, and pressure of the blood, either in the ear itself or in the brain, such as are induced in adults by worry, excitement, fatigue, debility, indigestion, pregnancy, and menstruation. Tinnitus is also present in cases of vertigo, diseases of the middle ear, the inner ear and labyrinth, or in cerebral disease, or it may be due to reflex irritation from gastric, hepatic, or urinary disorder, or to drugs.

The characters of these noises, described as ringing, whistling, hissing, cracking, pulsating, soft blowing, continuous or intermittent, monotonic or polytonic, have all been fully recognised, adequately differentiated, and explained when associated with disease of the auditory apparatus; but when, on the other hand, they appear to be of intracranial origin their recognition, objective appreciation, and explanation have not been by any means so satisfactory. The various signs and symptoms of tinnitus associated with disorders of the middle and inner ear, whether caused by affections of parts supplied by the vertebral, basilar, or carotid arteries, or by some venous congestion caused by the pressure of growths, or goitre, on the jugular veins, or by any cardiac diseases, are also of importance, but outside present consideration.

In 1868 Dr. James Jago[2] gave an account of certain acoustic phenomena which had their seat of origin elsewhere than in the ear itself, and he devoted a considerable amount of attention to the consideration of the means whereby sonorous vibrations were able to traverse the different structures of the head. He pointed out that vibrations were conducted best in compact structures, such as bone and cartilage, and but little through such soft substances as muscle, brain, connective tissue, fat, and skin.

[1] Andrew Wylie: Proceedings of the Chelsea Clinical Society, vol. i., p. 52.

[2] Jago: British and Foreign Medical and Chirurgical Review, vol. xlii., 1868.

The frame receives vibrations from an external body best where it is naked, next best where it is most thinly clad (as at the cartilaginous or bony part of the meatus), and, least of all, wherever there intervenes a watery skin instead of a dry one. In this way is to be explained the fact that sounds having their origin within the brain are not conducted (in health) through the watery medium of the subdural and other intracranial lymph cisterns to the dense bony structures of the skull itself.

NATURE OF THE PROBLEM.

The problem now before us is concerned, not only with the origin and propagation of intracranial sounds to the auditory organs, but also with the effort to explain why sounds—which must necessarily occur in structures such as the brain or wherever there is movement—do not invariably become appreciable subjectively—i.e., what is the nature of the protective mechanism which prevents our subjective perception of actual intracranial movements? With regard to the means whereby sound vibrations are conducted from the bony structures to the auditory apparatus, and the various affections which may impair or intensify that conduction, I shall say but very little, my object being merely to bring before you some facts and theories pertaining to intracranial physics and pathology which may in part serve to explain the origin of some of the entacoustical phenomena which may be appreciable not only subjectively by the patient as tinnitus, but also objectively by the observer as intracranial murmurs. Jago stated that he was not aware that anyone had pretended to have auscultated a tinnitus aurium, and he believed that auscultators have been deceived by accompanying noises. Later he conceded that there might be intracranial noises which ought to be distinguished from pulsatory noises emanating from alterations in the calibre of arteries or veins about the region of the ear, and he quotes Hinton with reference to the beating character, synchronous with the pulse, of certain murmurs sometimes due to aneurysm of the basilar artery.

Sir William Dalby has mentioned a case of tinnitus of so distressing a character that life was rendered perfectly wretched. All the best surgeons in Germany had been consulted without benefit. According to a request made in this patient's will, that his ears should be examined after death, a most careful dissection was made of the temporal bones. No abnormal appearance of any kind was detected. "In the face of this," says Sir William Dalby, "we certainly are not in a position to give a satisfactory explanation of this symptom except in a certain number of cases. For the rest we must be content at present to admit our ignorance of the cause, consoling ourselves with the reflection that the confession of ignorance is the first step to knowledge." There are probably but few of us who have not experienced a similar sense of failure. Dr. Thomas Barr,[3] speaking of tinnitus aurium of intracranial origin as being not only frequent but also a subject for which otologists eagerly and earnestly desired further knowledge, states that a monument truly awaits the man who finds an effective remedy, surgical or medical, for the hitherto incurable forms of this malady. I, for my part, have long sought explanations of some of the auditory phenomena in the insane. The pathological conditions underlying some of their abnormal conditions of auditory perception must of necessity require many years of patient labour and observation. It may be that in some instances, and especially in cases where the sheath of the auditory nerve is affected by an increase of pressure in the lymphatic fluid, direct stimulation of the nerve may cause subjective phenomena somewhat similar to those occurring in connexion with the visual sense when the specific energy of the visual apparatus or tracts is irritated and manifested by symptoms ranging from scintillating scotomata to mere sparks of light or pressure phosphenes. I believe that such direct stimulation is rare except in cases in which degeneration of the auditory nerve is taking place. Another point to be noted is that, although pulsatile tinnitus is common, rarely do we have evidence of similar pulsatile phenomena in connexion with any other of the cranial nerves which, in all probability, would be subject to somewhat identical conditions of influence.[4]

[3] Thomas Barr, M.D.: "Treatment of Tinnitus Aurium," Brit. Med. Jour., vol. ii., p. 1130, 1909.

[4] Gowers states that intermittent sounds may be of central origin, and he has recorded a case of epilepsy in which part of the aura was an intermittent hissing, evidently synchronous with the pulse, and succeeded by two bright lights which seemed to approach the patient by jerks of the same rhythm as the preceding sounds.

With regard to the subjective localisation of sounds, it must be noted that in some instances the power to distinguish between entotical sounds and those of external origin is impaired or even entirely lost. In the insane, for instance, sounds of entotical or intracranial origin may be located externally, in accordance with the law of the eccentric projection of sensations. Sometimes, however, they may be located within the cranium, and when they are hallucinatory they may be capable of a psychological explanation, either as purely auditory, or as revivals of articulatory images. We have, therefore, various sources of error in the subjective localisation of sounds, and a full account of the phenomena of intracranial murmurs requires full consideration of factors which are either exoneural, entotical, esoneural, or psychical. For present purposes, however, we must exclude all exoneural and psychical considerations and deal only with such conditions as are esoneural and as are in more or less direct relationship to the entotical data which have been already so elaborately studied by otologists.

COMPARATIVE ANATOMY OF CEREBRAL LYMPHATIC SYSTEM.

The original form of the auditory organ is a vesicle derived from the epiblast. In the embryo the vesicle becomes separated from the epiblast and becomes connected with the auditory nerve which grows towards it from the brain. It then sinks deeper into the mesoblastic tissue of the skull and becomes divided into the utriculus, from which the semicircular canals become differentiated, and the sacculus, from which the recessus vestibuli and the cochlea are formed. This whole apparatus constitutes the membranous auditory organ or membranous labyrinth. Later, the surrounding mesoblastic tissue becomes chondrified and also ossified to form the bony labyrinth with a cavity (cavum perilymphaticum) filled with perilymph between them. The cavity within the membranous labyrinth (cavum endolymphaticum) contains the fluid endolymph. In fishes the ear lies close under the roof of the skull, and is thus easily accessible to the waves of sound. As we pass higher in the vertebrate series the auditory organs sink deeper in the skull. The comparative anatomy of the ductus perilymphaticus which (from the reptiles onwards comes into connexion with the epicerebral lymph-sinuses serves as a communication between the perilymphatic cavity and the peripheral lymphatic system of the head) is of great interest, and the internal relationships of the perilymph to the endolymph are suggestive of some explanation of the ability of fishes to resist great increase of external pressure, and of birds by means of their air sinuses to resist great diminution of pressure. The main point for present purposes rests in the fact that pressure variations affecting the perilymph may either directly or indirectly affect the endolymph.[5]

At a very early stage of development swellings of the anterior, middle, and posterior cerebral vesicles can be seen. Their cavities, or ventricles, are in direct connexion with the central canal of the spinal cord. The walls of these cavities become more and more thickened, so that the cavities themselves become gradually more constricted. In the lower vertebrates the brain by no means fills the cranial cavity, but in the higher vertebrates the subdural lymph spaces gradually become less in proportion to the other cranial contents. The significance of this will be seen when we discuss the movements of the lymph fluid in relationship to intracranial murmurs.

PHYSIOLOGY OF THE INTRACRANIAL CIRCULATION.

Consideration of the details of the arterial circulation within the cranium need not detain us. Much discussion has arisen in connexion with the manner in which the various anastomoses occur, and elaborate explanations have been given as to the methods whereby local demands for an increased supply of blood may be determined.

In the brain mass the venous system is, like the arterial,

[5] The endolymphatic duct at its upper end perforates the inner wall of the cartilaginous or bony auditory capsule, passes into the cranial cavity, and ends in an expansion (Saccus endolymphaticus) in the dura mater; osmosis can thus occur between the lymph contained in the endolymphatic and epicerebral-lymph spaces respectively. Wiedersheim, "Comparative Anatomy of Vertebrates," p. 205, gives the relationships of the lymph systems as follows: "In Elasmobranchs, the ductus endolymphaticus opens on the posterior part of the roof of the skull, and is thus in free communication with the sea-water. In many reptiles its free end comes to lie close under the roof of the skull beneath the parieto-occipital suture, and in the Ascalabota the duct even leaves the cranial capsule, passes back between the muscles of the neck, and in the region of the pectoral arch becomes swollen to form a large folded sac, from which finger-shaped processes extend right to the ventral surface of the vertebral column and to the submucous tissue of the pharynx. These processes may also branch out in a labyrinthic manner into the orbit, and they are always filled with a white semi-solid mass of otolithic substance, consisting of very minute crystals of carbonate of lime; otolithic matter is also present in the ductus endolymphaticus of all vertebrates, at any rate in the embryo." "In Amphibians, and also in certain Teleosteans, the duct of either side, by means of large sac-like enlargements, may come to lie close to its fellow, either on the dorsal surface only, or on both dorsal and ventral sides of the brain. The latter is the case in Anura for instance. In birds and mammals the ductus endolymphaticus never passes out of the cranial cavity, and in its general relations corresponds with the tube-like ground form described above.

practically capillary, and only on reaching the pia mater do the vessels so coalesce as to form veins of appreciable size. The capacity of the veins within the skull is, as a rule, greater than that of the arteries. The veins, instead of all converging to form trunks differing only in bulk from one another, are emptied into the dural sinuses which cannot, under any circumstances, become appreciably altered in size—i.e., the sinuses can neither collapse from pressure from without nor yield to distending forces from within. The veins from the pia mater open obliquely into the great longitudinal sinus in a direction opposite to the current of the blood. These facts seem to indicate a design whereby the venous outflow is regulated so as to prevent its becoming unduly slow or rapid. The absence of valves in the intracranial veins would, in a measure, prevent the occurrence of any venous murmurs such as are sometimes heard in connexion with the bulbous dilation of the jugular vein, and as in the crural vein in the groin. The exact functions of the trabeculæ found in some of the intracranial veins is uncertain. Possibly they serve not only to regulate the flow of venous blood, but also to prevent the conduction of sound vibrations which might occur in connexion with the flow of blood from vessels of smaller into those of greater calibre. It is assumed that the flow of blood in the venous sinuses of the brain is continuous—without any possibility of pulsatile waves. We know, however, that when the capillaries are greatly dilated, and when the arterial blood pressure is high, the pulse-wave may be propagated through the capillaries into the beginnings of the veins. In the brain, enclosed as it is within an immoveable structure, the only sources of outflow are by the inelastic venous sinuses and by the cerebro-spinal lymph channels. It is readily conceivable, therefore, that any increase of pulsation in the brain itself may communicate pulsations to not only the cerebro-spinal fluid, but also, by direct pressure on the elastic and collapsible intracranial veins of the inner membranes, to the larger venous sinuses. The extra vascular pressure thus causes extra venous pressure, and it is not improbable that a venous sound so generated in the torcular may be propagated in the direction of the venous flow, or even through the denser structures of the cranial bones. Coming now to the other contents of the cranium, it is necessary to speak of the relationships of the cerebro-spinal fluid. The cranium being an immoveable and rigid box does not allow of expansion or contraction either in consequence of pressure from within or without. We can neither add to, nor subtract from, the sum-total of its contents. The brain substance and the cerebro-spinal fluid are in themselves passive, the latter being compensatory to the expansion or collapse of the former, and both reacting to variations in the arterial or venous pressure.

The term "cerebral pressure" really means, therefore, either undue preponderance of one or other of the cranial contents, partial displacement of one or other constituent, acceleration of the arterial or retarding of the venous circulation, or alteration in the compensatory movements of the cerebro-spinal fluid. Arterial, venous, lymphatic, and other forms of pressure due to injury or disease, &c., are but terms used to signify alterations either in the position or in the relative quantities of the cranial contents. The intracranial contents being in the sum incapable of expansion or contraction, it is of importance to note the mechanism whereby the "give and take" between them is affected. The brain itself is inelastic and passive, and depends upon arterial, venous, respiratory, and peristaltic movements for its metabolism and activities. Its substance may be displaced, contracted, expanded, or destroyed by injury, disease, new growths, or finer interstitial degenerative changes. The arterial system may preponderate unduly in its activities, the relative amount of arterial blood being greater than in health. This is due either to excess of propelling action in the arterial system or defect in resistance of the venous or lymphatic systems. The arterial blood may be diminished, on the other hand, owing to defect in the propelling mechanism or to increase in the resistance offered by the venous or lymphatic systems. Similarly, the arterial and venous systems may be concurrently hyperactive or deficient owing to diminution or excess of the constituents of the lymph cisterns. Perfect balance of the relative quantities of the cranial contents thus presupposes certain activities or movements, which are also essential to proper metabolism. The skull thus regulates the pressure of the fluid within its cavity, and any functional increase in the arterial blood would be possible only upon one of two conditions—viz., a corresponding collateral arterial diminution, or a transfer of venous blood in the direction of the venous sinuses. A venous transfer would be altogether too slow, and there could not be any continuous action, for the repulsion of the venous current—dependent upon the respiratory movements—would give rise to a frequently interrupted flow of venous blood in the brain. The cranial cavity is not, however, entirely filled by the brain; it includes, in addition, a number of spaces filled with lymphatic fluid. The dura mater is separated from the arachnoid by a comparatively small space which is lined by endothelium. This space communicates with the lymphatic glands of the neck, and with the subdural spaces which do not immediately surround the nerve-roots, but do so in common with the arachnoid and are connected with the lymphatic spaces of peripheral nerves. As an example, we have the communication between the auditory labyrinth and the subdural space through the spaces which surround the auditory nerves. In the tissue of the dura itself there are also lymph spaces which are connected with the subdural space. The lymph cisterns are traversed by a network of threads and trabeculæ of connective tissue, the threads being narrower at the summits of the convolutions than over the sulci, whilst at the base of the brain where the subarachnoidal spaces are dilated there may be none. It is impossible here to give any account of the anatomy of these lymph cisterns; instead, it must suffice for present purposes to note that they act, not only as water cushions to minimise shocks to the brain and to compensate varying conditions in the blood pressure, but their fluid contents may also serve to prevent the conduction of intracranial sounds to the internal table of the skull. This, of course, refers to normal conditions of the lymph cisterns and their contents, and does not include abnormal conditions in which they may not only fail as non-conductors of sound but in their nature and contents may even be the source of origin and means of propagation of various sonorous vibrations, which may be heard both subjectively and objectively.

Before entering upon a description of the various brain movements it would, perhaps, be well to consider briefly some points in regard to the Pacchionian granulations which occur in the course of all sinuses, and more particularly alongside of the sinus longitudinalis. The cerebro-spinal fluid is removed from the subarachnoidal space by several channels. Much of it passes into the spinal cord, the remainder passes along the sheaths of the cranial nerves, or is excreted by the Pacchionian bodies into the superior longitudinal sinus. The point to recognise is that the fluid from the subarachnoid lymph spaces, when forced from the brain by increased intracranial blood pressure, not only passes into the perilymphatic space of the labyrinth and thereby tends to modify the pressure of the endolymph, but it also serves as a more direct conducting medium for sound vibrations arising in connexion with the pulsatile or other movements of the brain, shortly to be described. The average quantity of cerebro-spinal fluid within the cranium is said to be about two ounces, but the importance of its several functions is but seldom correctly estimated. Its presence not only serves to regulate and make the pressure uniform when brain movements occur, so that every systolic and expiratory dilation of the blood-vessels is concentrated upon those parts where least resistance is offered, but it also acts as the medium for the removal of intracranial waste products.

BRAIN MOVEMENTS.

There are three different kinds of brain movements: (1) Pulsatile movements communicated from the pulsations of the large basal cerebral vessels; (2) respiratory movements, in which the brain rises during expiration and falls during inspiration; and (3) vascular elevations and depressions which alternate and are due to periodic dilatation and contraction of the blood-vessels. This last is a peristaltic arterial movement, regulated by the vaso-motor centre, and occurs from two to six times per minute. Needless to say, it is in connexion with one or other of these movements that sound vibrations are apt to occur in the arterial, venous, or lymphatic systems.

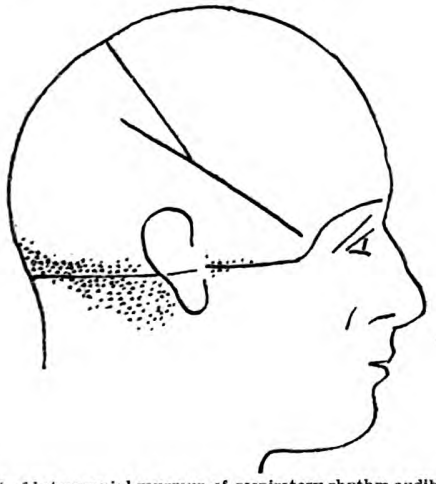
The pulsatory movements of the brain are exceedingly interesting, and undoubtedly they most frequently give rise to intracranial murmurs. From the circle of Willis the

arteries ascend, and their currents are directed upwards in the same direction as the venous currents. The large arteries at the base of the brain communicate a movement to it, each pulse wave raising it up and thereby compressing the cerebral veins. In expiration the venous blood is dammed back into the sinuses, and the brain expands at the expense of the cerebro-spinal fluid. During inspiration the veins are emptied by suction action, the brain collapses, and the cerebro-spinal fluid re-enters the cranial cavity.[6]

During these movements the cerebro-spinal fluid is subjected to doubly compensatory movement—i.e., the pulsatile movement is mainly intracerebral and is concerned mainly with the passage of the fluid through the cerebral tissues and the ventricles, and the respiratory movement which is concerned mainly with the flow of the fluid to and from the cranium. Thus it is that the vascular mechanism of the brain determines not only the intracerebral, arterial, and venous movements, but it also serves to give a peristaltic movement to the ventricles of the brain whereby the cerebro-spinal fluid is slowly passed onwards. This double action may be expressed in another way. The pulsatile action is a factor of causation of the circulation of the blood within the cranium, and it aids in the peristalsis of the intracranial lymph fluid, whereas the respiratory action affects not only the venous flow but also the "give and take" of the cerebro-spinal fluid as a mass in its internal and external relationships.

It seems certain that any excess of cerebro-spinal fluid is always compensatory, and its tension must always be equivalent to that in the veins. For our purpose it is interesting to note that excess of cerebro-spinal fluid within the cranium is not, as a rule, attended by tinnitus. Amongst the numerous cases of cerebral atrophy or sclerosis, with large amounts of compensatory cerebro-spinal fluid, I have met with, tinnitus has been rare. I have, however, seen one case of dementia in which there was an excess of cerebro-spinal fluid and an obstinate intracranial murmur of respiratory rhythm, and located by the patient as being "deep down" in his brain, and distinctly audible on

FIG. 1



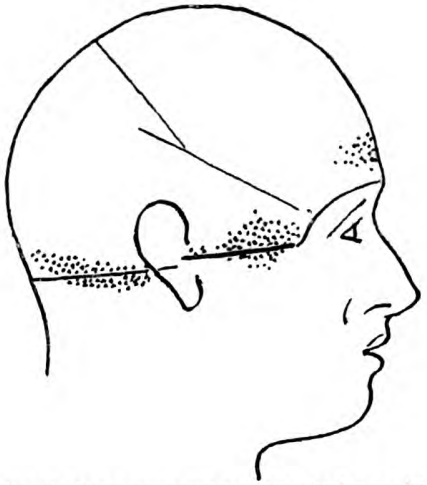
Seat of intracranial murmur of respiratory rhythm audible both subjectively and, on auscultation, objectively.

auscultation at both sides of the base of the skull under, and posterior to, the mastoid. Post-mortem examination showed an excess of fluid over the sulci of the convolutions, and chiefly at the base where there were also considerable roughening and large transverse ridges of the inner surface of the bone stretching across the middle cranial fossæ. In this case it seems probable that the tinnitus was due to the to-and-fro movement of the cerebro-spinal fluid over the roughened bone, and its seat of origin in close proximity to the internal ear apparatus rendered it particularly noticeable to the patient. The auditory apparatus appeared to be healthy. (Fig. 1.) It is to be noted that the murmur was of respiratory rhythm and there was no evidence of its having been in any way affected by the pulse wave.

[6] Leonard Hill: Physiology and Pathology of the Cerebral Circulation.

When there is great expansion of the cerebral volume, owing to arterial pressure, and the cerebro-spinal fluid has been driven out of the cranium, the brain comes into contact with the rigid bone, and, as a consequence, any murmur which becomes audible, either subjectively or on auscultation, is nearly always pulsatile, and in the few instances I have seen in which the patients have complained of loud sounds accompanying each pulse wave I have not been able to locate any particular intracranial murmur, nor have I been able to exclude the possibility of their having been subjective so far as I myself was concerned. With regard to the so-called vascular wave, which is due to a peristaltic arterial movement, regulated by the vaso-motor centre, and occurring from two to six times per minute, I have but very few clinical data. These vascular movements constitute an important factor in the nutrition of the brain and in the exchange of metabolic products. The advance of the vascular wave in peristaltic fashion provides a motor mechanism designed to carry off waste products through the lymphatic fluids by establishing currents within the brain fluid. This peristaltic wave action on the cerebro-spinal fluid may determine movements of the fluid over or through structures which may, under pathological conditions, determine sounds with a corresponding rhythm and propagated in the directions of the flow to other ventricles or cisterns. Quite recently I saw a case in which the tinnitus recurred for about three seconds every 20 seconds. It could not be located subjectively, but on careful auscultation I was able to detect a very faint sound recurring at intervals longer than those between the patient's and my own respirations. (Fig. 2.)

FIG. 2.



Regions at which a murmur of peristaltic rhythm was faintly audible on auscultation.

In this case the sounds were very soft, and they were best heard in the region of the lateral and cavernous sinuses. I fancied I could also detect them just above the superciliary ridges, and at the time it occurred to me that possibly the sounds might be central in origin and propagated through the fluid of the lateral ventricles. This, however, was, of course, mere conjecture. The patient recovered after a course of treatment by digitalis and strychnine.

Anæmia and hyperæmia[7] are powerful agents in modifying pressure equilibrium. The high arterial pressure which occurs in Bright's disease is attended by undue pressure on the peri- and endo-lymph, and gives rise to tinnitus. In hemicrania due to gout the intracranial arteries may be dilated or hyper-extended, and by their more forcible action not only drive the cerebro-spinal fluid from the cranial cavity causing increased tension in the labyrinth, but, by the same process, force the brain towards the internal table of the skull and thereby render it possible for the pulsatile waves to come into almost direct contact with it. So it is in conditions of plethora culminating in apoplexy, of which tinnitus is an early symptom. Tinnitus is often a prominent and distressing symptom in anæmia and chlorosis. It seems possible, however, that the origin of the murmurs is in

[7] Field: "Abnormal Vascular Conditions Affecting the Organ of Hearing," Medical Times and Gazette, 1878, vol. i., p. 616.

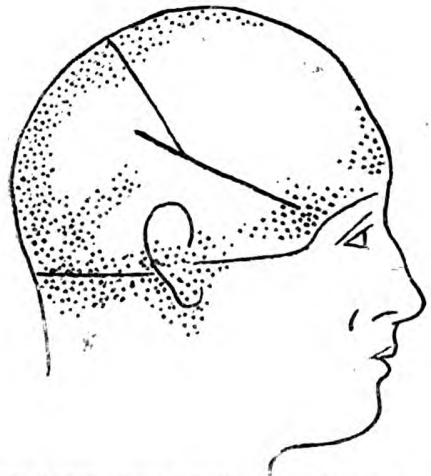
such cases totally different from that of increased arterial pressure. Sometimes the "bruit de diable," either continuous or rhythmical, arising within the bulb of the common jugular vein during diastole and inspiration, is audible both subjectively and objectively. This pathological condition occurs not only in anæmia but also in plumbism, syphilis, scrofula, &c. It is more common in young than in old people, and is due to the vibration of the blood flowing in from the relatively narrow into the wider part of the vein. Similar murmurs have been described as occurring in the subclavian, axillary, thyroid, facial, innominate, and crural veins, and also in the superior vena cava. This can be easily demonstrated by firmly compressing a carotid artery when tinnitus immediately ensues in the corresponding ear.

From certain anatomical and clinical data there appears to be no doubt that intracranial venous murmurs may occur in the same way. The method by which the venous blood from the brain and membranes enters the longitudinal and other great sinuses renders the occurrence of sound-waves not only possible but extremely probable. In health the aspiration of the venous blood from the cranial cavity is probably almost noiseless, but when the aspiration is not supported by a sufficiency of arterial pressure the passage of the venous blood into the sinuses must almost necessarily be attended by murmurs. The exact rôle of the fibrous threads and trabeculæ in connexion with the veins in some localities is not certain. Possibly under certain pathological conditions of impaired activity in the venous outflow there may be with systole and expiration a tendency to regurgitation.

VENOUS MURMURS.

Venous murmurs may be of pulsatile or respiratory rhythm. The blood in the sinuses of the brain may undergo a pulsatile movement owing to the fact that during cardiac diastole much blood flows into the veins (Mosso) and, under some conditions, this movement may be propagated into the veins of the retina and auditory organs. Pulsatile venous murmurs are somewhat difficult to localise subjectively. In young people they are sometimes referred to the region of the lateral sinuses, in climacterics they are more frequent in the region of the longitudinal sinus, whilst, in other instances, especially if they have their origin in the middle line, they cannot be located subjectively. Venous pulsatile murmurs can sometimes be heard on auscultation, and, in the few cases I have auscultated, the murmurs have been confined

FIG. 3.

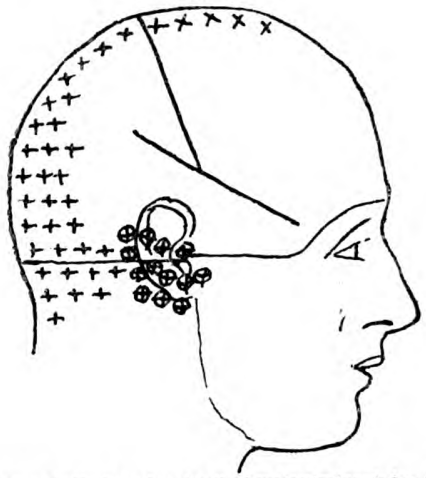


Regions at which venous pulsatile and respiratory murmurs are located subjectively, and which are sometimes audible on auscultation.

almost entirely to the regions of the larger venous sinuses. In one instance only have I heard a respiratory venous murmur which corresponded with each expiration, and this was evidently due to the aspiration of the venous blood from the lesser into the greater veins. (Fig. 3.)

Frequently patients complain of crackling noises in the region of the longitudinal lateral sinuses and the torcular. (Fig. 4.) Their origin is as yet uncertain, and I have never yet succeeded in auscultating them. When occurring in connexion with the Eustachian tube they may be audible to other persons. Possibly they may be associated with the venous cavernous spaces (fovea glandulares) which, according to Langer and Trollard, are caused by the wearing away of the vitrea, and are to be found in drunkards, in the senile, and in the subjects of heart disease. They are sometimes described as being very loud indeed. Sir William Gowers [8]

FIG. 4.



The crosses indicate regions localised subjectively as being the seats of origin of explosive sounds. The crosses within circles indicate regions at which explosive sounds can be auscultated—probably Eustachian.

refers to the sound produced in an internal aneurysm (of the internal carotid or vertebral) which may be heard by another person on auscultation. Greene [9] mentions the case of a boy who had an intracranial murmur audible on auscultation, and in whom an aneurysm was most unlikely. Poosten [10] also speaks of a case in which a pulsatory sound, resulting from some effect of a blow two weeks before, could be heard eight inches from the patient. It not infrequently happens that insane persons state that all their cerebral and mental troubles began with a loud explosion within the head, as if something had given way. Jago has referred to this phenomenon, and mentions a case in which the explosion seemed to occur near one ear, and ended by a prolonged ringing in the other. He says he has also heard a tinnitus hiss or buzz in one ear as if from a distance, and still later to become appreciable to the other ear.[11]

With the exception of the improbable bursting of an air bubble or cell the explanation appears to be rational. The same observer refers to the fact that the two petrosal and the capacious lateral sinuses are actually supported by the bone that includes the labyrinthian fluid; a sonorous vibration affecting the blood within them may be propagated either through solid bone or in an aural vein to the labyrinth. To account for the transmission of sonorous vibrations across the skull I must again quote Jago, who says: "Should an explosion take place in either of these sinuses its sonorous

[8] Diseases of the Nervous System, vol. ii., second edition, p. 273.
[9] Transactions of the American Otological Society, 1878.
[10] Monatsbl. f. Ohrenheilk., 1878, No. 4.
[11] Jago says: "Such facts indicate that the phenomenon cannot be primarily a nervous affection, for we have no reason for supposing that a sonorous sensation ever passes from one nerve to the other. Nor is it observable that the auditory nerves are exposed to be hit in their paths to the brain by any moving body which assails them separately, and that there should be an actual resonance within the cavity of the skull filled up with brain, or that any bell-like ringing in such a bony cavity, if containing nothing but fluid, could happen, is inconceivable; yet the tinnitus, explosive and transitory, has no resemblance to an arterial souffle, or such a capillary or vascular tinnitus as invades the drum. Nor is it aggravated by closing the meatus, not having sufficient absolute intensity to be conveyed thither in any appreciable degree from its point of origin. To me it seems that anatomy reveals but one apparatus in which the phenomenon could take place, and this one adapted to all its phases. I speak of the chain of large venous tubes and receptacles called sinuses, which connect one petrous bone with the other, and both with other intracranial parts, &c. It surely does no violence to probability to assume that in such a blood current a bubble or cell may occasionally burst, some fibre snap, some collapsed vein leading to a sinus be forced open, or some coherent things part. This being granted, the explanation is palpable."

waves would traverse the Cotunnian fluid on that side immediately, but would have to circulate all round the tentorium to play upon the other side of the head, and would thus be heard later upon the second ear. Such an event might even occur in the beginning part of one of the internal jugular veins, or, may be, one of the cavernous sinuses, and the waves have to ripple over one labyrinth in their course through the lateral sinus, the torcular Herophili, and the remaining lateral sinus, to the seat of the other. If it happens in either lateral sinus there will be a difference in the times of their reaching the two labyrinths, and that difference will be greater as it happens farther from the torcular. Whilst should the starting-point be in the torcular, or any one of the sinuses lying in the mesian plane of the head, the two labyrinths will be attained at the same instant. There may be cases, too, in which the undulations may find their way back again to the petrous bone they have already washed, by being reflected, or by winding their way in a circulating manner through one of the small sinuses that help the lateral ones to keep open a communication between the two sides of the head. Lastly, we may imagine that the sounds under consideration may, in certain cases, be increased by resonance; for example, in such a vessel as the torcular." I agree with him that a chief office fulfilled by the numerous bands which give a spongy structure to the interior of the cavernous sinus is to intercept sonorous vibrations that may be impressed upon its blood current by the internal carotid artery which traverses it, that they may be cut off from the petrosal sinuses.

These observations refer to the conduction of venous sounds. Arterial bruits, if intracranial, are more apt to be central and conducted either direct to the bone in conditions of deficiency of cerebro-spinal fluid, along the course of the arterial stream, or indirectly to the labyrinth through the medium of the venous structures or the lymph cisterns as pulsatile phenomena already referred to.

I have but barely referred to some conditions such as cerebral aneurysm, and there are many other psychological and pathological conditions which may give rise to imaginary or real intracranial murmurs. In fact, this lecture is merely an attempt to reopen a line of investigation which ought, in the long run, to throw some light upon the causes of an affliction which in its far-reaching effects is almost as distressing as any other form of disease from which mankind is prone to suffer. Although our knowledge of many intracranial phenomena is at present scanty and our ignorance of other phenomena profound, it will not always be so, and doubtless we shall, in the course of time, be better able to apply methods of treatment which are based upon a scientific and intelligent appreciation of much that is at present enshrouded in mystery.

THE HUNTERIAN SOCIETY.—Dr. R. Hingston Fox, the President of the Hunterian Society, at a gathering of the fellows and friends of the society on Oct. 6th, delivered an address on the Life and Work of Dr. John Fothergill. In the course of his remarks Dr. Hingston Fox pointed out that after taking his degree in 1736 Fothergill came to London, attending St. Thomas's Hospital, and settled in 1740 in the City, hard by Gracechurch-street Friends' Meeting House. Practice came to him, especially from his kindness to the poor; he used to say, "I climbed on the backs of the poor to the pockets of the rich." His opportunity came in 1748 from an epidemic of septic tonsillitis with a high mortality. He studied the disorder, and worked out a method of treatment, not depleting but supporting, and affording nourishment, air, cleanliness, and cinchona bark. With the Society of Physicians (1752) and the Society of Licentiates (1754) Fothergill was closely connected. In the strife with the American colonies Fothergill's intimate friendship with Franklin and large correspondence enabled him to understand both sides, as did few Englishmen at that time. He pleaded earnestly in the public prints for justice; remember, he said, that these colonists are the sons of freedom; they are become a nation; you can never subdue them. He laboured with Franklin and others to make terms of agreement, but it was not to be. He died in the midst of his work in 1780, at the age of 68 years. The spare alert figure with its keen piercing eyes was active to the last.

INTESTINAL HÆMORRHAGE IN TYPHOID FEVER AND ITS RELATION TO THE AGGLUTINATING POWER OF THE BLOOD.

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IN a work[1] published at Copenhagen in Danish, Enud Schroeder, in coöperation with Professor Dreyer, describes his investigations and observations on the effect of blood-letting in actively immunised rabbits on the agglutinating power of the blood. The immunisation was accomplished by injecting 1 c.c. of sterilised standard culture of typhoid bacillus, paratyphoid bacillus, or bacillus coli communis into the peritoneal cavity. A large quantity (10 litres) of the culture was prepared in order to ensure regularity in the agglutinability of the bacilli, seeing that portions of this standard culture were used in the subsequent agglutination tests. In such tests a macroscopic method was adopted. 4 c.c. of blood were taken from the ear of an immunised rabbit on successive days. The sera having been separated were placed in order of withdrawal into a series of sterilised tubes (11 × 70 mm.) made of glass and arranged on a stand. The quantity of serum put in each tube was varied according to the dilution required. 0·85 per cent. NaCl was used as a diluent, and this along with the sera was added to 1·5 c.c. culture, to make a total of 2·5 c.c. in each tube. A standard tube was taken and the dilution so adjusted that the deposit was just seen by the naked eye. By comparing the tube contents and noting the dilutions, the agglutinating power of the sera of successive days was found, and the fluctuations recorded in the form of a curve.

Schroeder found that after immunisation the blood serum of a rabbit exhibited an agglutinating power which varied slightly from day to day; in other words, a natural curve of agglutination was produced on recording results graphically. By means of a large number of similar observations he drew up a formula by means of which any particular curve of agglutination could be calculated. In each case the readings were checked by the formula, and the results found to coincide.

Bleeding of the rabbits was usually done during a rapid fall of the curve—i.e., in the third phase (see Chart I.). 25 c.c. of blood were drawn off 24 hours after the maximum rise of immunisation was reached. It was known by the formula what the curve would have been independent of bleeding, and thus the effect of the loss of blood could be observed. For the first couple of days after this the curve continued to fall, but not to the same extent as the calculated value; thus there was some checking of the loss of agglutinins. After this there was a sharp rise in the curve, reaching a maximum, and then a gradual fall. During the fall 25 c.c. of blood were again removed, and in 24 hours another sharp rise was noted, followed by a more gradual fall. On repeated bleedings the period elapsing between loss of blood and rise of curve was less, and the subsequent fall more gradual.

Schroeder then describes the effect of bleeding during the rise of the curve. 25 c.c. of blood were withdrawn on the seventh day after immunisation. The rise continued for two days and the fall commenced. The curves were not as regular as the previous ones. The conclusions he draws from his observations are as follows: (1) Blood-letting in the fall is most frequently followed by a further fall, and afterwards by a rise which is often very considerable; (2) repeated blood-lettings each produce similar oscillations; (3) after each blood-letting there is a considerable reproduction of agglutinins; and (4) bleeding in the second phase (i.e., sharp rise) does not apparently affect the rise, which is continued immediately after and with little interruption.

Similar investigations were continued on persons suffering from typhoid fever. Rises and falls in the agglutinating power of the blood were found to occur, as in immunised rabbits. Then bleeding typhoid patients was tried. 150 to 200 c.c. of blood were removed at a time, and the results

[1] Enud Schroeder: Om Aareladningens Indflydelse paa Blodets Agglutinin-Holdighed. Kbh., 1909.

were very similar to those arrived at in the experiments on rabbits (see Chart II.).

Several observers have attempted to discover the effect of intestinal hæmorrhage in typhoid fever, but apparently without success. No doubt the reason of this was that so few cases under observation happened to have hæmorrhage. Courmont[2] describes five cases; they all, unfortunately, died before any reaction could be found. Jorgensens[3] describes a case of this kind giving a marked rise in the curve during the height of the fever, and he therefore attributes it to the effect of the hæmorrhage on the agglutinating power of the blood. Another case is noted by Fraenkel u Otto and by Lentz and Leube.

Schroeder remarks that it is probable that intestinal hæmorrhage in typhoid increases the power of agglutination of the blood; and whilst it may have a favourable influence on the progress of recovery of the patient, at the same time it must be borne in mind that such hæmorrhage may be very considerable and often fatal.

CHART 1.

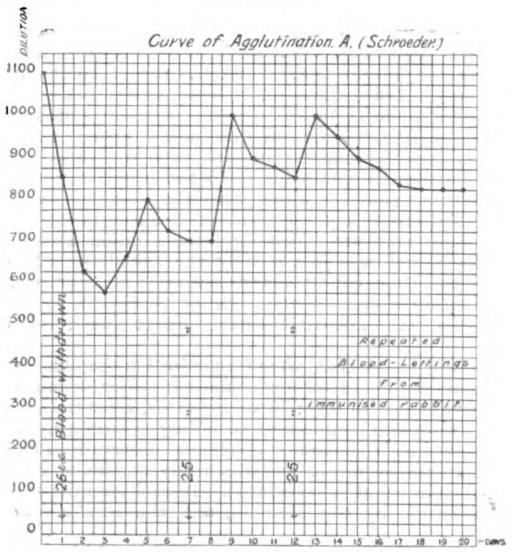
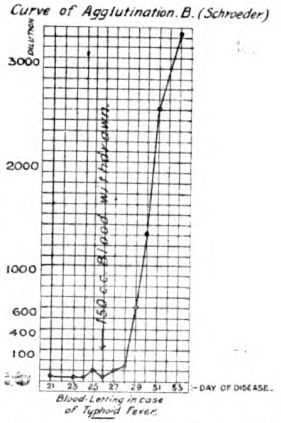


CHART 2.



The above work suggested a new and more extensive investigation of the effect of intestinal hæmorrhage in the human subject suffering from typhoid fever. Such hæmorrhage is undoubtedly a sign that the disease is in an advanced stage, and, moreover, that it is of a serious type. The bleeding is, of course, due to the position of the ulcers with regard to the larger arteries supplying the intestinal wall. Vessels are eroded and hæmorrhage is produced. The great dangers of this accident are (1) perforation of the bowel, almost always fatal; and (2) loss of a quantity of blood too great for the patient to withstand in this weak condition.

[2] La Courbe Agglutinante chez les Typhiques. Revue de Médecine, p. 745, 1897; p. 317, 1900.

[3] Svingninger i Blodets Agglutinerende. Evne ved Febris typhoidea, Kbh. 1904.

Whilst bleeding is recognised as a grave sign in many cases, it must be admitted on referring to these investigations that a great effort is made by the organism to balance this danger. The agglutinating power of the blood is increased after hæmorrhage to a remarkable degree, thus giving the body a much better chance of coping with the advancing disease. What appears to be a bad sign, then, may often prove to be a good one, and may turn the scale and save the life of the patient. Some of the cases graphically described by curves show very strikingly the truth of this statement. 24 hours after bleeding, the curve of agglutination is well up and the temperature down, with the commencement of recovery of the patient. As mentioned above, Schroeder describes a series of cases in which typhoid patients were bled at intervals to the extent of 200 c.c. each time. Almost without exception he finds a fall in the curve of agglutination for the first 48 hours after the blood-letting, and then a sharp rise, due to the effect of the hæmorrhage on the formation of agglutinins. In the present investigations such a fall preceding the rise has not been found. Blood was taken to be tested 24 hours after the hæmorrhage, and without exception showed great increase in agglutinating power. This apparent difference may be due to the fact that very often bleeding takes place in the intestine, and the blood is retained for a day or a couple of days, and so is not noticed at the time it occurs. As a control several cases of hæmorrhage in patients other than typhoid were observed. In none did the blood give any agglutinating reaction at all, either to typhoid bacilli, paratyphoid bacilli, or B. coli communis.

The quantity of blood lost does not appear to bear any proportion to the quantity of agglutinins formed in the blood. A comparatively small amount, say 5 or 6 oz., gives rise to a large increase in the agglutinating power of the blood. In most cases a blood count and an estimation of the percentage of hæmoglobin were done before and after hæmorrhage, but no change other than that observed in ordinary hæmorrhage was found.

The results obtained in the 14 cases to be described prove beyond doubt that hæmorrhage in typhoid fever produces by some means or other an increased formation of agglutinins. Especially is this phenomenon made clear in cases where the day before hæmorrhage occurs samples of the blood serum will not clump either typhoid bacilli, paratyphoid bacilli, or B. coli communis, and yet 24 hours after the hæmorrhage clumping by blood serum taken now in the same dilution (i.e., 1 in 10) takes place immediately. And, moreover, the serum will stand well diluting before it fails to produce agglutination.

The death-rate in cases of typhoid fever where intestinal hæmorrhage has occurred has been worked out by several observers. It was found to be very high in most cases. Of the amount of hæmorrhage no classification was made, nor was any allowance given for the cause or time of death. It is advisable in making statistics of this kind to divide the cases into, say, two divisions, the one group being cases where the bleeding amounted to 10 oz. and under, and the other group cases of over 10 oz. Those in which death ensued within twenty-four hours after loss of blood may with justice be excluded; and deaths from such an accident as perforation of the gut should not be included in the death-rate.

The following figures give the number of cases of intestinal

TABLE I.—*Cases of Intestinal Hæmorrhage in Monsall Fever Hospital, Manchester.*

Year.	10 oz. and under.		Over 10 oz.*	
	Cases.	Deaths.	Cases.	Deaths.
1906	10	2	14	9
1907	11	2	5	1
1908	14	1	9	5
1909	23	6	10	7
1910	24	5	4	2
Total	82	16	42	24
Percentage of deaths	19·5		57·1	

* The average loss of blood per patient was 41 oz.

hæmorrhage in typhoid and the number of deaths which have occurred at Monsall Fever Hospital, Manchester, during the last five years 1906–1910, uncorrected as regards cause and time of death. The division into two parts, however, has been adopted.

Even after this simple division of the quantities, a death-rate of 19·5 per cent. is by no means a high one when it is taken into account that all such cases must be severe ones. And the figure 57·1 per cent. is not great considering that the average loss of blood per case was 41 oz.

This table should be compared with the figures to follow, which represent the total number of typhoid cases in the hospital in years 1906–1910 with the percentage of deaths.

TABLE II.—*Total Number of Typhoid Cases in Monsall Fever Hospital, 1906–10.*

Year.	Cases.	Percentage of deaths.
1906	243	18·1
1907	146	10·2
1908	201	16·8
1909	236	16·9
1910	237	16·3

Average percentage of deaths = 15·6.

The following figures no doubt give a truer idea of the death-rate in hæmorrhage cases.

Of a total of 16 deaths in the first part of Table I. (10 oz. and under) 8 were due to perforation of the intestine. If these 8 cases are eliminated there now remain 8 deaths in 74 cases, giving a percentage of 10·8, which is extremely low. In the other part of the same table (over 10 oz.) 14 of the 24 patients died within 24 hours, thereby not allowing time for the increased formation of agglutinins to take effect. This leaves 10 fatal cases out of 28, giving a percentage of 35·7.

These statistics worked out for the past five years, and thus dealing with a large number of cases, must represent fairly accurately the true state of affairs, and it may be taken for granted that loss of blood in typhoid fever, especially in quantities of 10 ounces and under, is beneficial, and the good done more often than not outweighs the severity of the disease on the other side of the balance.

Nothnagel[4] gives the following statistics of hæmorrhage cases. From 20 to 30 per cent. of those attacked die. Greissinger placed the figure at 31·2 per cent., Liebermeister at 38·6 per cent., and Homolle at 43·3 per cent. Curschmann, the author of the volume on Typhoid and Typhus, gives the figure 38·2 per cent. for Leipsic. For Hamburg he gives 20·9 per cent. in 1886, and as low as 11·6 per cent. in 1887. He also states that he himself has observed 50 successive cases where two deaths only occurred. Graves[5] and Trousseau[6] take the view that hæmorrhage is not a serious but rather a favourable occurrence. The latter supports his opinion by quoting a large number of cases.

The present investigations have been carried out for a period of about a year. As large a number of cases as possible have been investigated so as to include the maximum number of cases of intestinal hæmorrhage. The method adopted was as follows. As a rule a sample of blood was taken from the patient's finger soon after admission in a small sterile glass tube, which was immediately sealed. The microscopic method was used, as it proved to be a convenient and reliable one. The serum was separated from the blood by centrifugalisation, and measured out on to a clean slide by means of a small sterilised platinum loop (Delépine's method) according to the proportion required. A 15 hours old broth culture was used for each observation, and quantities measured in loopfuls as before. The dilutions were made with ordinary sterile peptonised broth, and the same means of measuring it adopted. When the required dilution was obtained a loopful of the mixture of serum, culture, and diluent was placed on a sterile cover-slip and examined under the microscope as a hanging drop preparation. Various dilutions were tried in each case until a point was reached such that *no clumping whatever* took place in half-an-hour. These points of *no clumping* with minimum dilution are the ones registered on the affixed charts, of which two only are here reproduced through lack of space. (Charts III. and IV.) The bacilli in the central part of the drop are the ones to observe, as there is always a certain amount of accumulation of bacilli at the edges which must not be taken into account. Each separate dilution is, of course, a fresh experiment on a separate slide. The same strain of typhoid bacilli was used in the observations on the same case, so as to exhibit uniformity in agglutination, and, moreover, the culture on agar from which the broth cultures were made was as near as possible a month old. It should be noted here that newly isolated typhoid bacilli and also those which have been in use for six months or more lose their power of clumping. Samples of blood were examined every other day, and although only 14 cases had hæmorrhage, a large number of cases were under observation the whole time; it is obvious, therefore, that a great amount of work has been done which does not appear in this paper.

It is impossible to tell whether any particular case is likely to have hæmorrhage or not. From the notes made curves of agglutination were drawn and two of them are here given. The cases are briefly described with a few remarks on each. A copy of the temperature chart is included in the two illustrations.

CHART 3.

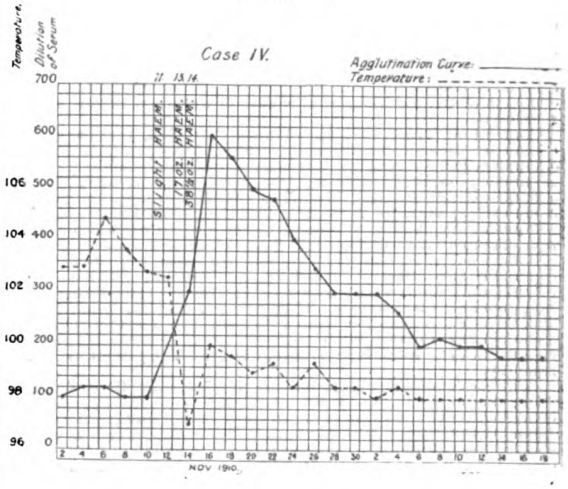
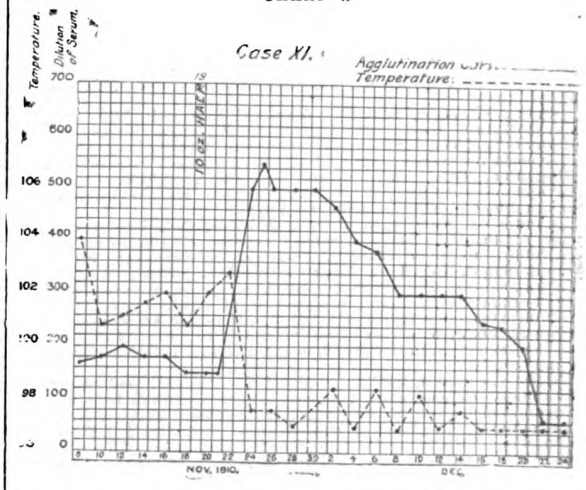


CHART 4.



In conclusion, these cases prove that intestinal hæmorrhage gives rise to an increased formation of agglutinins in the blood lasting for a short time, which may help to tide the patient safely over a dangerous period. As a result of these investigations it is recommended that, in many toxic

[4] Nothnagel's Encyclopædia of Practical Medicine, Typhoid and Typhus Fevers, by Dr. H. Curschmann, p. 224.
[5] Clinical Lectures, 1848, vol. i.
[6] Clinical Medicine, translated by Kunzmann, vol. i, p. 238.

cases of typhoid fever, and more especially in those in which the blood gives a poor agglutination reaction, phlebotomy to the extent of about 10 oz. (according to the physical condition of the patient) be tried as a treatment. It would in all probability give excellent results in many cases, as it would be without the accompanying dangers of intestinal hæmorrhage.

A Few Notes on the Cases of Hæmorrhage investigated.

CASE 1.—A male, aged 20, admitted April 20th, 1910—tenth day of disease. General condition fair; tongue dry and furred; abdomen, no pain, but tenderness on palpation; spleen enlarged; heart-sounds normal; bronchitis present; and a large number of rose spots discernible. Hæmorrhage: April 12th, 6 oz.; 13th, 2 oz.; May 20th, 6 oz.

On May 11th there was a relapse and an accompanying rise of temperature. The temperature was down on May 20th and remained so until the discharge of the patient at the end of June. A good recovery resulted. The curve of agglutination first shows a slight rise and fall before the loss of blood. After this a sharp rise and a very gradual fall, followed by a big sharp rise and again by a more gradual fall. After the second rise the temperature shows a continual fall. Dilution before hæmorrhage, 1 in 250; after hæmorrhage it rose to 1 in 1700.

CASE 2.—A male, age 29, admitted April 16th, 1910—twelfth day of disease. General condition fair; tongue furred; abdomen distended; spleen and liver enlarged; heart-sounds weak; bronchitis and rose spots present. Hæmorrhage: April 23rd, 10 oz. The curve shows a rise and a fall before hæmorrhage, after which comes a big sharp rise, with a fall of the temperature. Dilution before hæmorrhage, 1 in 150; after hæmorrhage, 1 in 550. The patient, who in the early part of the disease was in a very critical condition, made a very good recovery.

CASE 3.—A male, aged 19, admitted April 13th, 1910—fourteenth day of disease. General condition bad, tongue furred; abdomen slightly distended; spleen not enlarged; heart-sounds weak; lungs normal; and a few rose spots to be seen. Hæmorrhage: April 22nd, 8 oz.; 23rd, 30 oz.; 28th and May 1st, slight old hæmorrhage. Here again is seen the sharp rise 24 hours after the loss of blood. In this case there was *absolutely no agglutination* reaction whatever for 10 days before the hæmorrhage, in half an hour, with a dilution of 1 in 10, neither with typhoid bacilli, paratyphoid bacilli, nor B. coli communis. Dilution after hæmorrhage, 1 in 600. The patient's life was in the balance for 10 days before the bleeding, after which he made a slow but very good recovery.

CASE 4.—A female, aged 22, admitted Nov. 2nd, 1910—seventh day of disease. General condition bad; tongue furred and white; abdomen distended, painful, and tender; spleen enlarged; heart-sounds weak; respirations rapid; bronchitis; rose spots. Hæmorrhage: Nov. 11th, a little old hæmorrhage; 13th, 17 oz. old hæmorrhage and 6 oz. fresh hæmorrhage; 14th, 16, 7½, 4, 2, 2, and 1 oz. fresh hæmorrhage. This patient lost about 60 oz. of blood and yet made a good recovery. The temperature remained below 100° F. after hæmorrhage. (See Chart III.)

CASE 5.—A male, aged 21, admitted April 27th, 1910—twenty-fourth day of disease. General condition bad, patient delirious; tongue furred; abdomen normal; spleen not palpable; heart-sounds normal; lungs normal; no rose spots. Hæmorrhage: May 7th, 2 oz.; June 5th, 2 oz. The curve does not show any sharp rises, but there is evidently some reaction to even small losses of blood. Dilution before hæmorrhage, 1 in 150. After hæmorrhage, 1 in 280. The patient made a good recovery.

CASE 6.—A male, aged 34, admitted May 3rd, 1910. General condition poor; tongue dry, brown, and cracked; abdomen normal; spleen much enlarged; heart-sounds normal; lungs normal; numerous rose spots. Hæmorrhage: May 12th, 7 oz.; 15th, 5 oz.; 24th, 2 oz. A very substantial rise is here noted, a further short rise, and then a fall. Dilution before hæmorrhage, 1 in 400; after hæmorrhage, 1 in 1100. The patient was in a very bad condition, but made a good recovery.

CASE 7.—A male, aged 22, admitted May 10th, 1910—sixteenth day of disease. General condition very bad; tongue dry and brown; abdomen distended and tender; spleen not enlarged; heart-sounds weak; pulse dicrotic; bronchitis and rose spots. Hæmorrhage: May 12th, 30 oz., 13th, 25 oz. The patient died on May 13th, evidently from loss of blood. The agglutinin increase was, however, already apparent, and had the anæmia produced by the hæmorrhage been overcome the patient might have recovered. Dilution before hæmorrhage, 1 in 300; after hæmorrhage, 1 in 900.

CASE 8.—A male, aged 39. Admitted July 15th, 1910—twentieth day of disease. General condition very bad; tongue furred; abdomen distended; spleen not enlarged; heart-sounds weak; lungs—bronchitis and rapid respirations; rose spots. Hæmorrhage: July 16th, 12 oz.; 17th, 9 oz.; 18th, 1 oz.; 19th and 20th, slight old hæmorrhage. This patient died from perforation of the intestine. Dilution before hæmorrhage, 1 in 250; after hæmorrhage, 1 in 400.

CASE 9.—A male, aged 27, admitted July 2nd, 1910—seventeenth day of disease. General condition poor; tongue furred; spleen palpable; abdomen normal; heart-sounds weak; no rose spots. Hæmorrhage: July 13th, 14 oz; 14th, 18 oz. This patient died on July 21st, 1910. The reaction occurred as shown by dilutions below, but he did not seem to rally from the loss of blood. On admission and for ten days following this the agglutination reaction was negative to typhoid bacilli, paratyphoid bacilli, and B. coli communis. The loss of blood produced the formation of agglutinins. Dilution after hæmorrhage 1 in 500.

CASE 10.—A male, aged 20, admitted Nov. 15th, 1910—nineteenth day of disease. General condition poor; tongue dry and furred; abdomen, no distension; spleen very large; heart-sounds weak; bronchitis; a large number of rose spots. Hæmorrhage: Nov. 19th, 2 oz.; 27th, 5 oz. and clots; 28th, some old hæmorrhage; 30th, 1 oz. The relation of the curve of agglutination and the temperature curve should here be noted. There is a gradual fall of the latter with the rise of the former. Dilution before hæmorrhage, 1 in 50; after hæmorrhage, 1 in 500. The patient progressed extremely well.

CASE 11.—A male, aged 34, admitted Nov. 6th, 1910—ninth day of disease. General condition poor; tongue dry and furred; abdomen distended; spleen not enlarged; heart-sounds weak; lungs normal; no rose spots. Hæmorrhage: Nov. 21st, 11 oz.; 22nd, clots. Here, again, may be noted the rise of the agglutination curve and the fall in the temperature. The hæmorrhage occurred, as shown, during the natural fall of the agglutinin curve. The patient made a very good recovery. (See Chart IV.)

CASE 12.—A male, aged 51, admitted Dec. 22nd, 1910—twenty-sixth day of disease. General condition poor; tongue dirty; abdomen normal; spleen enlarged; heart-sounds weak; bronchitis; no rose spots. Hæmorrhage: Dec. 28th and 29th, and Jan. 2nd, 3rd, 6th, 7th, and 8th, small clots; 11th, 7 oz.; 14th, 5 oz; 17th, 10 oz.; 18th, 8 oz. The curves speak for themselves and show well the progressive recovery with the rise in the power of agglutination. Dilution before hæmorrhage, 1 in 50; after hæmorrhage, 1 in 650. The patient made a good recovery.

CASE 13.—A male, aged 29, admitted Nov. 17th, 1911—eighth day of disease. General condition fair; tongue clean and moist; abdomen, no distension; spleen easily palpable; heart-sounds normal; lungs normal; no rose spots. Hæmorrhage: Nov. 26th, clots; 25th, 8 oz. There was a big sharp rise after the 8 oz. and then a gradual fall. Dilution before hæmorrhage, 1 in 50; after hæmorrhage, 1 in 540. The temperature commenced to come down after the hæmorrhage. The patient recovered.

CASE 14.—A male, aged 20, admitted Feb. 14th, 1911—fifteenth day of disease. General condition fair, wanders at times; tongue dry; abdomen normal; spleen not enlarged; heart sounds weak; pulse dicrotic; bronchitis; no rose spots; deafness. Hæmorrhage: Feb. 18th, 8 oz.; 19th, 5 oz.; 21st, clots; 23rd, slight hæmorrhage; 24th, 2 oz.; 25th, clots; 26th, slight hæmorrhage. In the chart of this case rises and falls are observed after the first hæmorrhages, on new ones occurring. Dilution before hæmorrhage, 1 in 100; after hæmorrhage, 1 in 650. The patient was in excellent health when discharged.

Manchester.

ACUTE MIDDLE-EAR AND MASTOID INFLAMMATIONS:

THE RELATIONS OF ACTIVE AUTO-INTOXICATIONS.[1]

BY SARGENT F. SNOW, M.D.,

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IN the study of a diseased condition we are doubly armed if we have a clear conception of its determining cause. *Knowing* the determining cause and *seeing* easily the local manifestation puts effective weapons in our hands, so that we may attack the trouble from two ways. A double leverage like this is very valuable when we have under treatment acute affections that are liable to develop and extend into vital regions.

Acute middle-ear and mastoid inflammations are well within the list of diseases that call for serious thought, and a suggestion or plan of treatment that will give us increased power over these conditions I am sure will be welcomed by all.

For years specialists have studied and discussed the local manifestations of mastoiditis and their calls for relief, to the end that we now have splendidly developed and effective plans for local treatment. In fact, mastoid operative technique is so perfected by experienced operators that but little concern need be felt for their cases, and perhaps it matters little with these operators whether the etiology of the trouble is considered or not—the patient is quite sure of ultimate recovery from the blood-letting and good drainage they obtain.

The question I would put forward now is whether we cannot modify the danger and cut short the duration of the trouble by working at both the cause and the effect—in other words, working from both ends towards the middle, treating the fundamental cause of the inflammation as vigorously as we treat its results.

Previous to 1909 I was content to treat my acute mastoid cases locally, not giving much attention to the constitutional state, except perhaps a perfunctory order for a cathartic at the beginning of treatment. A closer study of late into the causes of inflammation of the head membranes has given me a different view-point, and I am happy now in the thought that I am much better equipped for a battle against these inflammations.

The whole question of local congestion revolves around, and rests upon, the state of the glandular activities. If the antibodies, nature's army of opsonins, are in normal quantities and in normal activity they fight down and keep under subjection bacteria that are always ready somewhere in our economy for pernicious development. A basic idea in medical philosophy of long ago was that nature provided man with defensive agencies to combat disease. Sir Almroth Wright's development of the opsonic theory and his research

[1] A paper read before the American Otological Society at the Forty-fourth Annual Meeting, Atlantic City, New Jersey, June 26th and 27th, 1911.

showing that the blood serum contains protective substances that act upon pathogenic bacteria add further proof. Metchnikoff has made plain the importance of the protective body cells against micro-parasites. The researches of Ehrlich, Brieger, and others have shown the relations between antigens and antibodies. Hektoen of Chicago[2] locates the probable formation of antibodies as in the spleen and other lymphoid structures, all showing that medical science is rapidly unfolding important truths.

The presence of bacteria *per se* is not sufficient to cause acute inflammations. The soil surrounding them must be favourable to their propagation; the cellular structures must be so modified in functional activity as to be no longer able to keep the pernicious bacteria under subjection.

It is well known that various bacteria may be present in the tympanic cavity without exciting inflammation until the conditions of the secretions and tissues are favourable to their rapid propagation. Those conditions favourable to the rapid propagation of dormant but vicious bacteria are, in my opinion, induced by an active auto-intoxication or crisis of elimination. Membrane congestions, in the author's opinion, with few exceptions, are practically autotoxic expressions; these autotoxic expressions come with more or less periodic regularity, and any organ or sinus covered or lined with a membrane is in danger.

Closer observations on acute pharyngeal, nasal sinus, middle-ear and mastoid inflammations astound me at the invariable relation evident between those inflammations and an active autotoxic state of the system. Frequently we find that there have been weekly evidences that they were self-poisoned—evidences made plain by digestive disturbances or recurring head colds.

Each case may not show all the symptoms of this etiological factor, but the skilled observer will detect some of them. The local signs of auto-intoxication depend largely upon the individual. Sometimes the complexion is perfect, but the eyes or posterior third of the tongue will give the evidences. Not everyone will show a tongue coated to the tip, but he will show some of the other well-marked principal symptoms. By drawing down the lids of the eye his conjunctiva will be found of a yellowish cast, or his skin may be grey or ashen, his breath foul, or his tongue dry and reddened—all proving that the patient's system, from some cause or other, has accumulated a large load of enterotoxins. This load of poisons may be the result of several months of inactivity, constipation, and over-eating. It may be the result of recent dietary excesses, or from overstrain and exhaustion, causing poor action of the liver and digestive functions. Whatever the source, nature demands relief from the stored-up toxins.

Auto-intoxication has a multiplicity of causes, each one leading up to a time when the system can no longer tolerate its load of poisonous substances. The different organs and membranes of the body are forced to do, and will do, double eliminative work until some organ fails or flags in its function; then we have an acute inflammation in some part of the body from the faulty metabolism—an autotoxic crisis. This is the time when the cellular structures are so weak in their functional activity that germs are able to multiply with impunity.

Should the tonsils, accessory sinuses, or tympanic cavities be harbouring staphylococci, streptococci, or any variety of bacteria, these vicious trouble-producers are apt to be soon multiplying at a rapid rate, opposed by only a few weakened attenuated antibodies. The term "attenuated antibodies" is chosen advisedly, because for days, perhaps weeks, the blood secretions and tissues of the patient have been getting so surcharged with poisons absorbed from his own intestinal tract that his army of fighting antibodies, usually capable, have lost their strength in their efforts against his own auto-intoxication. He then becomes a prey to diseases from bacteria originating outside his body, some fulminating, acute, inflammatory process of varying virulency.

It seems to be largely an accident as to where this inflammation shall be located—determined, I assume, by the place in the body where vicious bacteria are most numerous, or causes for local congestion are most prominent. Should the Eustachian tube be closed by an autotoxic cold, should the nasal accessory sinuses be shut off from ventilation and drainage by a congestion of the nose, there is then just the condition proper for rapid development and suppurative processes with attendant consequences. When we see a marked autotoxic appearance in our patients we may expect soon an acute inflammation of some degree in some part of the body. According to Coombe,[3] it seems to depend upon the individual predisposition which organ or part will suffer. He says:—

> In one it will be the nervous system, in another the lungs, in a third the heart, &c. The gradual accumulation of these poisons in the organism will, at variable intervals, determine crises of elimination, according to the nature of the sufferer; at times a febrile access, at others a cutaneous outbreak, or an intestinal discharge; all of which leaves the patient weakened, but otherwise improved for a certain length of time, until a re-accumulation reproduces the same symptoms at necessarily varying intervals.

Let no mistake be made from this paper and the author construed as meaning that, as a rule, local surgical measures are contra-indicated. In fact, in acute mastoiditis surgical measures are indicated in nearly all the cases that reach the ear specialist. It does not follow, though, that the external mastoid operation will have to be performed in all cases showing tenderness and swelling over the mastoid region. Experience has shown that a very large percentage of such cases will recover with the drainage obtained by a free incision of the tympanic membrane, attic folds, and periosteum of the superior canal wall. The kind of operation and the amount of drainage necessary to obtain will depend largely upon the exigencies of the case. Acute middle-ear and mastoid inflammations are clearly of a dangerous, active, fulminating order, and the bacteria present are apt to be of such a virulent nature that constitutional measures alone are not safe to rely upon.

A point that the author would make in this paper is that there are certain alteratives that can cause the blood to become bacteriolytic; certain medicines that seem to act as antigens and induce the formation of more antibodies, or at least rehabilitate them with more antitoxic power. Any substance capable of inciting the formation of antibodies is an antigen. Mercury, iodine, the adrenal extractives, &c., seem to be in this class, and are hopeful adjuncts in the twentieth century fight against disease. Vaccine therapy also holds out some hope, but the indications are not very encouraging in acute mastoid troubles. The author relies at present most upon mercury by the mouth in some form as a remedial agent.

Authorities seem to agree that antitoxic elements are produced in the lymphoid structures of the body, and also that mercury is our most efficient medicinal stimulant of systemic functions. Mercury, then, can very properly be called an antigen, and clinical experiences of my own would seem to prove that it surely has antigenic properties. Properly given, it appears to act as an antigen, stimulating the formation of antibodies to ward off and subdue disease.

As time develops, it is probable that our knowledge as to how to use these alteratives will improve. At present, I find myself prescribing calomel in 1/10 gr. doses, frequently repeated until a grain or a grain and a half have been given. Then after making sure that the bowels are sufficiently active, it is followed by a dose of castor oil or salines. This plan is repeated in two days, and sometimes the very next day if the first has not been satisfactory, and it is continued every second day until active symptoms are subsiding. It is possible that smaller doses, more frequently repeated, would be better for antigenic action. During convalescence, either following the internal or external mastoid operation, I prescribe calomel in good dosage at least every five days, not for its cathartic action alone, but for its double action as an intestinal cleanser, glandular stimulant, and corrective for the whole system.

Since adopting this more vigorous plan of constitutional treatment, and attacking the cause of acute mastoiditis as promptly and thoroughly as I do the effect, I find that recovery is made in at least one-half the time and with one-third the effort, compared with what obtained under my former plan of using practically only local treatment.

Syracuse, N.Y.

[2] Transactions of the last Congress of American Physicians and Surgeons, p. 10.

[3] Auto-intoxication, p. 128.

CHILDREN'S HOME AT EXETER.—The Exeter board of guardians has submitted for the approval of the Local Government Board plans for the erection of a children's home to accommodate 74 children (30 girls and 44 boys) at an estimated cost of £6500.

THE OPHTHALMO-REACTION OF CALMETTE IN THE EARLY DIAGNOSIS OF PHTHISIS.

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WHILE resident medical officer at the Royal Hospital for Diseases of the Chest I had the opportunity of studying the effects of Calmette's reaction on patients exhibiting various stages of pulmonary tuberculosis. I think it may be of some interest to bring these cases before the profession.

The solution of tuberculin which was employed consisted of glycerine-free desiccated tuberculin of strength 0·1 per cent. prepared from Koch's old tuberculin manufactured by Farbwerke vorm Meister Lucius and Brüning. One to two drops of this solution are dropped into one eye of the patient near the inner canthus. In the meanwhile the lower lid is drawn down by means of the finger, which is kept there for a minute or so to ensure absorption; otherwise it is inclined to be squeezed out, as the patient naturally closes his eye. In *all* cases before the drop is inserted the eye should be carefully examined for any sign of disease, old-standing or recent, in order to avoid any risk of serious inflammation. Unless the eye is to all appearances free from disease no tuberculin should be placed in it.

The resulting inflammation differs in different individuals, both in time of onset and in the intensity, irrespective of the amount of the involvement of the lungs. In my experience some cases have shown definite reaction as early as three hours after the application of the test; on the other hand, some patients have not shown any reaction until as late as 36 to 40 hours after the test was applied, but in the majority of cases the maximum reaction is obtained in about 12 hours.

The reaction produced may consist of slight conjunctival injection, of marked injection of the whole conjunctiva, both ocular and palpebral, or of marked injection with a mucopurulent discharge, and the patient experiences the usual symptoms of simple conjunctivitis, which entirely clears up in the course of three or four days. In one case, in which a stronger solution was used (1 per cent.), there was not only a marked conjunctival reaction but also an inflammatory condition of the surrounding tissues closely resembling that produced by erysipelas. As a rule, no treatment is required. If the patient complained much of the irritability of his eye the usual treatment for conjunctivitis was employed, but in my experience this was rarely required.

Some observers have recorded bilateral results; none of our cases have shown this. If Calmette's test has been applied to the eye of a patient with pulmonary tuberculosis and several weeks afterwards Koch's old tuberculin has been injected in the usual manner with a positive result, the same eye in some cases has been relit up by a secondary inflammatory reaction.

In some cases of early involvement of the lung no *physical signs whatsoever were discovered*, and the disease was only suspected on a history of hæmoptysis. These are the cases which I should like to emphasise, and in which Calmette's reaction came to our aid and proved to be of the greatest value, the diagnosis being confirmed later by the appearance of crepitations at one or other apex. Thus a positive reaction may be said to carry great weight, and the patient would be wisely treated from the first as if physical signs had existed. One often sees a patient who complains of "bringing up blood," and in whom *no* physical signs can be found; hence it is difficult to say where the blood is coming from, but, as I have just stated, if Calmette's test is positive, in such a case it throws a grave suspicion on one or other lung.

A negative reaction by no means excludes phthisis, as the test may fail in some early cases, but more especially in old-standing ones, and those who are moribund. If Calmette's test proves negative, and pulmonary tuberculosis is suspected, then a second application has been made in from three to four weeks' time; on this occasion, however, to the other eye. If a reaction now takes place, in my opinion the patient is undoubtedly tubercular, but this was found only to be required in a few cases. I have seen two cases in which a third application was necessary before a positive reaction was obtained. Patients who have had the test applied have been seen some considerable time after, even as late as a year, and I have *never* had a case which showed any bad results whatever.

Summary.—Out of 225 cases in which Calmette's reaction has been tried, 100 were cases of pulmonary tuberculosis, which all reacted with the exception of seven. These seven were undoubted phthisis, the sputum containing tubercle bacilli. Five of these seven were in an advanced condition; two of these five gave a reaction to a subcutaneous injection of Koch's old tuberculin. The remaining two cases were early, and, as I have stated above, their sputum contained tubercle bacilli.

Of the remaining 125 cases which were not phthisis, and so did not give the test, 25 were cardiac cases of all varieties; 31 were simple bronchitis which cleared up; 20 were chronic bronchitis and emphysema; 23 were of various kinds—e.g., gastric ulcer, dyspepsia, enteric fever, empyemata, neuroses; 8 were bronchiectases; 6 were simple pleuritic effusion of pneumococcal origin; and 12 were cases of lobar pneumonia all of which resolved. In all these 125 cases tubercle bacilli, although repeatedly looked for, were found to be absent from the sputum, and also from the six cases of simple pleuritic effusion.

Conclusions.—1. A negative result by no means excluded pulmonary tuberculosis. Some very advanced cases failed to give a reaction. 2. I have *never* obtained a positive result except in true cases. 3. I never saw any bad results whatever from the use of the test as regards the eye. 4. If a patient in a suspicious case fails to give a reaction, then the test should be applied on three different occasions, with an interval between each application of from three to four weeks.

I am greatly indebted to the physicians of the hospital for their permission to publish these results. My thanks are also due to my colleague, Dr. A. J. B. Leckie, the house physician, for his kind assistance in compiling the cases.

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RESEARCHES IN EPILEPSY.

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THE following investigations into the pathology of epilepsy were undertaken in connexion with the Maghull Epileptic Colony. They are varied in character and do not pretend to have followed any special scheme of line or study, though the majority of them have originated from an idea that the conditions in the intestinal tract have an influence upon the disease. Several are in the nature of repeat experiments upon the work of previous workers. A few have not been attempted before, as far as can be discovered, in connexion with epilepsy.

The work done falls into several categories, and a classification at the outset may tend to simplify subsequent description.

I. *Brain.* 1. Attempts to produce an epileptic animal. 2. The histology of an epileptic brain.
II. *Blood.* 1. The agglutination reaction of epileptic blood with bacillus coli. 2. The opsonic index of epileptic blood for bacillus coli.
III. *Urine.* 1. The urea-ammonia ratio. 2. The evidences of intestinal putrefaction that are afforded by chemical examination of the urine. 3. Correlation of these evidences with the actual putrefactive organisms present in epileptic fæces.
IV. *Fæces.* 1. A general bacteriological survey of the fæces of eight epileptics. 2. A special bacteriological survey of the fæces of an early case.

I. *Researches on the Brain.*

1. *Attempts to produce an epileptic animal.*—It is a noticeable feature of epileptic brains, always when they are seen during life upon the operating table and generally at a post-mortem examination immediately after death, that they present a markedly œdematous appearance to the eye. Closer examination reveals that the œdema lies under the dura mater, in the arachnoid and pia mater, the immediate coverings of the brain. The fluid lies along the vessels and in the interstices of the arachnoid tissue. When extensive, it forms a single sheet of fluid, more or less divided into little drops and ponds by the

divisions of fine fibrous tissue springing from the arachnoid and pia mater. Neither chemical nor bacteriological examination of this œdema fluid by any known method has afforded the discovery of the reason for its presence in epilepsy. It consists of normal cerebro-spinal fluid, and has all the properties and characters of that fluid. Some observers state that it contains more albuminous matter than is normal, and contend that this points to the fluid being the result of an inflammatory process.

It is possible that the mere presence of this fluid might conduce to a condition of the cortical nerve cells of the brain, which would make them peculiarly sensitive and prone to nerve discharges, or from their hypersensitiveness more exuberant in their reaction to stimuli. It was with a view to decide upon the importance of the mere presence of this fluid that the following experiments were undertaken. First, to produce this œdema experimentally in animals. Secondly, to determine whether this œdema, thus produced, was capable of producing epileptic convulsions.

It was found impossible to produce *permanent* œdema of the membranes by any method of fluid injection, and hence the answer to the second question still remains undecided. Altogether 37 rabbits were trephined, various fluids containing albumin were injected under the membranes in varying amount, and the bone was replaced. Natural albuminous fluids were used in the hope that they would be slowly absorbed, and that the artificial œdema produced would last long enough to produce effects. Blood sera and epileptic cerebro-spinal fluid were employed. Pig's serum saturated with common salt was used in the hope of attracting fluid from the vessels and increasing the œdema. Indol, which has always been looked upon as a convulsant, and which is normally manufactured in the intestinal canal by the bacillus coli, was also injected in a very dilute solution, which also contained albumin. Some observers have remarked that the stools of epileptics contain a toxic body of nature unknown, which has convulsant effects when injected into animals. An extract of epileptic fæces was therefore sterilised and injected into the brain membranes of three rabbits which all died, probably poisoned, but even they showed no convulsive seizures.

Table I. gives the results in tabular form:—

TABLE I.

—	Fluid used for injection.	Died operation.	Died afterwards.	Fits.	Recovered.
18	Pig's serum, 0·5, 1·0, 2·0 c.c.	3	2	0	13
5	Pig's serum saturated with NaCl.	0	2	0	3
3	Epileptic cerebro-spinal fluid.	0	0	0	3
8	Solution of indol in peptone water.	1	1	0	6
3	A sterilised extract of epileptic fæces.	2	1	0	0
37	—	6	6	0	25

It was found that 1 c.c. was the largest amount that could with safety be injected at one time, and with this amount great care had to be taken to carry out the injection very slowly, otherwise the animal died almost at once from cessation of respiration. Of the animals, six in number, which died after the operation, two succumbed to septic meningitis, one from a hæmorrhage into the brain through accidental puncture of a vessel, and three from symptoms of pressure from too large a dose. One rabbit injected with normal pig's serum had a spasm of some sort early next morning, but recovered entirely and showed no more symptoms.

Since these experiments were undertaken, six rabbits have been injected with different fluids to discover if it were possible to project the fluid along the vessels into the spaces in such a way that it might be retained. Ten other rabbits which had died from other causes were trephined post mortem, and attempts made to produce an œdema of the arachnoid and pia mater spaces. All these attempts ended in failure. It was found impossible to inject the fluid in any way that it might be retained.

2. *Histology of the epileptic brain.* (*a*) *Histology of the choroid plexuses.*—With this œdematous condition of the membranes the epileptic brain frequently presents an excess of fluid in the ventricles, which are sometimes distended and distorted out of all shape and size by the liquid they contain. Since this liquid originates in the secretory cells of the choroid plexuses, which lie in the lateral ventricles, it was considered worth while to examine these histologically to discover if any abnormality might be present accounting for this hypersecretion or transudation. In all, the choroid plexuses of seven epileptic brains were removed post mortem and placed in fixing fluid. Sections were made of various portions, which were compared with similar sections made from the choroid plexuses of normal brains. No abnormalities of structures were found.

(*b*) *Histology of the epileptic brain cortex.*—The histology of the cortical cells has been investigated by innumerable observers, and, except in very chronic cases, very little has been remarked. Turner examined the cortex for the purpose of investigating the conditions of the blood-vessels. He was able to discover minute clots in the arterioles, which he considered to be the cause of fits by the irritation of their presence. Nine epileptic brains have been sectionised and various parts of the cortex suitably stained. No clots such as Turner described have been found.

II. *Researches on the Blood.*

1. *The agglutination of B. coli communis.*—The toxic theory of epilepsy is one that has obtained great support in past times, and the favourite origin of the manufacture of the toxin has been placed in the intestinal canal. Very many and very various have been the attempts to discover a specific toxic body in epilepsy, and the minds of the greatest number of observers have been directed towards an investigation of the intestinal contents of epileptic patients. The bacillus coli has fallen under suspicion as the producer of nerve toxins, and it was for this reason that indol, which is formed by the B. coli from albuminous materials, was employed in some of the experiments on rabbits.

In all, the sera of 24 epileptics and six normal individuals were tested against four strains of B. coli communis. One strain came from a healthy stool, two were isolated from epileptics at the Colony, and the last was a laboratory specimen. Dilutions were carried up to 1 in 100, and were made 1 : 5, 1 : 10, 1 : 20, 1 : 25, 1 : 50, and 1 : 100. The first three dilutions were made first, and if any agglutination occurred in the 1 : 20 dilution within two hours the further dilutions were then proceeded with.

In three of the controls some slight agglutination occurred in two hours in the 1 : 20 dilution; in four of the epileptic sera a little more than a tendency to agglutinate was observable in the same period. In none of the 30 sera tested did agglutination take place in higher dilution than 1 : 20 in two hours.

2. *The opsonic index against B. coli.*—Fifteen epileptic sera were examined with the laboratory strain and against one strain of B. coli recovered from an epileptic stool. The control sera, single on one occasion only, plural in all others, were usually formed of a pool of three normal healthy sera. The results of this investigation were quite negative. The indices varied within normal limits, and on the whole the variations amongst the 15 epileptic sera were not so wide as between the individual sera of six healthy persons which were examined against one another.

III. *Researches on the Urine.*

1. *The urea-ammonia ratio* is of little value in itself as evidence of liver activity. It was used in this case, probably mistakenly, to gain some idea of the urea production. Urea is formed in greater part by the re-combination effected by the hepatic cells of ammonia and carbonic oxide, in the form in which it occurs in venous blood (ammonia carbamate). If the liver loses this power to any extent less urea will be manufactured, and ammonia in some form will escape into the blood. Too much ammonia or too little carbonic oxide, either of which conditions might occur through an error in metabolism, would lead to the same result. The alkalinity of the blood would be affected in consequence, though its restoration to normal would take place rapidly by the automatic readjustment of the phosphates. But such an alteration in reaction, though slight and transient, might be capable of affecting sensitive nerve-cells. The gravity of such an altered condition is heightened if the powerful

convulsant effects that ammonia can produce when injected experimentally into the circulation be remembered.

So far only six cases have been examined, but these have been investigated for some months. The 24 hours urine was collected in a covered receptacle containing some thymol to prevent decomposition. The urea was estimated in a Gordon-Little's ureometer. The ammonia determination was performed by three methods, and finally that of Schlössing was adopted as it was the simplest, and if attention were paid to uniformity of the surface-area of urine exposed the error as estimated by the control methods was very small.

It was found that the urea-ammonia ratio varied very much; at times it reached 100 or even more; at its lowest it became as low as ten, in one case 9·3. These numbers were obtained as per following example:—

$$\frac{\text{Amount of urea passed in 24 hours grammes}}{\text{Amount } NH_3 \text{ passed in 24 hours grammes}} = \frac{41{\cdot}77}{1{\cdot}081} = 38$$

The fits appear to have some correspondence with a low ratio, although occasionally there is a fit when a high ratio occurs. For example, the ratio was obtained daily in Case 1; it runs:—

CASE 1.—9·33 (1 fit), 12, 36, 82, 28 (1 fit), 38, 55 (1 fit).
CASE 2.—97 (1 fit), 10 (1 fit), 18, 154, 37 (1 fit), 36, 33, 35.
CASE 3.—134, 45·2, 24, 10 (2 fits), 18 (2 fits), 36, 45 (1 fit), 29 (1 fit).
CASE 4.—17 (1 fit), 48, 30, 28 (1 fit), 83.
CASE 5.—40, 40, 40, 40, 28 (1 fit).

These are weeks taken at random from the charts of daily investigations and speak for themselves. A larger series is required before anything definite may be said.

An attempt was made to obtain the first urine passed after a fit. This was difficult, for the patient so frequently micturated unconsciously. But eight specimens were eventually obtained from different epileptics and passed not more than four hours after the attack. The urea-ammonia ratio of these eight specimens runs: 7·6, 12, 5, 5 7, 3 0, 12, 38, and 15; low in every case.

2. *Evidences of intestinal putrefaction.*—This was investigated by means of Ehrlich's test. A solution of para-amido-benz-aldehyde in hydrochloric acid is added to urine, using 10 c.c. of urine and 1 c.c. of the test solution for uniformity. A deep-red cherry colour indicates putrefaction, and its degree is said to be measured by the depth of colour produced. Herter has found a correspondence between the amount of skatol in the fæces and the intensity of this reaction. The test was performed on each urine in the following way. Ten cubic centimetres of urine were measured into each of three test tubes, and 1 c.c. of the Ehrlich solution added. One tube was placed aside, the second was gently warmed, and the third rapidly raised to boiling-point.

The results were tabulated in four classes, indicating the production of colour in the cold, on gentle heat, on boiling, or only after boiling and standing some time. Twelve control urines of healthy individuals were first investigated. Of these, two only gave a reaction in the cold at once, seven a reaction on gentle heat being applied, and three a slight reaction on or after boiling. Twenty-three epileptic urines were examined. No urine gave an immediate reaction in the cold. Eight gave a reaction in the cold after standing from varying periods from half an hour to two hours; five gave a colour only after gentle heat. Four required to be boiled to obtain the test; the remaining six required to be boiled and allowed to stand for some hours before a definite cherry tinge appeared.

3. *Correlation of urinary and intestinal evidences.*—Many theories of epilepsy accuse the alimentary tract as the source of the disease. There is no doubt that intestinal irritation frequently precipitates an attack, and, on the other hand, that attention to bowel functions and diet has always some effect, and often a pronounced ameliorating influence, upon the number of attacks. The common cause of intestinal irritation proceeds from constipation and its consequences, and is due to the putrefactive products of retained excreta. The products chemically fall into a class of substances of which indol, phenol, and skatol are good examples. The body in protecting itself combines these bodies with sulphur to form sulphates, in which form they are comparatively harmless. Thus indol is converted into indoxyl-sulphate, and can be recognised as indican in the urine with its well-known blue colour. When thus converted the bodies are excreted by way of the urine and can there be estimated. Other sulphates appear normally in the urine, such simple salts as sodium and potassium sulphate. In the normal body the complex sulphates comprise a tenth of the total sulphates excreted.

In Table II. the total number of putrefactive organisms has been estimated in a gramme of fæces, and in another column the ratio of complex to total sulphates in the urine of the 24 hours previous to the motion. The putrefactive organisms are here estimated as B. aerogenes capsulatus, which is the anaerobic inhabitant of the lower intestine capable of attacking proteid material directly.

TABLE II.

Total putrefactive organisms.	Sulphate ratio.	Total putrefactive organisms.	Sulphate ratio.
1. 1000, not 10,000	1 : 5·7	5. 10,000	1 : 15·6
2. 10,000	1 : 10·3	6. 1000	1 : 14·8
3. 100,000	1 : 5·3	7. 10,000	1 : 11·8
4. 10,000	1 : 12·6	8. 1000	1 : 10·3

Herter and Smith have tried to show that fits run parallel with the ethereal sulphates of the urine. According to their investigations, the fit is preceded by a rise in the ratio, and this rise they suggest to be due to intestinal putrefaction. In the table above there seems to be no parallelism between the intestinal contents and the ethereal sulphates.

IV. *Researches on the Fæces.*

1. A complete bacteriological examination has been made in eight cases of epilepsy from Maghull. In each case as many various organisms as possible were isolated and tested upon various media—(1) to identify them; and (2) to examine their cultural and morphological characters. Special attention was paid—(1) to the strains of B. coli isolated; (2) to the numbers of putrefactive organisms present; (3) to the number of staphylococci; (4) to the number of streptococci; and (5) to the number of aerobic spore-bearing organisms.

All results were made comparable by the use of a routine method of dilution of the fæces. In each case a gramme of the stool was carefully weighed out and diluted with 99 c.c. of water, making a dilution of 1 in 100; 10 c.c. of this were transferred to another flask containing a further 90 c.c. of water, making a second dilution of 1 in 1000. This process was carried on until the final dilution was 1 in 100 million. 1 c.c. of this final dilution contained 100 millionth part of a gramme of fæces. 1 c.c. of each dilution was used for inoculating plates of neutral-red-lactose-agar, lactose-litmus-agar, gelatin, often ordinary agar. These were incubated aerobically and anaerobically, and the colonies were counted from day to day. Dilutions were also heated to 80° C. for 20 minutes to kill off all but spore-bearing bacilli, and milk tubes were inoculated from them.

To act as controls some 20 normal fæces have been examined in a similar fashion, so that comparisons might be made. It has been found impossible to adopt any standard of normality for healthy fæces. The variations that take place from day to day in the same individual and from one individual to another swing within wide limits. The only standard that appears to remain fairly fixed is relationship of the classes of organisms one to another.

The epileptic fæces examined have shown no striking points of divergence from the normal. The results of this work have been extremely disappointing, especially after the amount of time and labour that has been put into it.

2. *A special case.*—In May, 1909, a boy, aged 7, was seen, who suffered from *petit mal*. His history was as follows: He had always been a delicate child, and at the age of 3 years contracted a severe attack of gastro-enteritis, profuse diarrhœa with very offensive, slimy, and bloody stools. At this time he had a fit and remained unconscious for 24 hours. The fits recurred after the intestinal condition was relieved up to the age of 5, but they were few and far between. From May, 1907, to June, 1908, he had no fits, but they began again in this latter month. His mother noticed that his motions had become very offensive, and also that he cried out that he had pain in the abdomen before a fit came on.

Treatment with bromide had little effect. Grey powder gave no relief. His motions were examined bacteriologically and the condition was that of great diminution in the colon group of bacilli and a great rise in the putrefactive group. The stools were soft, gaseous, and extremely disagreeable to the nose. They were examined twice, and he was then taken into the Royal Southern Hospital, where he received lactic

acid bacilli in milk. The last two weeks he was in hospital he had no fits, and for a week after returning home he had none. The intestinal condition was entirely changed under the influence of suitable food, attention to the bowels, and the lactic acid bacilli. But the influence upon the fits was practically *nil*.

Conclusions.—It will be noticed that the results of these investigations are uniformly negative with one exception. There appears to be a relationship between the fit and a low urea-ammonia ratio.

Literature—1. Herter: Journal of Biological Chemistry, January, 1906. 2. Herter and Smith: New York Medical Journal, August and September, 1892. 3. Laplace: Semaine Médicale. 4. Turner, John: Brit. Med. Jour., March 3rd, 1906.

Liverpool.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF ACUTE ANTRUM OF HIGHMORE WITH EYE COMPLICATIONS.

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A WORKMAN was sent to me on June 30th of this year with the following history. Fourteen days prior to his visit to me he had a severe attack of influenza. On the day following the beginning of this illness he explained to me that he had very acute pain of a neuralgic character, confined to the left side of his face and head. Two days following the neuralgia he began to notice that the sight of the left eye was becoming dim, also that his sight was double; this latter feature be especially noticed on descending the stairs from his room. I found his condition as follows:—

The patient was a young man 22 years of age. From the position in which he sat, and the distortion of his face, it was evident that he suffered great pain. His left eye had a marked vertical squint, only the lower half of the cornea being visible. The pupil was dilated and sluggish to strong light, and it was under the circumstances difficult to estimate his vision accurately, but it appeared to be about 6/60. When I palpated between the eyeball and the inferior orbital wall there was a distinct swelling, irregular and firm, only slightly painful on pressure; there was also some œdema of the lower lid, which the patient explained was not so bad as it had been on the previous day. The fundus of the eye showed the edges of the optic disc blurred and the vessels distended and tortuous; I could not make out any difference in the level of the disc and the surrounding retina. With red and green glasses well-marked diplopia was shown, both horizontal and vertical in character, the vertical being the more marked.

The diagnosis rested, in my opinion, between tumour of the antrum and acute antrum. I punctured the antrum below the inferior turbinate and syringed out some pus with a very offensive smell. It appeared to me that the best thing under the circumstances was to make a good exploratory opening through the canine fossa. I did this and found nothing in the antrum except a small quantity of pus and some polypoidal mucous membrane. A gauze drain was inserted, and in a few days all symptoms disappeared.

West Hartlepool.

RUPTURE OF AN EMPYEMA INTO THE ŒSOPHAGUS.

BY WILLIAM A. BULLOUGH, M.SC., M.B., CH.B. VICT.

A GIRL, aged 16 months, was admitted to the Royal Albert Edward Infirmary and Dispensary, Wigan, on Feb. 8th, 1911. Her medical attendant had explored the chest and found pus. The child was in an extremely emaciated condition, and cried in a peculiar way that suggested extreme hunger. On exploring the left side of the chest some turbid fluid was withdrawn. A portion of rib was resected, but very little pus was found. The lung was contracted and although a number of adhesions were broken down, did not "come up" well. Next day she continually vomited the milk and other fluids which were got down her throat. At the first dressing it was noted that the discharge resembled curds of milk. Consequently the child was given a little milk to swallow, and thereupon a portion of it came through the wound. The quantity swallowed and the quantity coming through the wound were roughly measured and it was found that about half the milk escaped through the wound. On interrogating the parents it was elicited that the child had been continually vomiting her milk for a week prior to admission. We were of the opinion that it was a case of ruptured diverticulum of the œsophagus. However, the child died next day and we made a post-mortem examination.

Necropsy.—The left lung was contracted and firmly adherent to the posterior pleura. On opening the mediastinum a mass of adhesions was found between the œsophagus and the left pleura. An oval-shaped hole was found on the left side of the œsophagus about 3 inches above the diaphragmatic opening. The hole was three-quarters of an inch long and a quarter of an inch wide, the long axis being in the axis of the œsophagus. The edges of the hole looked as though it had existed for some little time, being nicely rounded off. No diverticulum was found.

The presumption is that an empyema had burst into the œsophagus, that the pus had been expectorated by the œsophagus and mouth, and that the child had died from starvation.

I am indebted to Dr. J. Blair for permission to record this case.

Wigan.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Large Fibro-cystic Tumour of the Perineum.—Specimens.

A MEETING of this section was held on Oct. 5th, Dr. AMAND J. M. ROUTH, the President, being in the chair.

Mr. J. D. MALCOLM showed specimens and photographs of a remarkable case in which a tumour measuring 37½ inches in horizontal circumference hung from a woman's buttock to the level of her knees. Her age was 30; she had one child, aged 11 years, and six years before admission to the Samaritan Free Hospital she was under the care of an experienced surgeon who found a lax cyst to the left of the vagina and another behind the uterus. It was thought that there was a double vagina, and an incision was made into the lower swelling, but no pus and very little fluid escaped. A year later another surgeon of large experience found three tumours, one in the abdomen, one protruding from the vagina, and one bulging the buttock. After that time the patient did not consult any medical man from July, 1906, until April, 1911, when the buttock tumour had attained the enormous dimensions above mentioned. The anus was dragged out of place, and the finger, when inserted into the rectum, did not pass upwards into the body but downwards into the external mass, which had an area of resonance on its upper surface corresponding to the position of the lower bowel. There were also a tumour projecting from the vagina and an ill-defined growth in the abdomen. The removal of the new growths was obviously a very formidable procedure, but as there was no hope of relief except by operation the patient was told that the treatment would be very dangerous, and she still was anxious to have it carried out. There was a tumour in front of the peritoneum below the umbilicus, another behind the uterus, a third 7½ in. long projecting from the vagina, and the enormous mass of the buttock tumour. These all united in the anterior part of the pelvis on the left side, and they were removed by combined abdominal and perineal incisions, with the exception of a small part in the pelvis. After much fluid had drained from them the parts removed weighed 39½ pounds. Three of the tumours were soft very œdematous solids; the large buttock growth was partly soft solid and partly cystic. The

solid part of this latter growth seemed to consist of an invasion of the pelvic floor, which was expanded over a mass of large cysts filled but not distended by clear yellowish fluid. The operation was a very severe one and the patient died half an hour after she was put to bed. The remaining part of the growth was removed after death. It had a diameter of not more than 1 inch. It was free from the hollow viscera, but it was firmly fixed to the fascia covering the muscles of the anterior lateral wall of the pelvis. It was easily separated from these muscles, and when it was removed the ascending ramus of the left pubic bone and the obturator vessels and nerve were fully exposed. It was conjectured chiefly from the relations at this part that the tumour developed from fascial tissue. The ureters were dilated to a diameter of half an inch, and the kidneys and their pelves were also enlarged.

In reply, Mr. MALCOLM stated that in the account of the case prepared for printing he had noted the unfortunate fact that this patient had not offered every facility for the consideration of her case to one of the surgeons whom she consulted in 1905 and 1906 or to some other surgeon.

MEDICAL SOCIETY OF LONDON.

The Society and the General Practitioner.

A MEETING of this society was held on Oct. 9th, Dr. J. MITCHELL BRUCE, the President, being in the chair.

Dr. MITCHELL BRUCE, in delivering the presidential address, asked, Was it in the interest of the society that the general practitioner who came to its meetings should be receptive only—should he not be communicative also? At the meetings the general practitioner was furnished with material which he could put to practical tests. Did he return with a report of those trials? The registrar of the society had estimated the proportion of papers presented, and he had found that whilst Fellows of the society in general practice constituted one-third of its members, only 1 communication in 15 came from them—indeed, but four papers had been read before the society by the general practitioner during the last ten years. The President pleaded for a more equal participation in the work of the meetings; he thought that great advantages would be secured to medicine and surgery if a larger share in the work of the society were taken by the family doctor. He was of opinion that not only were certain aspects of disease best studied and best understood by the general practitioner, but that in some of its relations disease could be sufficiently studied and described by him alone, for it was not a question of the individual as a competent observer, but it was a question of his opportunities for observation The President then stated some of the opportunities which, in his opinion, were especially enjoyed by the general practitioner of advancing the science of medicine and surgery.

Dr. LEONARD GUTHRIE read a paper on Recurrent Jaundice with Pyrexia, Splenomegaly, Anæmia, and Pigmentation of the Skin in a girl aged 11 years.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At the opening meeting of the thirtieth session of this society on Oct. 6th the in-coming President, Mr. W. McAdam Eccles, was inducted by the out-going President, Dr. Phineas S. Abraham. Mr. Eccles then presented Dr. Abraham with the "Keetley Medal," a medal in bronze founded in memory of the late Mr. C. B. Keetley, one of those who inaugurated the society in 1882. Mr. Eccles then read his presidential address on the Future of Surgery. After reviewing briefly some of the points which indicate the enormous advance that has been made in surgery during the past quarter of a century, Mr. Eccles showed that technical skill in operating was almost useless were it not that Lister had shown the way in which such skill need not be lost by the onset of sepsis. Even now heated debate may occur as to the precise methods for securing asepsis, but the one fact remains that the removal or exclusion from a wound of organisms is the essential to success. This it was that Lister taught the world. No nurse or dresser at the present day was fit to start the rudiments of surgical nursing or surgical practice unless she or he had grasped this fundamental point. Another circumstance which had led to the great advance of surgery, and would of necessity lead even more to its perfecting in the future, was the better training and higher skill of surgical nurses. Surgeons sometimes did not give due credit and praise for the assistance they received from good nurses. Many a case would succumb after the manipulations of the surgeon but for the watchful care of the nurse. Mr. Eccles said he was a strong upholder of a thorough training for nurses, and he believed that State registration must come, and that every nurse worthy of the name would be required to hold a certificate granted after examination subsequent to a three years' course in a hospital of not less than 100 beds with a resident medical officer; the future of surgery—if not of medicine—would demand it. While speaking of nursing, the question of surgical nursing homes or private surgical hospitals naturally came up. In the past these have not been what they might have been. In the future, if maintained for those who were able to afford them, they must improve with the advance of surgery. For the sake of the patient who submitted to the surgery of the future it was best that he should be removed from his home into better surroundings of cleanliness, light, air, and nursing. The ideal surgical nursing home for those who could afford to pay must be thoroughly good—not necessarily extravagant or ornate—furnished with what experience had shown to be desirable for success in operation and after-treatment. It would require to possess properly built and equipped theatres, after-treatment bedrooms, convalescent rooms and verandahs, lifts, bathrooms, an X ray and a pathological department, and sufficient ground around for a well-kept garden, and to be some distance from the centre of the town. This the surgery of the future would demand and have. For the middle-class patient also something better must be done, but he was not fully convinced as to what this should be. In the surgical wards of a large hospital a large proportion of the beds were filled by operation cases, and the surgeon in charge had his time and hands filled by operative work, and his teaching tended to become more and more on those diseases and injuries which required operative interference. Thus the surgeon was apt to neglect non-operative cases and the lessons to be learnt from them. The whole art and practice of surgery, in spite of its etymology, did not consist of operative manipulations, and it would be a serious thing for surgery if in the future its exponents did not remain versed in anatomical, pathological, and even purely medical knowledge. The general practitioner to-day was bound to be acquainted with much more of surgery than in the past, but he should not have his brain, as a student, loaded with the details of intricate operations. The day was approaching when the work and teaching in the out-patient rooms, wards, and theatres of the hospitals with medical schools would have to be revised and modelled on different lines if students were to be taught adequately. A number of conditions were making for increase of, and changes in, surgical practice as it affected the general practitioner. The multiplication of factories, the enormous amount of motor road traffic, and the provisions of the Compensation Act had greatly accentuated the importance of "accidents." The clauses of the National Insurance Bill were sadly wanting in any direct reference to the future of surgery. Operative treatment which would be needed for many thousands of persons was practically ignored. In fact, the Bill seemed to have been thought out on the lines of the medical and surgical practice of the middle of the last century, when potions and pills were the rule of the day. This neglect of the claims of surgery by public men could not do otherwise than lead the public to consider that surgery was of secondary importance. The enlightened general public would ere long demand that their medical attendant should be prepared to give no uncertain advice on surgical matters, and hence the great desirability of thoroughly practical teaching, dogmatic if necessary, but sound in fundamentals. The general practitioner was the medical man who after all was far more worthy of respect and honour than many a physician, surgeon, or specialist, but who perhaps but seldom receives his due meed of praise. It was to his acumen in diagnosis, to his promptness in realising the necessity for surgical interference, and to his ability to recognise when he should act or send for a surgeon, that to a very large extent the welfare of the patient and the future of surgery would

depend.—A vote of thanks to Mr. Eccles for his address was proposed by Mr. F. Swinford Edwards and seconded by Colonel E. M. Wilson, R.A.M.C., and carried with acclamation.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Oct. 6th, at which Dr. Leslie Durno, the new President, delivered an address on the Vagaries in Fashions of Treatment during the Past Quarter of a Century. He said that the birth of the science of biology was a great landmark in medical science and the foundation of gigantic changes in the fashions of treatment of disease. For from this dated the advent of scientific therapy and the ending of empiricism. Drugs were no longer the chief weapon in the management of disease, the great drawback being the frequent uncertainty of their action, the difficulty of estimating accurately their assumed effects, and that uncertain quantity—individual tolerance and idiosyncrasy. Now etiological factors, dietetic regulations, and physiological methods were engaging increasing attention in treatment. A continued and frenzied search was afloat for specific remedies, and earlier and more opportune recourse was had to surgical intervention in many disorders. There was no region of the body that could demonstrate this change in treatment so well as the abdomen, and it would seem that the surgeon had actually claimed this as his own private preserve. But Dr. Durno could not help thinking that the time had about arrived for a breathing interval and a shuffling of the cards between the surgeon and the physician. Scientific therapy had originated and had enhanced the art of medicine and materially augmented the resources of therapeutics. In 1893, after much careful clinical study, Behring introduced his antitoxin treatment of diphtheria, and probably in the whole history of medical science no discovery had surpassed this in therapeutic value. The success of antitoxin started off the fashion of serum-therapy treatment—soon to be followed by vaccine-therapy. As these methods of treatment, along with organo-therapy, were at the present time busily engaging the minds of the profession, they must wait until sufficient clinical experience had accumulated before they could ascribe to each fashion its proper value and place in therapeutics. The bursting of the coal-tar bomb, with its resulting clouds of derivatives of antiseptics, antipyretics, and analgesics, made it evident that there was money in this new drug fashion, and very soon manufacturing chemists took up the introduction of these synthetic products, employing physicians to experiment with them and publish their results as so-called contributions to medical science. This new fashion in pharmacy was responsible for the rooting out of the prescribing chemist, and the old chemist's shop had gradually become an emporium for the sale of products of large manufacturing chemists, the public treating themselves with drugs in the way suggested on the box or bottle; and, to a great extent, laziness or indifference on the part of the medical profession had fostered this now really serious state of affairs. It was absolutely bewildering to think of the numbers of new methods of treatment introduced into all branches of scientific medicine during the past quarter of a century, and at the same time it had been most pathetic to witness the melancholy and humble endings of most of them. The possibilities of therapeutics had been, and would be, greatly increased by the *science* of medicine, but something might be lost by the tendency of the present day to disregard the *art* of medicine.

ARMY AND NAVY MALE NURSES' COÖPERATION.—This excellent institution, of which Queen Alexandra is patron and Sir Frederick Treves president, was established four years ago for the purpose of finding employment for qualified male nurses discharged from the Navy and Army. The report for the year 1910–11, which was presented at the annual meeting of the coöperation in July, has now been reprinted for general circulation, and it shows most satisfactory progress. During the year under notice nearly 350 cases were nursed, an increase of 50 over the year 1909–10, and 42 nurses were kept in almost constant employment; while the receipts for the service of nurses amounted to nearly £3350, showing an increase of nearly £600. The offices of the Coöperation are at 47B, Welbeck-street, Cavendish-square, London, W.

Reviews and Notices of Books.

Funktionelle Diagnostik und Therapie der Erkrankungen des Herzens und der Gefässe. (*Functional Diagnosis and Treatment of Diseases of the Heart and Blood-vessels.*) Von Professor Dr. AUG HOFFMANN, o. Mitglied der Akademie für Prakt. Medicin und Direktor der Medizinischen Klinik in Düsseldorf. With 109 figures and one coloured plate. Wiesbaden: J. F. Bergmann. 1911. Pp. 483. Price 12 marks.

IN few branches of clinical medicine have greater advances been made as a result of the application of scientific methods than in that dealing with diseases of the heart and blood-vessels. The relative accessibility of the essential organs of the circulation to methods of physical and instrumental examination, the fact that the main phenomena of the circulation are subject to known physical laws, and the importance of an efficient circulation to the adequate functional activity of other organs, are probably chiefly responsible for the large amount of research which has been done in the directions thus indicated within recent years. Perhaps the most important outcome of this work is that we are no longer satisfied with an anatomical diagnosis in morbid conditions of the heart and vessels, but require in addition to appraise the functional efficiency of the circulation as a whole in every patient, or, in other words, the degree of compensation he possesses for his disabilities. It is obvious that this functional diagnosis is the essential preliminary to rational and effective treatment.

This aspect of the diagnosis and treatment of diseases of the heart and blood-vessels is the one which is prominently emphasised in the important book by Professor Hoffmann now under review. He begins by describing in full detail the indications afforded by the patient's history and subjective symptoms, and then gives the methods of ordinary physical examination, including the modern applications of the Roentgen rays to this purpose, together with the significance of the information obtainable from these methods. The evidence from palpation and auscultation in regard to the functional efficiency of the heart is discussed in detail, and then the various graphic methods are described, together with the interpretation of their results. In this connexion a clear and well-illustrated account is given of Einthoven's string galvanometer and of its application to the record of electro-cardiograms. Illustrative tracings are shown, and the method of analysing them is explained. Among other instrumental methods the graphic recording of the heart-sounds is described. A careful and interesting analysis of recent work upon conditions of cardiac irregularity is included in this section. The methods employed to measure the working capacity of the heart—viz., by the sphygmobolometer of Sahli, by the plethysmograph, and the tachecgraph—are described and illustrated.

After these general considerations the special diagnosis of abnormal conditions of the heart and blood-vessels is studied. The characteristic signs and symptoms of cardiac insufficiency are described under two headings, relative and absolute, the latter being applied to conditions in which there are signs of stress in the circulation, even at rest. The diagnosis of the various anatomical lesions of the myocardium, endocardium, and pericardium is reviewed, but in less detail than is common in English text-books, the reason being, as already mentioned, that Professor Hoffmann regards the question of the estimation of the degree of functional efficiency as of paramount importance. Diseases of the vessels and nervous disorders of the circulation are next considered, and here, again, the author devotes much

attention to the recognition of their effects upon the circulation as a whole rather than to their anatomical diagnosis. The subject of the functional treatment of the diseases of the heart and blood-vessels is dealt with fully. The general principles of treatment are explained, the uses of hydrotherapy and of electrical appliances are carefully examined, and the individual drugs employed to exert effects upon the heart and vessels are discussed. At the end of every section a long bibliography is appended.

We can strongly recommend this book as a scientific and suggestive work of reference. It summarises in admirable fashion the present state of our knowledge in regard to diseases of the circulatory system, and emphasises the importance of directing treatment to the patient's needs and not to his anatomical lesion.

The Practice of Surgery. By JAMES GREGORY MUMFORD, M.D., Visiting Surgeon to the Massachusetts General Hospital; Instructor in Surgery in the Harvard Medical School; Fellow of the American Surgical Association. With 692 illustrations. London: W. B. Saunders Company. 1910. Pp. 1015. Price 30*s.* net.

A MORE striking illustration of the present state of surgery could hardly be afforded than by the fact that a volume on "The Practice of Surgery" should commence with the abdomen (the first chapter dealing with appendicitis). There is no preliminary matter, no mention of the principles of surgery, no account of bacteriology—in fact, nothing is mentioned, but the reader plunges straight into appendicitis. This arrangement has been adopted intentionally by the author, who has taken up surgical diseases mainly from the aspect of clinical surgery, and has discussed their importance and frequency so far as possible with due regard to a proper sequence. It is assumed that the reader has had a preliminary training in the subject, and he is here presented with surgery as it is seen in practice.

This work is written energetically and with a disregard for conventional methods. It contains very much that is good and also much with which we cannot agree. It is abundantly illustrated, and the illustrations have been for the most part chosen wisely and well drawn. Some subjects are more fully treated than others, but on the whole the general impression left by the book after perusal is favourable. But it might have been well to express the opinions a little less dogmatically, for the student may be led to think that there is nothing to be said on the other side, while all surgeons know how difficult it is to say with certainty that one course is right and all others are wrong. An interesting illustration is a reproduction of Hinckley's painting in the Boston Medical Library representing the first public demonstration of ether anæsthesia at the Massachusetts General Hospital in 1846.

A Treatise on Diseases of the Eye. By JOHN ELMER WEEKS, M.D. London: Henry Kimpton; Glasgow: Alexander Stenhouse. 1911. Pp. 944. Price 30*s.* net.

THE author of the present work is one of the most prominent ophthalmologists in New York, and his name is familiar all over the world in the designation of the Koch Weeks bacillus, which he discovered almost simultaneously with, and quite independently of, Koch, and of the complete life-history and pathogenicity of which he was the first and exhaustive investigator. The promise of his early work as a pathologist has been fulfilled in his development into one of the foremost of ophthalmic clinicians, and it is not surprising that Dr. Weeks should desire to give to the world some of his views on the problems which have occupied the greater part of his life. The form in which he has chosen to present them has its advantages and its drawbacks. Among the former are the opportunity afforded for a consistent general purview of the whole subject, and the width of the appeal made by a text-book as compared with isolated papers in journals and society transactions. Among the latter, the most serious drawback in the design of a formal text-book is that it precludes a due expansion of the discussion of particular problems at the expense of others which have occupied less of the author's attention. Probably Dr. Weeks had this disadvantage in mind when he called his book a treatise and not a text-book; he thus obtains rather more latitude for the inclusion of some historical discussions and many operative procedures of questionable value, and can make reference to many rare diseases of little importance to the student. We think that the student should use the book chiefly as a work of reference, supplementary to one of the ordinary text-books, in which he will appreciate the proper perspective of ophthalmological details more easily. The expert will be well advised to add it to his library, on account of the references to original articles contained, though, of course, these are far from exhaustive.

The general scheme of the work is familiar. There are introductory chapters on development and anatomy; then a chapter on the general principles of optics by Dr. W. N. Souter. The chapters on diseases of the eye follow the usual anatomical classification, though the order adopted differs from most other books—disadvantageously, as we think. The chapter on movements of the eyeballs and their anomalies is written by Dr. Alexander Duane.

The printing is excellent; there are many original illustrations, mostly good, and a very large number of borrowed ones, duly acknowledged.

Genito-Urinary Surgery and Venereal Diseases. By J. WILLIAM WHITE, M.D., John Rhea Barton Professor of Surgery, University of Pennsylvania, and EDWARD MARTIN, M.D., Professor of Clinical Surgery, University of Pennsylvania. Ninth edition. Illustrated with 300 engravings and 14 coloured plates. London and Philadelphia: J. B. Lippincott Company. Pp. 1092. Price 21s. net.

THE appearance of nine editions of a book within ten years must go far to prove that it is fulfilling its mission, and this fact places it beyond the reach of detailed criticism. The subjects included within this volume fully justify its great size, even though it has now passed the thousand pages; and the points which we select for brief notice are mainly those where it seems to us that in yet future editions some revision might be advisable. In discussing the etiology of chancroid the authors, though apparently satisfied that it is due to Ducrey's bacillus, do not state the fact so clearly as to make it obvious to those who are not acquainted with it before. For urinary segregation Cathelin's instrument is praised and it is described as better than its competitors, but the authors agree that even it is not sufficiently accurate for a bacteriological differentiation of the urine. With this latter opinion we agree, for we are inclined to think that the trustworthiness of urinary segregators has been much over-estimated. With regard to the operation of preference for the removal of enlarged prostate we are told that by either route, suprapubically or through the perineum, the great majority of prostates can be removed, and, the authors continue, "the experience and aptitude of the operator with the method to which he is accustomed is of far greater importance in determining the method of procedure than the character of the prostatic enlargement." This is certainly true, but we do not think they have made it quite clear that the large masses of prostate projecting into the bladder are much more easily removed suprapubically than through the perineum. We fully concur with the opinion expressed that

vasectomy is likely every succeeding year to occupy a more and more restricted field in the treatment of prostatic hypertrophy. The account of syphilis occupies more than 230 pages, and it forms an elaborate and accurate account of the manifestations of this disease and is illustrated by about 60 drawings, some of which are in colour. Unfortunately, we have been unable to find any reference in the account of the treatment to "606," but it is possible that the book was finished before this method of treatment became widely known.

Symptomatic and Regional Therapeutics. By GEORGE HOWARD HOXIE, A.M., M.D., Professor of Internal Medicine and Dean of the Clinical Department in the School of Medicine of the University of Kansas. London and New York: D. Appleton and Co. 1910. Pp. 499. Price 16*s.*

THIS volume contains material collected for the course in general therapeutics recommended by the Committee on Curriculum of the American Medical Association. This course forms a transition between the laboratory and clinical work, and therefore more attention has been given to the discussion of the principles underlying the various methods of treatment than to an elaboration of the relative merits of the various drugs which have been introduced from time to time for the treatment of disease.

The first part of the book is occupied with a consideration of symptoms and their relief, and of the relations of symptoms to pathological processes. Thus the treatment of pain by various methods is chronicled at length, local and general anæsthesia being included under this heading. The treatment of "localised inflammations" is described, but the remarks are too brief to be of any practical value. Diseases affecting the various systems of the body are considered seriatim and the pathology of each condition is briefly reviewed, a distinction being made between symptomatic and specific treatment. In this way the importance of rational treatment is impressed upon the student, and constant recourse to empirical methods is avoided.

The advice given in regard to the therapeutics of various affections is sound and well expressed, but we consider that although this book may be read by the student as a preliminary guide to "treatment," it can hardly replace other manuals.

La Pratique des Maladies des Enfants. Vol. VII., *Chirurgie des Enfants, Appareils Digestif, Cardiaque et Pulmonaire, Organes Génito urinaires, Organes des Sens. (The Surgery of Childhood: the Surgery of the Digestive System, Heart, Lungs, Genito-urinary Organs, and the Organs of Special Sense.)* Par A. BROCA, Professeur Agrégé à la Faculté de Médecine de Paris; FROELICH, Professeur Agrégé à la Faculté de Médecine de Nancy; A. MOUCHET, Chirurgien des Hôpitaux de Paris; GUISEZ Assistant d'Oto-rhino-laryngologie à l'Hôtel-Dieu; and F. TERRIEN, Professeur Agrégé à la Faculté de Médecine de Paris. Avec 235 figures. Paris: J. B. Baillière et Fils. 1911. Pp. 540. Price, paper, Fr.14; boards, Fr.15 50.

THIS is a new volume of a valuable series of treatises devoted to the diseases of children. Like the preceding volumes of the system, it concerns itself mainly with diagnosis and treatment, and the names of the authors are sufficient to guarantee the high quality of the material. An article by Professor A. Broca, which serves as an introduction to infantile surgery, commences the volume. Professor Broca lays stress on the superiority of general anæsthesia over local anæsthesia for children, but he excepts cases in which there is hypertrophy of the thymus. He considers that almost all the deaths from chloroform in childhood are due to a faulty technique. Professor Froelich mentions that he prefers to operate for clefts of the hard palate at the age of 2½ years, but he performs the operation in two stages. Professor Guisez, who is responsible for the surgery of the ear, nose, and larynx, speaks very highly of direct bronchoscopy for the removal of foreign bodies, and mentions that he has had 25 successful cases out of 26 during the last seven years. The account of the surgery of the eye, by Professor F. Terrien, is very complete, and occupies nearly 200 pages; it deserves special mention. The illustrations in the volume are numerous and excellent, but in a work on the diseases of children it is surely a mistake to have some illustrations representing adults as patients, as in the figures of rhinoscopy. The book is a valuable volume of an important treatise.

The Reduction of Domestic Mosquitoes. By E. H. ROSS, M.R.C.S. Eng., L.R.C.P. Lond. London: John Murray. 1911. Pp. 114, with 18 illustrations. Price 5*s.* net.

YELLOW fever, dengue, and filariasis have been proved to be transmitted by two of the most common mosquitoes which worry the life of a healthy man, and which are an intolerable burden to the sick in hot countries. The object of this book is to bring to the notice of municipalities, town councils, health officers, and residents in warm climates the advisability of destroying all domestic mosquitoes, whether they are carriers of malaria or not.

Since 1899 Sir Ronald Ross has preached incessantly the need of extirpating mosquitoes by reducing the number of their breeding places, and in the following year Havana, a city of 250,000 people, began the campaign against gnats which has ended in the stamping out of yellow fever and malaria in many towns of the American continent. The mosquito net has hardly been necessary since 1903 at Ismailia; and the neighbouring town of Port Said, where the author lately held an appointment under the Department of Health of the Egyptian Government, determined in 1907 to destroy all the mosquitoes and to live in peace. In spite of the absence of sanitary laws dealing with this question, the presence of sea water only 3 feet below the level of the roads, 400 cellars in the town flooded with sewage from leaking cesspools, and a polyglot population under their own consular laws, which began by refusing to allow to sanitary inspectors access to the cesspools teeming with mosquitoes, this happy result was gradually accomplished at a cost of about £1000 a year, or 6*d.* per head of the population. The expense is nearly four times as great in Ismailia, partly because the population is only one-fifth that of Port Said, and also because Ismailia is rich in irrigated gardens, which have to be dealt with every week. For cesspools in Egypt equal parts of refined and crude petroleum mixed together are used, though any other oil which happens to be cheaper can be substituted. The general coöperation of the public must be obtained without the aid of the police, and it is all important to choose workmen of proved honesty, because each house in the town must be entered every week, in order to pour a litre of oil on every square metre of the surface of the cesspool contents, after which the latter must be well stirred with a stick to ensure an even film of oil spreading all over the surface. The householder has also to be warned against the dangers of stagnant water in his house and compound, and all flower vases, jugs, basins, buckets, and baths must be dried at least once a week. Special care must be taken with the kitchen, bathroom, and the cistern, which should be covered with a fine-meshed wire net of galvanised iron.

In Port Said, each mosquito gang, for it seems unnecessary to call three or four men working under a foreman a "brigade," deals with nearly 6000 houses every week, but many of these are huts or small shops which need but little supervision. Discretion and tact are always required; for

instance, in laundries the tubs of soapy water can be emptied on Saturday nights when the week's work is finished, and again the circulating cisterns of engines need not be clogged by petroleum, because the water in them is too hot for larvæ to breed there. The regular weekly visit discloses many insanitary defects, such as choked rain-water gutters, holes in trees containing rain-water, barge bilge-water, and other breeding places. If mosquitoes recur in a house which has been cleared, the responsible workman, whose name is inscribed on the door of the house, will have to be admonished, fined, or discharged. In Khartum, where the English can make their own laws, any householder is fined if mosquito larvæ are found on his premises, and lately several high officials have thus been punished. Similar fines exist in certain towns in the United States.

The author recommends mosquito reduction, because complete extermination is hardly possible, in Venice and other towns well known for this pest, and we believe that his book will be very useful to those who have not yet thought of ridding themselves of these irritating and sometimes dangerous insects. We doubt, however, if he is justified in claiming all the improvements in Port Said as the result of his energy in this one direction. He says the children "have some colour in their cheeks, and are able to play on the beach—it is a very different state of affairs. The place is buzzing, docks are being constructed, shipping dues are rolling in, and trade is progressing." Neither can we support his statement that the Egyptian Government has spent £249,000 during the past few years on fighting plague, and that "the result was *nil*."

LIBRARY TABLE.

Transactions of the South African Medical Congress (Twelfth Meeting). Published by the Transactions Committee of Congress, Cape Town. 1911. Pp. 324.—This volume of the proceedings of the Twelfth South African Medical Congress, held in November, 1910, contains many papers that reflect great credit on their authors. The Congress was honoured by the presence of the Duke of Connaught, whose reply to the address when at the opening ceremony especially bears witness to the devoted energies of medical men in the prevention, palliation, or eradication of disease, often involving a costly labour of research. His Royal Highness points out that such pioneers in the matters relative to disease should find their paths unhampered by financial obstacles. Dr. Charles F. K. Murray delivered the Presidential Address, in which he clearly pointed out the objects of such a congress. The work, although mainly scientific, embraces other matters claiming attention, such as the ethics of the profession, the attitude of its members towards each other and the public, and its responsibility towards the moral, intellectual, and physical well-being of the nation. He wisely suggests that at the time of the political union of South Africa a portfolio of Public Health should be created in the Ministry, and a resolution to that effect was submitted to the authorities unanimously. The section on medicine contains many admirable papers, amongst which may be emphasised that by Mr. A. Murray Gray on the Modern Treatment of Tuberculosis, which enters fully into all the recent methods for combating the disease. Dr. A. Garrow sends an important contribution on the Clinical Varieties of Mediterranean Fever met with in South Africa, in which he describes the following types: the acute malignant, the acute one-wave type, the acute undulatory type. Then follows a description of the subacute undulatory, the chronic, and the complicated types. The latter include pulmonary, pleural, hepatic, kidney, and nervous complications. We also may see cases simulating hip-joint disease and cases complicated by certain injuries and operations, and in this respect Dr. Strahan draws attention to the grave prognosis where Mediterranean fever complicates the puerperal state. The whole paper is well worth perusal. Dr. H. W. Reynolds writes on the interesting subject of ionic medication by electrolysis. Dr. S. P. Impey, a well-known authority on the disease, gives a paper on the Lepers of South Africa. He discusses the bacillus, points out the difference in prognosis between the tubercular and the anæsthetic forms, and draws attention to the rarity in South Africa of that variety wherein nodules occur on the trunk and the skin becomes hard and dry. The author holds that in anæsthetic leprosy only the nerves are affected, the other symptoms being of atrophic character. He also points out that nearly all authorities consider that there is hardly any danger of admitting to social intercourse lepers of the latter class. Dr. Impey first drew attention in 1902 to spontaneous cases of leprosy, which he believes occur much more frequently than is generally supposed. As regards segregation of lepers, he thinks this certainly should not be abolished, but the simpler form in vogue in Norway should be adopted. In the section on surgery will be found papers on Urinary Stone, by Dr. H. Temple Mursell; on Intestinal Obstruction, by Sir E Sinclair Stevenson; and an excellent paper on Some Factors Making or Marring the Success of Surgical Operation, by Dr. G. A. Casalis. Public health receives its due meed of attention. The special subject for discussion was the æstival diarrhœas of South Africa. This was opened by Mr. G. D. Maynard. The points he laid stress on were the need for simplification in nomenclature and more uniform methods of registration; the importance of the age factor; that the specific infection of food as a cause of the disease has probably been over-rated; and, finally, that the lowering of the body resistance due to improper feeding, climatic changes, insanitary conditions, &c., is of prime importance in the etiology of the disease. The author does not think that the agency of flies in the matter of causation as the chief factor has yet been proved. Dr. Garrow contributes also to this section a paper on the Etiology and Prophylaxis of Mediterranean Fever in South Africa, drawing attention to the part played by infected goats' milk, urine-infected kraal dust, and the fouling of hands and inoculation through abrasions with infected urine in handling the urine-soaked fæces of infected goats. Mr. H. A. Spencer writes on epidemic malaria a noteworthy paper, to which subject also Mr. Edward H. Philips contributes an excellent discourse. Many other praiseworthy papers in this report reflect the highest credit on our medical brethren in South Africa.

The Hunterian Lectures on Colour-Vision and Colour-Blindness. Delivered before the Royal College of Surgeons of England on Feb. 1st and 3rd, 1911. By Professor F. W. EDRIDGE-GREEN, M.D. Durh., F.R.C.S. Eng., Beit Medical Research Fellow. London: Kegan Paul, Trench, Trübner, and Co., Limited, 1911. Pp. 76. Price 3*s.* 6*d.* net.—These lectures were published in THE LANCET at the time of their delivery—viz., in our issues for Feb. 4th and 11th. Doubtless many of those especially interested in the subject—and, indeed, it is one of importance not merely to the ophthalmologist, but to every general practitioner—will be glad to have them in book form. The book contains several additional diagrams and illustrations which will help to elucidate the subject matter.

JOURNALS AND MAGAZINES.

Archivos Brasileiros de Medicina. Vol. I., Nos. 1 and 2. February and March, 1911. Rio de Janeiro: R. Gonçalves Dias.—These are the first issues of a new review, to be published monthly, with a minimum of 50 pages. The numbers will be alternately devoted to original work in, and

to a general review of, medicine. The first number, which is a specimen of the former class, contains original contributions and case reports, abstracts of articles and monographs, and book reviews. The "Supplementary Numbers," as those of the other class are called, contain a general review of matters of practical medical interest, a section of clinical reports, a permanent section on cancer, reports of medical societies, and other matters of professional interest. The last number of each year is to be devoted exclusively to a particular subject, the Problem of Syphilis having been selected for 1911. Each original article will have a *résumé* affixed in English, French, or German. In the first number Dr. Miguel Pereira and Dr. E. Gaspar Vianna report a case of blastomycosis which ran its entire course in less than four months and recalled in its rapidity and virulence bacterial septicæmia or bacteriæmia. The necropsy demonstrated the dissemination of the blastomycotic process throughout the organism, infecting, as it did, the pancreas, liver, lungs, mesenteric glands, joints, and bones. Numerous parasitic forms were found which seemed to characterise morphologically and biologically a new blastomycete. In the cultures a parasite of spherical form which produced mycelium developed. Inoculations into the ape, dog, roebuck, rabbit, and guinea-pig showed positive results. Other articles are: Two Cases of Madelung's Deformity, by Dr. Albaro Ramos; A Contribution to the Study of Uterine Fibroma, by Dr. Adolpho Possollo; A Contribution to the Applied Anatomy of the Prostate, by Dr. Benjamin Baptista; Nine Cases of Scurvy in Infancy, by Dr. Fernandes Figuiera; Responsibility in the Insane, by Dr. Henrique Roxo; Röntgen Diagnostics, by Dr. Toledo Dodsworth; A New Method of Blood-staining, by Dr. Joaquim Moreira da Fonseca; Reduplication of the First Sound of the Heart, by Professor Dr. A. Austregesilo; Clinical Reports of Benign Forms of Nervous Leprosy, by Dr. Juliano Moreira; Subcortical Sarcoma of the Right Parietal Lobe, by Dr. Ernani-Lopes; and Alternating Paralysis, by Dr. Joaquim Moreira da Fonseca. M. Pio Corrêa contributes an illustrated note on a Flacourtiaceous Parasiticide (Carpotroche brasiliensis Endl). There are several excellent illustrations and skiagrams. The character of the second number has been sufficiently described above.

The Child. Vol. II., No. 1. October, 1911. London: John Bale, Sons, and Danielsson, Limited. Price 2*s.* net, or 1 guinea annually.—Sir James Crichton-Browne's presidential address, delivered before the annual meeting of the Child Study Society at Halifax, Yorks, last July is the first article. He calls attention to the fact that 40 years ago he anticipated the present idea of the function of education—viz., to foster growth—by defining education, in his Education and the Nervous System, as the "guidance of growth." In this connexion he discusses the conditions influencing growth, mind and body growth, growth in different organs, and brain growth. He emphasises the importance of studying correlatively the growth of both mind and body. In an article on Ireland and Child Hygiene Sir John Byers points out the importance of child hygiene, describing the infant mortality as the index of social welfare and sanitary administration. He considers that the divergence between the excessive infant mortality among the poorer classes as compared with that among the better-to-do—notwithstanding that the mothers of the former class usually nurse their offspring, while those of the latter class do not—is due to removable conditions—viz., (1) the habits and homes of the people, and (2) maternal ignorance. The infant death-rate of Ireland, urban and rural, is discussed and compared with that of large cities elsewhere. He comments on school hygiene and tuberculosis in Ireland, and concludes with discussing the means to improve the hygiene of childhood. Mr. Arthur Greenwood discusses juvenile labour problems and suggests a line of reform. Mr. George Archibald Hamilton deals with the aim of religious education, which he describes as "to help the children to be overcomers [of obstacles]." He regards secular education in the schools as a psychological impossibility. Sir Francis Vane analyses the source of attractiveness to boys of the Scout movement, and says that it is clear that a movement which equally attracts the children of all races belongs to that category of things which are essentially universal, and protests against its limitation by the "village pumpists" to local ends and purposes. Miss Anita U. Boggs utters a plea for the forward child. Dr. Woods Hutchinson considers the effect of various well-meant experiments of philanthropy as a help or a hindrance in the diminution of infant mortality. He supports the care of infants by mother, aunt, or older sister as against institutional care, urges the displacement of the doctrine of content by that of fighting for betterment, protests against cheap foods, against the mother working up to the time of her confinement and neglecting her child afterwards for work, and against the indiscriminate urging of large families, contending that it is quality, not quantity, that should be reared. Mr. H. W. Armit describes the Child Welfare Section of the British Section of the International Hygiene Exhibition at Dresden.

The Bristol Medico-Chirurgical Journal.—To the September number Dr. George Parker contributes an interesting paper on Medical Organisation and the Growth of the Medical Sciences in the Seventeenth Century, illustrated by sketches of the lives of local worthies, among whom are included Cole, Sydenham, and Locke. Dr. A. Rendle Short writes on the End-results of Operations on the Stomach and Duodenum; he notes the number of cases in which an ulcer was diagnosed but was not found at the operation, severe hæmorrhage not being necessarily an indication of this lesion.

The Birmingham Medical Review.—In the September number Dr. W. J. McCardie discusses the advantages and disadvantages of Spinal Analgesia; his paper is not concluded in this issue. Dr. Leonard G. Parsons writes on Recurrent Vomiting occurring in Childhood, with notes of a fatal case. The condition is accompanied by the appearance of acetone bodies in the urine, and the treatment advised is administration of sodium bicarbonate and glucose. In a report on Infant Mortality in Birmingham the conclusion is reached that "the influence of industrial employment (of the mother) is quite small when compared with the influence of acute poverty ..... it is doubtful whether any further interference with the employment of married women would be at all beneficial as long as the acute poverty remains."

The Hospital, upon entering its twenty-sixth year of existence, has extended its scope in various directions, while the price has been reduced to 1*d.* weekly. It will henceforth be known as "The Worker's Newspaper of Administrative Medicine and Institutional Life, Administration, National Insurance, and Health." The issue for Oct. 7th was a special number, and contained articles of interest to those connected in various capacities with hospitals and kindred institutions, including a full report of the recent meeting of the British Hospitals Association at Manchester, and an editorial survey entitled "Twenty-five Years' Institutional Progress."

King's College Hospital Medical Society, which was founded in 1833, will open its season 1911–12 to-day, Friday, Oct. 13th, at 8 P.M., with an address on the "Use of Our Authority," by Mr. Stephen Paget, F.R.C.S. The chair will be occupied by Dr. StClair Thomson.

THE LANCET.

LONDON: SATURDAY, OCTOBER 14, 1911.

The National Insurance Bill.

A FORTNIGHT ago, in surveying the position of the National Insurance Bill, we found it to be certainly an anxious one, and recent events do not seem to have improved its prospects despite Mr. LLOYD GEORGE'S explicit statement that the Government would persevere with the measure. The amendments already passed by the House of Commons, while meeting in some respects the demands of the medical profession, have undoubtedly given great offence to the leaders of the Friendly Societies, and the word "betrayal" has been freely used by the representatives of these organisations. The Chancellor of the Exchequer, recognising the gravity of the situation and the necessity of reconciling so far as possible the rival claims of the medical profession and the Friendly Societies, held a conference at the Treasury on Monday last, to which representatives of the British Medical Association and of the societies were invited. No official report of the proceedings at this conference has been published, and in the circumstances it seems to us that little would be gained for either party by publicity. The objections of the Friendly Societies to the clause dealing with medical benefits are perfectly well known. They have been made at large and in strong language. Similarly the six cardinal points which the representatives of the British Medical Association are instructed to insist upon cannot be altered without reference to the members of the Association. All that it is possible to expect from the conference is, it seems to us, that the Friendly Societies having formulated their demands, the representatives of the British Medical Association should report how far those demands can be met without waiving any of the cardinal points. In the discussion which followed the presentation of the views of the Friendly Societies at the conference the representatives of the British Medical Association invited the societies to submit what they asked of the medical profession, but the medical secretary of the British Medical Association has disclaimed responsibility for a statement issued by the Press Association, saying that at the conference "a basis of settlement was reached." Mr. SMITH WHITAKER points out that he and the other representatives of the Association took every care to explain that they had no authority to enter into any arrangement of any kind, and that they could hold out no hope of any departure by the medical profession from the six cardinal points of its policy as already declared.

How much the medical profession will gain by even the maintenance in its integrity of the six-fold demand has always, of course, been a matter of doubt; and it is well that the medical profession should recognise this doubt before the measure is again before Parliament. Mr. ARTHUR MAUDE in a letter which we publish in another column reviews the present situation of the Bill in its relation to the medical profession, and examines critically the extent to which the six cardinal points have so far been met. He maintains in very able manner that little real concession has been granted by the Chancellor, the clear inference being that if the demands of the British Medical Association should be whittled down any further as a result of the conference now proceeding, the medical profession will have fought in vain. Our correspondent views the whole course of recent negotiations with suspicion. We do not share all his particular apprehensions. But we have never disguised our deep distrust of the introduction into the greater part of the medical service of this country of the contract system. This system has worked badly in our own experience of it, and cannot be regarded as a success in Germany; and it has throughout surprised us that a general acquiescence in its beneficence should have been expected of the medical profession by the public. For the present the British Medical Association and the Friendly Societies appear to have reached a place where one or other must yield, and where neither can do so; while the reconciliation of interests here will not make the Bill any more inviting to a large section of the medical profession. The British Hospitals Association, at its recent meeting at Manchester, heard the views of a responsible body of hospital managers and administrators, and the speakers unanimously declared that the Bill as it stands will seriously prejudice voluntary hospitals throughout the country, not only financially, but in their relation to the medical profession. The British Hospitals Association called on the Government to amend the Bill in order that the voluntary hospital system may not be swept away, and in so doing were speaking in the best interests of the science of medicine and of medical education.

The Difficulties of Diagnosis.

THERE are few opinions on medical subjects which are more strongly held by the non-medical portion of the population than the opinion that a physician or surgeon should be able to make a diagnosis of any case presented to him. For they hold that to a competent observer a diagnosis is simple and sure. Only a few years ago a medical man was fined for not notifying a case of small-pox, in spite of his statement that he was not satisfied that it was a case of this disease. The public fail to recognise that in many cases the making of a diagnosis is extremely difficult, and not rarely quite impossible; and they are ready to look upon any refusal to name the disease present as an acknowledgment of ignorance, while it may well be that the refusal is due to the wide knowledge of the observer. While it is true that rapid and accurate diagnosis is possible in cases where the signs and symptoms are striking and characteristic, nearly always careful examination is necessary, and the diagnostic methods which have been introduced of late years may have to be called into requisition before a decision can be come to with practical certainty. Increased facilities have brought with them increased responsibilities. And where the chief cause of difficulty in diagnosis is the absence of any marked symptoms, the medical man, with

all the aids now given him by physics, chemistry, and biology, may well remain in doubt as deep as any that would have involved his predecessors of fifty years ago. There may be some rise of the temperature and some malaise, and some indefinite and shifting pains, but without more definite signs or symptoms an accurate diagnosis is impossible. For cases such as these the diagnosis of "febricula" is regarded by some as satisfactory, and "influenza" has been of great utility in cases where no materials for a real diagnosis are at hand. Oftentimes these are mere screens to hide the absence of a diagnosis, and though they cannot be entirely condemned, for they may soothe and satisfy the anxious mind of the sufferer, they can hardly be regarded as other than unsatisfactory. The onus of these expressions of pious and semi-informatory opinion rests with the public who, without such expressions, condemn the medical man out of hand.

There may be present in a case some striking symptom, such as the pain in a case of sciatica, which will justify a diagnosis, but even in so simple a matter as this, where the pain is the expression of a neuritis, it must not be forgotten that almost identical symptoms may follow from the presence of a tumour—say—in the pelvis pressing on the sciatic nerve. Nowadays the medical man who looks no further before him than is implied by the diagnosis of sciatica may satisfy his audience, but not his conscience. Perhaps the most troublesome cases to diagnose are those in which two absolutely independent lesions or morbid states co-exist. It is an established rule in diagnosis that the simplest explanation which will account for all the symptoms and signs present should be accepted, yet it will happen that though two distinct lesions are present they may give rise to symptoms explicable by one diagnosis. As an instance we may mention a case in which definite syphilitic ulceration is present on the face, while a localised enlargement of the tibia also exists. Here every surgeon would feel justified, in the absence of further evidence, in diagnosing the lesion of the tibia as syphilitic in origin, and yet in a case of this sort which was recently brought to our attention, though the ulcers were certainly syphilitic, the swelling of the tibia was due to a central sarcoma. In the pages of THE LANCET have appeared numerous instances in which an error in diagnosis has been due to the mixed origins of the symptoms, and doubtless many such cases must occur to the minds of our readers. Another occasional but very important cause of diagnostic mistakes is poisoning. In such cases the value of the many precise aids to diagnosis now possessed by the medical man may become very obvious; closer investigation will show that conditions which might have one reason are better explained by another. It is such careful revision and correction of diagnosis that, for example, the poisoner has to dread. It is so rare for a medical man to meet with cases of sub-acute or chronic poisoning, either accidental or intentional, that he is inclined to recognise in the condition of the victim some combination of signs and symptoms that can be explained on more usual grounds. Many trials for murder have shown that cases of homicidal poisoning have escaped recognition, even though treated by very competent medical men, because no suspicion of poisoning was excited in circumstances which a more common diagnosis appeared to fit. We can all see how important it is that the possibility of poison should be present to the physician's mind upon the necessary occasions, but the same importance exists, though not in so dramatic a form, when obscurity occurs in any clinical problem.

The difficulties of diagnosis can never be fully appreciated by the public, and just as the English law supposes that every man knows the whole of the law, so does it suppose that every medical man knows the whole of medicine. Which is absurd. The progress of science has placed in our hands many diagnostic means quite unknown a few years ago. The Roentgen rays reveal to us differences unascertainable by other means, especially in regard to the bones and to foreign bodies; the recent introduction of the bismuth method has made the X rays applicable to many parts of the alimentary canal and thus has widely extended their usefulness. The employment of tuberculin and mallein, and other similar substances, has become so certain a method of diagnosis as to be utilised in agriculture. Still more recently Wassermann's test has been introduced, and when employed with due care it is invaluable, and often decisive. The value of differential blood-counts is also great for diagnosis and prognosis, words which would describe much other pathological procedure which we do not mention. But with all these adjuvants the greatest care has to be used in solving the complex problems of disease, while no amount of laboratory technique will absolve the physician from ordinary general precautions in making a diagnosis. We chronicle elsewhere the death of Dr. JOSEPH BELL, the Edinburgh surgeon, whose elaborately developed powers of observation revealed to him the environment in which many of his patients lived and moved. JOSEPH BELL, be it remembered, was a thoroughly good scientific surgeon. The detective faculty may be of the greatest value to the medical man when reinforced by the ability to make use also of every aid which science can supply. Without such aid failure will result, while, on the other hand, elaborate pathology unsupported by ordinary observation is deprived of half its value.

Annotations.

"Ne quid nimis."

THE GALTON LABORATORY OF EUGENICS.

THE importance of the study of eugenics can hardly be exaggerated, since the bias of future legislation will almost certainly be in the direction of social reforms; and if such legislation is to be anything more than the passing of palliative measures it must be based on accurate data. Besides laying the foundations of the science of eugenics Sir Francis Galton himself endowed the Research Fellowship in Eugenics in the University of London, and the Society of Eugenics, which was formed by his friends, is zealously carrying on that good work. Sir Francis Galton also left the residue of his estate to the University of London for the endowment of a professorship and laboratory for national eugenics, and in his will he expressed the wish that the University would see fit "to preserve the capital thereof wholly, or almost wholly, intact, not encroaching materially upon it for cost of buildings,

fittings, or library." In order to carry out the wishes of the testator, the income from his bequest being insufficient to cover both endowment and adequate buildings, Lord Rosebery, the Chancellor, Sir William J. Collins, the Vice-Chancellor, Sir Edward H. Busk, chairman of Convocation and of the Galton Laboratory Committee, Dr. Henry Miers, the Principal, and other officials of the University of London, have issued an appeal for £15,000 for the provision of a Galton Eugenics Laboratory at University College, Gower-street. The appeal points out that the scope of the science of eugenics and the work of the laboratory have been defined as "the study of these agencies under social control that may improve or impair the racial faculties of future generations physically and mentally." In accordance with the suggestion of Sir Francis Galton, Professor Karl Pearson, F.R.S., has been appointed first Galton professor, and he is assisted by a staff of highly trained workers who now find very insufficient accommodation in a few small rooms temporarily placed at their disposal at University College. The output of the laboratory in the form of original investigations has been very large, and attention is called to the fact that already influential movements are on foot for the academic recognition of eugenics and the establishment of similar laboratories in both America and Germany. The small laboratory, consisting of two rooms only in the applied mathematics department at University College, is consulted very largely by medical officers of health, by school medical officers, and by independent medical men engaged in statistical problems. On the ground that the institution has already been of great value and will render increased public service with its fuller development, the University feels justified in sanctioning an appeal for such external aid as will enable its staff to carry out effectively this portion of their functions. At the present time the laboratory is in possession of material received from educational and health authorities in all parts of the country, which alone would require three or four full years' labour for the existing staff to analyse and publish, and the bulk of it has direct bearing on the most important social and national problems of the day. No better memorial to the late Sir Francis Galton could be established, and we heartily endorse this appeal. Sketch plans of a new laboratory by Professor F. M. Simpson, F.R.I.B.A., are affixed to the appeal, and contributions and promises of support will be received by Sir Edward Busk, University of London, South Kensington, S.W.

THE ALBUMIN REACTION IN TUBERCULOUS SPUTUM.

THIS reaction is stated to be invariably present in cases of tuberculous disease of the lung, even in its early stages when it may be difficult or impossible to discover tubercle bacilli in the sputum. The technique of the reaction is exceedingly simple. 5 c.c. of the sputum are mixed with 20 c.c. of physiological salt solution in a test-tube; 5 or 6 drops of acetic acid are added and the whole well shaken up and then filtered. The filtrate is then tested for albumin by heat or nitric acid.[1] Lesieur and Prirey[2] find this reaction present before the appearance of any physical signs in the lungs in 75 per cent. of cases, and declare it a more useful test than the microscopic examination of the sputum. In miliary tuberculosis it is not constantly given, nor in pleurisy. It is present in acute lobar pneumonia due to pneumococci during the attack; its persistence in this disease during convalescence points to the probability of a new focus of infection or a complication. The reaction is found also in acute pulmonary œdema, acute congestion, and acute broncho-pneumonia. As a rule, it is negative in acute bronchitis, and it is negative in chronic bronchitis and in emphysema. In cardio-renal cases it is often positive. They give 840 observations from various authors in which the reaction was positive in 100 per cent. of cases confirmed by microscopic examination of the sputum for tubercle bacilli, in 82 per cent. of cases of probable pulmonary tuberculosis, and in 37 per cent. of cases of non-tuberculous sputum. They find that the intensity of the reaction is in direct proportion to the importance and gravity of the lesions and the abundance of tubercle bacilli, and so consider the reaction to be valuable in prognosis as well as diagnosis. A negative reaction would appear to exclude pulmonary tuberculosis.

[1] Fornara, Il Policlinico, Sezione Pratica, Anno xviii., Fascicolo 27.
[2] Paris Médical, 29, vol. iv., 1911.

THE PAST SUMMER.

THE statistics below have been compiled from observations published month by month by the Meteorological Office and may consequently be regarded as accurate. They comprise the mean temperature, the total amount of rainfall, and the total number of hours of bright sunshine for the three months, June, July, and August. The comparatively slight excess of the temperature over the average may be noted; the figure is in many places no

—	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.	Difference from average.	*Number of days with rain.	Total fall.	Difference from average.	Number of hours of sunshine.	Difference from average.
	°	°	°	°		in.	in.	hrs.	hrs.
Greenwich	78	54	65·9	+3·6	24	3·7	−3·1	819	+189
Westminster	75	57	66·2	+4·1	22	4·8	−2·2	773	+257
Hampstead	73	55	64·0	?	26	3·7	?	771	?
Kew Observatory ...	75	56	65·3	+4·1	23	3·6	−3·3	789	+197
Tunbridge Wells ...	74	53	63·6	+3·6	19	3·3	−3·8	881	+274
Bath	75	54	64·1	+3·4	23	2·8	−5·1	824	+219
Harrogate	69	51	60·2	+2·7	30	6·2	−1·8	654	?
Buxton	69	50	59·5	+3·1	31	6·0	−5·2	701	?
Hastings	71	56	63·7	+3·4	19	4·6	−2·0	907	+225
Brighton	71	56	63·9	+2·7	18	3·2	−3·2	918	+242
Bournemouth... ...	73	55	64·0	?	21	3·5	?	894	?
Sandown, Isle of Wight	73	57	64·3	?	26	3·8	?	900	?
Ventnor	72	58	64·5	+3·5	24	3·3	−3·4	882	+271
Torquay	71	57	64·1	+3·4	17	2·7	−4·4	888	+171
Plymouth	70	57	63·7	+3·2	27	6·0	−2·9	835	+215
Jersey	72	59	65·5	+3·9	25	4·6	−2·3	922	+188
Penzance	70	58	63·7	?	34	5·3	?	762	?
Scilly...	67	56	61·4	+4·6	29	7·5	+0·6	751	+ 61
Bettws-y-Coed ...	70	52	60·8	+1·3	42	9·3	?	665	?
Llandudno	70	56	62·9	+3·4	36	6·7	−0·8	779	+224
Southport...	69	54	61·3	+2·6	35	6·3	−2·4	787	+210
Blackpool...	68	53	60·6	+5·7	35	6·7	−2·2	800	+250
Scarborough	67	54	60·5	+2·6	41	8·9	+1·5	658	?
Yarmouth	69	56	62·6	+3·4	19	3·0	−3·9	750	?
Clacton	70	56	63·3	+2·0	20	3·0	−3·0	847	+136
Margate	73	57	65·1	+3·8	18	2·8	−3·2	816	+233
Nottingham	73	52	62·7	+2·7	31	4·4	−3·0	673	+ 49
Birmingham	73	54	63·3	+4·2	33	3·6	−4·3	588	?
Manchester	72	56	63·7	?	32	5·5	−4·7	609	?
Liverpool	69	55	62·0	+2·7	33	5·9	−2·2	759	?
Glasgow	66	52	59·2	+2·3	45	6·5	−3·7	548	+107
Aberdeen	63	51	56·7	+0·9	51	5·0	−2·8	632	+129
Dublin	69	55	61·7	+2·3	40	5·6	−2·3	†588	+ 59
Armagh	63	50	59·2	+1·7	44	5·9	−3·3	597	+152
Birr	70	50	59·9	+1·8	45	6·7	−4·0	597	+146

* A day with at least 0·01 inch.
† Sunshine in Phœnix Park.

more than about 3°. In July and August, however, it was from 5° to 6°, or even more, over a very large part of England, and it is owing to the fact that June was very little warmer than the normal that the excess of the three months is relatively small. August was a little hotter than July in nearly all parts of the kingdom, and considered generally it was the hottest of which there is any record. The metropolitan area experienced the greatest heat, and this was followed rather closely by Jersey and Margate, while the coolest regions were the north of England, Scotland, some parts of Wales, and Ireland. The periods of greatest heat were July 22nd and August 9th. On the former date the sheltered thermometer reached 90° and above in very many localities, the highest readings being 96° at Greenwich and 97° at Epsom, while on the latter there were many readings above 95°. At Canterbury, Epsom, and Raunds readings of 98° were recorded, at Isleworth 99°, and at Greenwich 100°. This last figure, however, is, perhaps, not strictly comparable with those recorded elsewhere, as it appears that at the Greenwich observatory the form of the sun screen in use is not of the same type as those employed over the kingdom generally. The duration of sunshine, like the temperature, was everywhere in excess of the average, the excess in several localities of the south amounting to between four and five hours a day. There were, nevertheless, some districts where the excess was much less, the most noticeable being Nottingham, the Scilly Isles, and Dublin. Of all the records given in the table that at Glasgow was the lowest and that at Jersey the highest, the difference being represented by four hours daily. Except at Scarborough, where June was wet, the droughty condition on the mainland is well shown by the statistics. In East Anglia, Kent, and along the south and south-west coasts rain fell on no more than 20 days at the most, many places in those districts reporting a figure even lower. The driest places given in the table were Torquay, Bath, Margate, Clacton, and Yarmouth, each station receiving the small aggregate of three inches or less, a quantity wholly inadequate for three months of hot sunshine. Ireland, Scotland, and the northern parts of England were more fortunate, although even there the total fall was generally far short of the average. Of the four stations representing London it will be seen that Hampstead was the least warm both during the daytime and at night, and that it was somewhat less sunny than both Kew and Greenwich.

WHERE CHEMISTRY AND MEDICINE MEET.

IN his Presidential Address delivered to the Obstetrical and Gynæcological Section of the Royal Society of Medicine, a full abstract of which is published in our present issue, Dr. Amand Routh advances cogent reasons for encouraging coöperation between the physiological and pathological chemist and the obstetrician. Dr. Routh shows that obstetricians are at a standstill as regards the nature of the bio-chemical changes in the blood which influence the cyclical functions of menstruation and ovulation, and of those blood conditions which appear to encourage the implantation of the fertilised ovum and induce the onset of labour and lactation. Very little is known also of the autotoxæmias which may cause such toxic obstetric troubles as hyperemesis gravidarum, puerperal albuminuria, eclampsia, acute yellow atrophy of the liver, chorea gravidarum, and puerperal insanity. The fact that blood serum from pregnant women has different qualities from that of other women is indicated in several ways, but the physiological chemist has not yet discovered either the chemical constitution or the molecular structure of the substances concerned. Thus it is said that the serum of a pregnant woman hinders the proteolytic ferments, such as trypsin, and that pregnancy can be diagnosed by this fact. It has been stated by Krause and Graff, of Vienna, that placental serum has a remarkable power of destroying cancer cells. Stern has shown that whereas in healthy non-pregnant women 65 per cent. gave positive reaction to the cutaneous tuberculin test and 14·5 per cent. to the conjunctival test, the cutaneous reaction at the end of pregnancy diminished to 30 per cent. and the conjunctival reaction results were consistently negative. To the same category of observation we may refer the fact that pregnant women appear to have a sort of immunity from scarlet fever, for Olshausen could only find instances of seven cases of scarlet fever during pregnancy, as compared with 134 within one week after delivery. Dr. Cuthbert Lockyer, again, has investigated the influence which the lutein tissue formed in the mature Graafian follicle can exercise. It is known that excess of lutein tissue, sometimes in the form of lutein cysts, is associated with hydatidiform degeneration of the chorion, and it is known that destruction of the corpus luteum in rabbits prevents implantation of the fertilised ovum by preventing the development of the trophoblast, and these and other facts seem to show that lutein tissue is one of the elements of the ovarian internal secretions which, through the blood, may exercise influence on the cyclical functions of the uterus, and on the normal or abnormal implantation of the ovum. The effects on the menstrual function of disordered internal secretion of the other ductless glands, in such diseases as myxœdema, Graves's disease, cretinism, and acromegaly, are to some extent familiar. Altered metabolism in the placenta or Graafian follicles is believed to be the cause of the various autotoxæmias which cause eclampsia and other parturient or puerperal diseases. The fact that puerperal eclampsia in women and puerperal apoplexy in cows can sometimes be cured (the latter in 98 per cent. of cases) by injections of antiseptics or even oxygen into the mammary glands, suggests that disordered metabolism of those glands also may at times produce a virulent toxin. Such a difficult blend of sciences as physiological and pathological chemistry cannot be undertaken except by experts, and Dr. Routh is of opinion that no real advance will be made in our knowledge till special laboratories for these subjects are established in our medical schools, and effort is thus made to discover the nature of the substances concerned, and their appropriate prophylaxis and antidotes. The question as to how this chemical branch of pathological research is to be provided is likely to prove difficult. Inasmuch as the work is required for the correct diagnosis and efficient treatment of the patients in hospital, it is not only rational, but just, that the hospital, rather than the medical school, should bear the expense, but it is not at all certain that this view would be taken by some of the lay authorities on hospital management.

ACUTE NEPHRITIS FOLLOWING THE INJECTION OF SALVARSAN.

THE untoward events which may follow the administration of salvarsan are almost exclusively associated with the intravenous mode of injection, and it is also possible to argue that many of them (nerve-deafness, for instance) are as likely to be due to the disease as to the drug. However, when all such allowances have been made, there still remains a residue of evidence as to the possible toxicity of salvarsan. Two cases, reported by Dr. H. Tucker of Philadelphia in the *Therapeutic Gazette* for September, go to show that the intravenous injection of salvarsan may speedily be followed by acute nephritis. The first case was that of a man, aged 30, who came under treatment for a hard penile sore with inguinal adenitis. His general condition was good, and his life had been

one of uninterrupted health until he acquired syphilis. A week before the injection of "606" was given he presented a characteristic secondary rash. The urine is reported on this same date as containing a trace of albumin and a few leucocytes, but no casts. The Wassermann test was positive. A dose of 0·6 gramme of salvarsan was given intravenously. In an hour the patient was vomiting and the temperature had risen to 101·2° F.; there was a large watery evacuation of the bowels. On the following day there was complete suppresion of urine, none being withdrawn even by catheterisation; by the evening the patient was very dyspnœic, and by midnight he was dead. No post-mortem examination was made. The second patient was also a fairly healthy man, aged 24; he was poorly developed and took spirits to excess at times, but apart from these facts his condition was apparently normal, except for the evidence of syphilis, which brought him under Dr. Tucker's care. He was in the secondary stage, having already undergone an inadequate course of treatment several months before. The urine was normal, containing neither albumin nor casts. Accordingly, after the Wassermann test had shown a positive result, 0·6 gramme of salvarsan was given by intravenous injection. Two hours later excessive vomiting began, with copious watery motions; the temperature was 105°, but this fell in 18 hours to 96°. No urine was passed, in spite of active treatment, for 24 hours following the injection. The mental processes were clouded and there was fleeting delirium. A specimen of urine collected by catheterisation on the day following the injection presented all the features of acute nephritis: blood and casts were found, and the specific gravity was 1030. Within a week, however, all the abnormal constituents had disappeared together with the symptoms. It seems impossible to escape the conclusion, particularly in regard to the second case, that salvarsan administered intravenously can provoke acute inflammation of previously healthy kidneys.

THE PHYSIOLOGY OF THE MARCH.

THE danger of heat-stroke from a heavily clothed person taking severe exercise on a warm day, particularly on a warm, moist day, is not generally appreciated, though fatalities have resulted at military manœuvres and operations. In an interesting article published in the *Journal of the Royal Army Medical Corps* for July Lieutenant-Colonel C. H. Melville, R.A.M.C., has lucidly discussed this danger in particular and the physiology of the march in general. He aptly compares the human body during exertion to a petrol or other internal combustion engine. The nervous impulse corresponds to the spark and the combustion in the muscles of certain constituents (consisting of carbon and hydrogen) to the explosion of the petrol. In both not only is work done, but as a necessary concomitant heat is generated and provision is made for its dissipation. In the body it is carried by the blood-stream to the surface, where it passes off by evaporation of moisture, radiation, and convection, of which the first is the most important. In the motor-car a water circulation is provided by which the heat is removed from the engine to the radiator, where it passes off. If the dissipation of heat is interfered with fever or heat-stroke is produced in man, an over-heated engine in the car, and in both serious injury may result. During severe exertion the rise in temperature is considerable. In a series of observations Dr. M. S. Pembrey and Captain Parker, R.A.M.C., found that in soldiers marching under varying conditions of load the temperature rose on an average 2·3° F. Such a rise is physiological and may be regarded as a danger signal. A temperature of 103° may be taken as the point where danger begins. Taking the normal temperature at rest as 98·6°, man has then a margin of safety of 4·4°. Taking the normal temperature of exercise as 101 6°, the margin is reduced to 1·4°, and here the danger lies. The danger is much greater in the soldier marching than in the civilian, because the civilian is at liberty, by varying his clothing, his pace, and load, to minimise the production of heat and facilitate its dissipation; the soldier is not. The importance of the load carried is shown by an experiment on the same man on the same march, on level ground on different days of approximately the same temperature. On the first occasion he was in drill order and his temperature rose less than ½°. On the second occasion he was in marching order, and his temperature rose 1°. If the load be materially increased to, say, 60 pounds, and the march long, and the conditions of weather unfavourable, the temperature may rise considerably. The German physiologist Zuntz has observed that a march of 15 miles with a load of 68 pounds sent up the temperature of men to 102·5° and higher. Those whose temperature rose to 103° or more had flushed purple faces and a vacant stare, and were obviously on the verge of breaking down. A load of 48 pounds on a very hot day had the same effect in raising the temperature as a load of 68 pounds on a cool day. The temperature produced is affected by the pace in two ways. Suppose a certain load is carried a certain distance in ten minutes, and again in five minutes. In the second case only half the time is given to dissipate the heat produced, while more heat is produced because the human body engine, like all other engines, has a normal speed at which it works with the greatest economy. Any variation above or below normal is uneconomical, and more heat is produced in proportion to the work done. All clothing interferes with the dissipation of heat because it interferes both with the evaporation of perspiration and with radiation. Even a slight difference in clothing is important. Five men were marched in drill order on two occasions—on the first with, and on the second without, their jackets. In the former case their temperatures rose 1½°, in the latter 1°. The obvious corollary is that soldiers should be ordered to open their jackets during severe exertion. Yet this is often neglected at manœuvres. A historical instance of the effect of difference of clothing on the endurance of troops is furnished by the attack on Chin-Kiang-Foo in the first Chinese war. The 9th regiment, healthy and strong, having just landed, ascended the heights dressed according to regulation. The heat was intense, and numbers fell dead from heat-stroke. The 18th, 49th, and 55th regiments, equally exposed to the sun, but with their jackets opened and stocks removed, did not lose one man from this cause.

TUBERCULOUS OSTEOMYELITIS OF THE SYMPHYSIS PUBIS.

IN the *Canadian Medical Association Journal* for September Dr. Francis J. Shepherd has reported an interesting case, describing it as one of tuberculous osteomyelitis of the symphysis pubis. A telegraph operator, aged 33 years, was admitted into the Montreal General Hospital on Jan. 26th, 1911, suffering from a large swelling in the lower abdomen. Excepting an attack of rheumatism he always enjoyed good health. Fourteen months before admission, while lifting hay, he gave himself a wrench, he thought, of the right hip. After two days the pain subsided, but three weeks later he again had sharp pains in his right hip when he walked or spread his legs apart. He limped until March, 1910, when he sought medical advice, under which he improved, but soreness still remained in the hip-joint, especially when he abducted his leg or when he lay on his right side. Flexion and extension were free and painless. In November, 1910, he noticed a small lump under the skin midway between the umbilicus and symphysis pubis.

It was of about the size and shape of the little finger and lay transversely. It was not tender or painful. He did not suffer from night sweats or lose weight. The swelling increased considerably and thinking that it was a hernia he wore a truss which, he said, gave relief. The pulse and temperature were normal. On examination a freely moveable mass extending two and a half inches on either side of the middle line was found between the umbilicus and symphysis pubis. The skin was not involved and there was no heat or redness. The swelling protruded from the abdomen and seemed to be external to the muscles. It fluctuated in the centre. Rectal examination revealed nothing. The right hip joint was normal in appearance and movement. There were no dilated veins. Under anæsthesia an incision was made above the pubis and a large quantity of flaky odourless pus was evacuated. On inserting the finger a large cavity was felt in the symphysis, containing a sequestrum and some cheesy matter. The sequestrum was removed, the cavity scraped out, and the opening closed. Another opening was made directly over the cavity, through which iodoform gauze packing was introduced. After a few days this was removed and bismuth paste was introduced. The wound healed rapidly and the patient was discharged on Feb. 28th able to walk, and without pain in the hips or pelvis.

MORTALITY IN A PUBLIC SCHOOL RECORD.

A GATHERING of "Old Boys"—former scholars of some particular school—is both a gay and a sad affair. They meet together, once a year it may be, at the Old Boys' Dinner, and one espies on every hand the familiar faces of one's early youth, mounted on incongruous or decrepit bodies. Where there is no excess of intellect—and who will be so bold as to say that public-school life in the fourth and fifth forms promotes intellectuality unduly?—where, too, the emotional life has been *nil*, the average Briton's face changes very little in the course of a life-time. It is possible to recognise, after the lapse of some forty years, the face of Jones IV., say, whom one last saw in the midst of some sanguinary school-boy fight at "the back of the fives courts" at the old school. The face will appear almost as boyish as of yore, save that, perhaps, it will be thatched with scanty grey hair, though its pedestal, the human frame, will display varying losses of symmetry. The ageing man, however, is more impressed by what he does not see than by what he does see on these occasions. He now misses his friends. After the age of 40 the mortality of the public school-boy begins to be apparent. An admirable contribution to the literature of school registers, the third edition of "The Register of Tonbridge School from 1826 to 1910," has just reached us. The editor is Mr. H. E. Steed of H.M. Office of Works. From this book it becomes obvious that since the "seventies" and early "eighties" death has been singularly busy among the Old Boys. Of what do public school-men die? From the data contained in a school register it is hard to say, but it is possible to infer much from the known characters of the deceased as well as from the incidence of their deaths. We therefore invited the opinion of an old Tonbridgian of the indicated seniority. From him it appears that Tonbridge some 30 or 40 years ago sent quite 40 per cent. of its *alumni* to India or the colonies, and had therefore to bear a large share of the "white man's burden," spoken of by Kipling, and much of its mortality has, presumably, been due to tropical disease. Of an entry of 35 boys into Tonbridge School in September, 1874, one-fifth has departed into the land of shadows. The first form, of which our informant was bottom boy, numbered 18, of whom the eldest is now 51 years old. Two of these have died—the one killed "while in pursuit of Lobengula," while the other, a well-known Congo pioneer under the late H. M. Stanley, succumbed to influenza in West Africa in 1891. The sixth form of that date, September–December, 1874, naturally shows a greater mortality, for the sixth-form boy is, on the average, 18 years old, while the average age of the then lowest form at Tonbridge was 10 or 11 years. Of 11 sixth-form boys 3 have died, and 2 of these died in India and China respectively. Roughly speaking, of the whole number of boys mentioned in this register who were born between 1860–1862—that is to say, about 50 years ago—5½th have died. In other words, 36 or 37 have died out of a total of 190. If from the actuarial point of view the average seems high, it should be borne in mind that of the 36 or 37 at least 20 have died abroad, in Burma, Manitoba, India, sometimes by accident or from disease contracted abroad, as in the case of military men or of an overworked medical officer, like the late Allan Euan Grant, M.B., C.M. Edin., of Madras, who returned to England to die from diabetes in 1902. Of the remaining 16 or 17, one heroically sacrificed his life for a child. This was Francis Stanhope Hawkins, M.B., F.R.C.S. Edin., born 1861, who as house surgeon of Guy's Hospital, died from diphtheria in September, 1888, "contracted while clearing the tube inserted in the throat of a child." He is therefore most honourably out of court. Of the rest, one died from scarlet fever at Keble College, Oxford, one from phthisis, and two while still at school. Much has been written about the after-lives of athletic boys and of vicious boys, some good people writing as if these classes were necessarily the same and some as if they were necessarily different. The perusal of this register does not tend to convince one who remembers something of the boys recorded to hold either that too much athleticism entails an early mortality, or that the kind of youth, darkly referred to by the late Dean Farrar in a certain disagreeable chapter in "Eric, or Little by Little," is more prone to die young than his fellows. The *mauvais sujet* bulks no more largely among the deaths than among the surviving school successes. Many of those who die early are worthy and blameless clergymen; and, *per contra*, among the plumes in the school cap, some of them men of adventure, are those who in their day were voted boys of poor spirit or prigs. A prig, indeed, is often a man of individuality, possessed, in a marked if sometimes perverse kind of way, of that rare quality—moral courage. These school records, like old school gatherings, produce mixed feelings of pleasure and pain to those who read them with personal knowledge, but from an ethnological point of view they have their value.

THE RELATION OF THE ORGANIC PHOSPHORUS CONTENT OF VARIOUS DIETS TO DISEASES OF NUTRITION, PARTICULARLY BERI-BERI.

IN these columns we have from time to time in recent years reported the advances which have been made in our knowledge of beri-beri, which had been until quite lately a most mysterious disease. In the Malayan peninsula and archipelago, as also in the Philippine Islands, many opportunities have been afforded for investigation into the nature of this malady, and much of what we know has come from that quarter. The disease, as it occurs in the Far East, is now generally recognised to be due to a dietary of white rice from which the pericarp of the grain has been removed in the process of "polishing" or milling (the pericarp containing the bulk of the phosphates and other salts), so that the disease is easily prevented by the use of a less highly milled or polished rice, one, in fact, that retains at least a

portion of the pericarp; and beri-beri can also be cured simply by administering with the food of the patient a portion of the "polishings" which are removed from rice in the milling process. In an article in the recently issued number of the *Annals of Tropical Medicine and Parasitology* (Series T.M., Vol. V., No. 2), published by the Liverpool School of Tropical Medicine, Dr. G. C. E. Simpson and Mr. E. S. Edie give an account of some experiments which they had carried out in connexion with the subject. The writers allude to the valuable work done by Schaumann and give a most interesting summary of that investigator's conclusions upon the results of his experiments on animals. They consider that his work has not received the attention in this country that it deserves. Schaumann in 1908, and Fraser and Stanton also a little later and quite independently, discovered that diets which produced peripheral neuritis were invariably poor in phosphorus, and that substances which have the power of preventing this neuritis, such as rice-meal, wheat-bran, katjang beans, yeast and testicular extract, are rich in that substance, so that the smaller the percentage of a diet in phosphorus the greater is its influence in producing beri-beri in man, or neuritis in fowls. It has already been shown by experiments that the animal body has not the power to synthesise the organic phosphorus compounds necessary for the life of the cells from phosphorus-free proteins and inorganic phosphates, but that animal life is dependent for these substances (as for proteins and carbohydrates) on the synthetic powers of the vegetable kingdom. Schaumann as a result of his experiments has formed the opinion that spontaneous or experimental polyneuritis in animals appears to be a disease of metabolism, attributable to the lack of some specific organic phosphorus compounds the identity of which, however, is still uncertain. As regards the form of beri-beri which occurs on sailing-ships, it is pointed out that many of the articles of diet carried on long voyages—such as white rice, white bread, and potatoes—are poor in phosphorus, and that salt meat loses 50 per cent. of its phosphorus by the combined action of the pickle lye and of the water in which it is boiled. Peas and other legumes as a result of a long voyage become mouldy, as well as hard and resistant to cooking even with soda. Schaumann's view seems to be that scurvy may be due to stale vegetables and ship beri-beri to the use of rotten or stale meat, the important factor being the lack of organic compounds of phosphorus. It is also worthy of mention that the preserved meats may have been "denaturised" by excess of heating in the process of preserving. Infantile beri-beri is known to be very common in the Philippines, Japan, and elsewhere. Schaumann's explanation of its cause is that it is associated with a great diminution of phosphorus in the mother's milk, especially in organic combination, and also associated with phosphorus hunger in the mother, resulting in a retention and sparing of phosphorus. Dr. Simpson and Mr. Edie have confirmed Schaumann's conclusions so far as their own experiments have extended. These, however, are to be continued, and a further report will in due course be presented. They believe that in the majority of cases tropical beri-beri is due to a deficiency of organic phosphates in the diet, but in occasional cases it may be due to deficient absorption of organic phosphates by the alimentary tract, or to bacterial infection possibly splitting up the phosphates before absorption, or interfering with the absorptive power of the intestine. They suggest, also, that a whole cycle of other diseases have in all probability a similar etiology, and that among these infantile scurvy, rickets, osteomalacia, &c., may be included. Lastly, the writers discuss the danger of white bread to English children. White bread has given rise to polyneuritis in fowls fed upon it; and as the phosphates are removed with the bran it is possible that children fed largely on such bread might develop disease as the result of deficiency of organic phosphorus in the diet. It is somewhat curious that the wheat-bran rich in phosphates is given to cattle for the purpose of fattening them. Dr. Simpson and Mr. Edie advocate the substitution of wholemeal bread for the white variety. We are not prepared wholly to endorse this recommendation, but there is much material for thought in this interesting paper.

THE ROYAL SOCIETY OF MEDICINE AND DENTAL RESEARCH.

IT has long been felt that dentistry, which has made such wonderful strides within comparatively recent years, would make still more rapid progress if its students could be encouraged to devote their time to research work. Unfortunately, however, few men have the time and money necessary for the pursuit of investigations which are in themselves unprofitable from a monetary point of view, and the Royal Society of Medicine is to be congratulated on having instituted grants in aid of scientific research in connexion with dentistry. These grants are available at all the dental and medical schools in the United Kingdom. The regulations can be obtained from the honorary secretary of the Odontological Section of the Royal Society of Medicine, 15, Cavendish-square, London, W.

THE SUCCESS OF FRENCH TEMPERANCE LEGISLATION.

IN the spring of 1906 we published a series of special articles on temperance legislation in France.[1] Both the French Government and the Paris municipality had resolved to carry into practice the resolutions adopted by the International Congresses of Hygiene in regard to alcoholism. The principle advocated was to combat the consumption of spirits by providing what is termed hygienic drinks at the lowest price possible. This includes all natural wines that have not been fortified or brandied, and pure beer, cider, or perry. On the other hand, spirits such as brandy, gin, whisky, or absinthe, could not be taxed too heavily. Therefore, while taxation on spirits was increased, almost every form of taxation, whether local or national, was removed from natural wines. The city of Paris suffered far and away the greatest financial loss, as it derived a large part of its income from town dues levied on wine and beer. The revenue from *octroi* duties throughout France on hygienic drinks was estimated at £3,466,440, of which the Parisians paid nearly two-thirds. At 10 fr. 62 c. per hectolitre the *octroi* duty on wine yielded £2,050,000 to the income of Paris. Now other taxes have had to be invented to replace this enormous sum, and we were subsequently able to buy wine at 2*d.* the litre in Paris. This wine, analysed in our laboratory, did not of course possess the bouquet, but it had the same composition of high-class and expensive clarets, though it only cost, at the retail price, 1½*d.* per English pint. It was cheaper than beer, and the argument is that when people can get good, wholesome, natural claret at a very low price, they will not drink any large amount of spirits, and therefore drunkenness will disappear. There is little or no drunkenness in wine-growing countries, where wine can be obtained for the asking. Still, the abolition of all taxation was considered a bold experiment. Last week, however, our Paris correspondent sent us the glad news that the venture has proved a great success. Dr. Jacques Bertillon presented 33 diagrams to the Academy of Moral and Political Sciences on Sept. 30th. These related to the consumption of spirits

[1] THE LANCET, March 10th (p. 709), 24th (p. 863), and April 7th (p. 994), 1906.

in as many large towns. Formerly the consumption of distilled spirits was almost the same in all these towns, and varied from 7 to 8 litres of absolute alcohol per head per annum. In the rural districts it was 2·84 litres. To-day, however, with wine so much cheaper, the consumption of spirits has greatly decreased, and the larger the town the greater the reduction. Thus in towns of 4000 to 10,000 inhabitants the figure had fallen to 6 litres, but in towns with a population of over 90,000 the consumption of alcohol now only amounts to 4·23 litres per head. This is a reduction that in some cases must be equal to close upon 50 per cent. and for the larger towns always exceeds 40 per cent. Nor is this an experiment made on a small scale with a group of people, a town or district. It has been carried on now for five or six years by a great nation on a population of 40,000,000 people, descended from different races, living in different climates and according to a great variety of local customs. It is rare, indeed, that such a wholesale experiment can be made, nor do we often obtain such encouraging results. With the quick and easy means of transit that exist there is no reason why we should not have in England claret as good and as cheap as that obtained in the northern non-wine-growing parts of France. The distance may be a little longer, but transit by sea is cheaper than by rail. This year wine is very dear, about 4½*d.* to 5*d.* a litre; but this has been an altogether disastrous and exceptional year. As a rule, excellent new and natural wine can be bought at the vineyard for about 2*d.* the litre.

WE regret to learn the death of Dr. W. R. Huggard, the well-known physician and British Consul at Davos.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH FOR 1910.

City of Glasgow.—Dr. A. K. Chalmers includes in his report an instructive chapter on isolation hospitals, with special reference to their use for whooping-cough and measles. The mortality from both these diseases in Glasgow has long been persistently high, as the following figures show:—

Death-rates per 100,000 of Population in Glasgow and the Rest of Scotland Respectively.

	1855-64.	1865-74.	1875-84.	1885-94.	1895-04.	1905-8.
Whooping-cough.						
Glasgow	164	136	133	106	86	76
Rest of Scotland ...	54	49	52	49	42	36
Measles.						
Glasgow	89	85	63	77	64	56
Rest of Scotland ...	36	31	28	39	34	27

This excessive mortality is also brought out when the Glasgow rates are contrasted with those of certain English cities, which are fairly comparable in point of population and industrial pursuits. During the ten years 1898–1907 the average death-rates from whooping-cough in Liverpool, Manchester, and Birmingham were respectively 48, 44, and 44, against 80 in Glasgow, and from measles 49, 61, and 41, against 57 in Glasgow. Both diseases tend towards death through lung complications, and a marked difference in the temperature of the winter months might be thought to afford an explanation. But the mean temperature from October to March in Liverpool is 41·7°, in Manchester 43·5°, and in Birmingham 42·9°, against 43·0° in Glasgow. Nor will the presence of a large proportion of children at susceptible ages explain the greater prevalence of these diseases in Glasgow, for the birth-rate in Liverpool in the period in question was greater by 2 per 1000, while that in Manchester and Birmingham was practically identical with Glasgow. In Dr. Chalmers's view the important point in which Glasgow in this matter differs from these English cities is its custom of housing in flatted tenements, which affords greatly increased opportunities of infection from both diseases. It is noteworthy that there is no similar contrast in the relative incidence of enteric fever, scarlet fever, or diphtheria. The latter disease, for the same period, produced a death-rate of 15 per 100,000 in Glasgow, against 25, 18, and 21 in Liverpool, Manchester, and Birmingham. In Glasgow it has for many years been the practice to isolate a substantial portion of the known cases of whooping-cough and measles in the city hospitals. The proportion of cases isolated has remained fairly constant during the last 20 years at some 11 to 12 per cent. of the total known cases of measles, and from 19 to 28 per cent. of the total known cases of whooping-cough. A much larger number of total cases has, however, come under supervision in recent years, and the actual numbers isolated have been correspondingly higher. In 1906–09, for whooping-cough and measles respectively, the average annual total of cases registered was 3644 and 11,501, and the corresponding number of cases treated in hospital was 894 and 1355. In considering the advantages which the hospital isolation may have secured, Dr. Chalmers lays stress on the consideration that although the actual mortality rates from whooping-cough and measles are greater in Glasgow than in the rest of Scotland, the rate at which the mortality has been reduced during the past 50 years has been much more rapid in Glasgow in the case of whooping-cough, and somewhat more rapid also in the case of measles. He also points to the fact that in the cases of both diseases the hospital treatment materially lessens the severity and obviates the danger of sequelæ which, if untreated, may permanently impair the health or physical condition of some of those patients who survive the attack. It is clear that a strong case can be made out from the Glasgow records for the continuation and development of the local practice, and now that various other towns are making similar arrangements for isolation of measles and whooping-cough an additional body of evidence bearing on its utility should be available before long. The use to which the Glasgow city hospitals are now put differs greatly from that of past years. Before 1875 the whole hospital administration was dominated by the demand for the admission of typhus fever, which in some years was the cause of 9 out of every 10 admissions. Before 1900 the demand for accommodation for diphtheria was almost negligible, whereas this disease now furnishes from 12 to 17 per cent. of the total admissions. The proportion of the different diseases exercises an important effect on the nature of the accommodation required. When isolation of whooping-cough and measles cases is principally in question provision should be made for large numbers of convalescents in proportion to the acute cases, and should consist mainly of suitable dormitories, nurseries, and playrooms rather than of hospital wards in the ordinary sense. Some 1600 beds are now available at the city hospitals for all infectious diseases apart from small-pox, but Dr. Chalmers points out that this number needs to be increased if provision is to be made on as large a scale as that now available in London, Edinburgh, and Liverpool. A still more pressing need is the erection of a suitable small-pox hospital on a site sufficiently remote from populous centres.

City of Wakefield.—In course of a well-balanced review of the considerations which a municipality should keep in mind when endeavouring to combat tuberculosis, Dr. T. Gibson lays stress, not only on the usual "housing" reforms, but also on the great value of properly laid out open spaces. Whether the application of the Housing and Town Planning Act will secure such spaces on the outskirts, as the city extends, will be seen in a few years, but at the present time this need is very great in or close to the central and more congested areas. Though the inhabitants of Wakefield have easy access to the country, hundreds of people, especially mothers and young children, seldom wander far from their pent-up habitations and dreary surroundings. Dr. Gibson pleads also for old folks who cannot travel far from their doorsteps. In many parts of the town the necessary vacant spaces exist, and the opportunity should be utilised before they pass into the hands of the builder. In course of the medical inspection of school children, he found in 1909 that 95 out of 1649 (5·7 per cent.) and in 1910 82 out of 1900 (4·3 per cent.) presented some abnormality of the heart, and considers that in some at least of these cases it is specially important that advice as to choice of occupation should be given before the child leaves school. The moorland water from which the public supply of Wakefield

is obtained continues to be treated by filtration and made alkaline by the addition of lime, with results which are stated to be satisfactory as regards purity and ability to act on lead. The samples taken under the Sale of Food and Drugs Acts included 16 prescriptions, of which as many as four contained either an excess or a deficiency of the ingredients prescribed.

Urban District of Beckenham.—Dr. J. M. Clements comments upon the prevalence last year in Beckenham of diphtheria of a mild type, the case mortality being only 3·2 per cent. It would seem that clinically many of the notified cases have merely consisted of trivial sore-throats, which have been pronounced to be diphtheria as a result of bacteriological examination of swabs The occurrence of nine cases of diphtheria in the Alexandra school in June and July led to the examination of swabs from the throats of 395 children, in 7 of which diphtheria bacilli were found. It was noteworthy that neither the diphtheria cases nor the carriers were limited to one department or to any particular class, but were scattered irregularly throughout the school. The carriers were excluded until negative results were obtained, and no further spread occurred. The arrangements in this district under the diphtheria antitoxin order of the Local Government Board include supply of antitoxin free to local medical practitioners for use in cases of patients and contacts amongst the poorer classes, and the payment to such practitioners of 2*s.* 6*d.* for each patient and contact treated. The district council decided during the year to allow an additional private slaughter-house in Beckenham, but the local residents seem to have prevented its use. Dr. Clements states that the food sold throughout the district reaches a very high standard of purity. It would be useful for future reports to give supplementary information concerning the nature of the foods to which attention has been given during the year, and the particular forms of adulteration or misdescription which the officers concerned have had in view in arranging for the collection and examination of samples.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7557 births and 4707 deaths were registered during the week ending Oct. 7th. The annual rate of mortality in these towns, which had steadily decreased from 21·2 to 15·5 in the six preceding weeks, further declined to 15·2 per 1000 in the week under notice, and was 1·4 per 1000 below the mean annual rate recorded during the third quarter of the present year. In London the death-rate last week was equal to 15·0 per 1000, while the recorded rates in the other large towns ranged from 6·4 in Devonport, 8·3 in King's Norton, and 8·7 in Willesden, to in Burton-on-Trent, and in Coventry to 21·2 in Oldham and in Barrow-in-Furness, 21·6 in Bootle and in Wigan, and 23·9 in Tynemouth. The 4707 deaths from all causes in the 77 towns last week were 97 less than the number returned in the previous week, and included 802 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 1056 in the six preceding weeks. Of these 802 deaths, 628 resulted from infantile diarrhœa, 55 from whooping-cough, 46 from diphtheria, 37 from enteric fever, 18 from measles, and 18 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 2·6 per 1000 against 5·0 and 3·4 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœal diseases, which had steadily decreased from 2714 to 886 in the six preceding weeks, further declined last week to 628, and caused the highest annual death-rates of 4·5 in Walsall, 5·0 in Warrington, 5·1 in Stoke-on-Trent, and 6·9 in Burnley. The deaths referred to whooping-cough, which had been 55, 61, and 51 in the three preceding weeks, rose to 55 last week, and included 11 in London and its suburban districts, 6 in Leeds, 5 in Derby, 4 in Birmingham, and 4 in Leicester. The fatal cases of diphtheria, which had increased from 27 to 46 in the three preceding weeks, were again 46 last week; 14 deaths were recorded in London and its suburban districts, and 3 each in Portsmouth, Stoke-on-Trent, Liverpool, Preston, and Leeds. The deaths attributed to enteric fever, which had decreased from 41 to 35 in the three preceding weeks, were 37 last week, and comprised 12 in London and its suburban districts, 3 in Huddersfield, and 2 each in Grimsby, Liverpool, St. Helens, and Cardiff. The deaths referred to measles, which had declined from 59 to 19 in the seven preceding weeks, were 18 last week, and was the lowest number recorded in any week of the current year; 4 deaths occurred in London, 2 in Wolverhampton, and 2 in Manchester. The 18 fatal cases of scarlet fever were 3 in excess of the average recorded in the three preceding weeks, and comprised 4 in London, 3 in Stoke-on-Trent, and 2 each in Birmingham, Liverpool, Manchester, and Hull. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had increased from 1327 to 1666 during the five preceding weeks, had further advanced to 1793 on Saturday last; 293 new cases of this disease were admitted to these hospitals during the week, against 264, 240, and 333 in the three preceding weeks. These hospitals also contained on Saturday last 973 cases of diphtheria, 218 of whooping-cough, 169 of enteric fever, and 87 of measles, but not one of small-pox. The 1301 deaths from all causes in London last week were 48 less than the number in the previous week, and included 172 which were referred to diseases of the respiratory system, against numbers steadily increasing from 73 to 149 in the five preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had declined from 171 to 134 in the four previous weeks, rose again to 156 last week, and 374 inquest cases were registered. The causes of 27, or 0·6 per cent., of the deaths registered in the 77 towns during the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified last week in Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, Stoke-on-Trent, Salford, and in 52 other smaller towns. The 27 uncertified causes of death last week included 5 in Liverpool, 3 in Birmingham, and 2 each in Manchester, Sheffield, Hull, and Tynemouth.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 825 births and 490 deaths were registered during the week ending Oct. 7th. The annual rate of mortality in these towns, which had been 15·7, 16·7, and 15·2 per 1000 in the three preceding weeks, declined to 14·9 in the week under notice. During the 13 weeks of the third quarter of this year the annual death-rate in these towns averaged 15·2 per 1000, and was 1·4 per 1000 below the mean rate during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 11·6 and 12·3 in Leith and in Paisley to 15·4 in Edinburgh and 19·0 in Dundee. The 490 deaths from all causes in the eight towns were 9 fewer than the number in the previous week, and included 60 which were referred to the principal epidemic diseases, against numbers declining from 134 to 78 in the five preceding weeks; of these 60 deaths, 33 resulted from diarrhœa, 11 from diphtheria, 8 from scarlet fever, 4 from measles, 3 from whooping-cough, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·8 per 1000, and was 0·8 below the mean death-rate from the same diseases in the 77 large English towns. The deaths attributed to diarrhœal diseases, which had steadily fallen from 113 to 52 in the five preceding weeks, further declined to 33 last week and included 26 of infants under two years of age; 16 deaths were recorded in Glasgow, 8 in Dundee, and 4 in Aberdeen. The deaths referred to diphtheria, which had been 10, 5, and 13 in the three preceding weeks, were 11 last week, and included 4 in Glasgow and 2 in Perth. The fatal cases of scarlet fever, which had been 2, 5, and 3 in the three previous weeks, rose last week to 8, and comprised 4 in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The 4 deaths attributed to measles were 3 in excess of the number in the previous week, and included 2 in Glasgow. The deaths referred to whooping-cough, which had been 12 and 8 in the two preceding weeks.

declined to 3 last week, and comprised 2 in Glasgow and 1 in Aberdeen. The fatal case of enteric fever was registered in Glasgow. The deaths referred to diseases of the respiratory system, which had increased from 41 to 62 in the three preceding weeks, further rose last week to 78, and were 6 above the number in the corresponding week of last year. Of the 490 deaths from all causes in the eight towns last week, 170, or 35 per cent., were recorded in public institutions, and 28 deaths were attributed to different forms of violence. The causes of 10, or 2·0 per cent., of the deaths in the eight towns last week were not specified or not certified; in the 77 English towns the proportion of uncertified causes last week did not exceed 0·6 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 565 births and 431 deaths were registered during the week ending Oct. 7th. The annual rate of mortality in these towns, which had been 20·4 and 18·0 in the two preceding weeks, rose to 19·6 per 1000 in the week under notice. During the 13 weeks of the third quarter of this year the annual death-rate in these Irish towns averaged 18·3 per 1000; in the 77 English towns during the same period the mean annual death-rate was equal to 16·6, whilst in the eight Scotch towns it did not exceed 15·2 per 1000. The annual death-rate last week was equal to 22·1 in Dublin (against 15·0 in London), 17·3 in Belfast, 25·2 in Cork, 7·7 in Londonderry, 20·4 in Limerick, and 19·0 in Waterford; whilst in the 16 smallest of these Irish towns the mean annual death-rate did not exceed 19·0 per 1000. The 431 deaths from all causes in the 22 Irish towns were 35 in excess of the number returned in the previous week, and included 81 which were referred to the principal epidemic diseases, against 122 and 95 in the two preceding weeks; of these 81 deaths, 71 resulted from diarrhœal diseases, 4 from enteric fever, 3 from scarlet fever, 2 from measles, and 1 from whooping-cough, but not one from small-pox or from diphtheria. These 81 deaths from the principal epidemic diseases were equal to an annual death-rate of 3·7 per 1000. The mean rate from the same diseases in the 77 English towns last week was equal to 2·6, while in the eight Scotch towns it did not exceed 1·8 per 1000. The deaths attributed to diarrhœal diseases, which had decreased from 121 to 81 in the three preceding weeks, further declined to 71 last week, and included 66 of infants under two years of age; 33 deaths were recorded in Dublin, 18 in Belfast, and 5 in Cork. The 4 deaths attributed to enteric fever were 1 in excess of the average in the four preceding weeks, and comprised 2 in Dublin and 2 in Belfast. The 3 fatal cases of scarlet fever were equal to the average in the four preceding weeks, and were registered in Dublin, Belfast, and Ballymena respectively. The 2 deaths referred to measles occurred in Newtownards, and the fatal case of whooping-cough in Belfast. The deaths referred to diseases of the respiratory system, which had averaged 43 in the four preceding weeks, rose to 64 last week. Of the 431 deaths from all causes in the Irish towns last week, 139, or 32 per cent., were recorded in public institutions, and 8 deaths were attributed to different forms of violence. The causes of 10, or 2·3 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes of death in the week under notice did not exceed 0·6 per cent. in the 77 large English towns, but equalled 2·0 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeons: T. T. Jeans to the *Vivid*, additional, for the *Dartmouth*: T. C. Meikle to the *Dryad*; and J. A. L. Campbell, to the *Carnarvon*. Staff-Surgeon: G. C. C. Rose to the *President*, for the *Maine*. Surgeons: J. McCutcheon to Chatham Hospital as anæsthetist and radiographer on conclusion of course; R. Connell to the *President*, additional, for three months' special course of study at West London Hospital, and to Plymouth Hospital as anæsthetist and radiographer on conclusion of course; A. B. Marsh to Haslar Hospital; and H. E. Perkins to the *Hibernia*.

2ND LIFE GUARDS.

Captain Evelyn John Hansler Luxmoore, from the Royal Army Medical Corps, to be Surgeon Captain (dated Sept. 27th, 1911).

ARMY MEDICAL SERVICE.

Colonel Alfred Peterkin is placed on retired pay (dated Oct. 2nd, 1911).

Lieutenant-Colonel Herbert J. Barratt, from the Royal Army Medical Corps, to be Colonel, vice A. Peterkin (dated Oct. 2nd, 1911).

ROYAL ARMY MEDICAL CORPS.

Major Herbert I. Pocock to be Lieutenant-Colonel, vice H. J. Barratt, promoted (dated Oct. 2nd, 1911). Major Edgar McK. Williams retires on retired pay (dated Oct. 4th, 1911). Major Arthur O. B. Wroughton, from the Half-pay List, is restored to the establishment (dated Sept. 20th, 1911). Captain Ernest Blake Knox to be Major.

Lieutenant-Colonel W. T. Swan, commanding the Fourth and Fifth Companies of the Royal Army Medical Corps and in charge of the Royal Victoria Hospital at Netley, has been selected for the higher rate of pay under Article 317 of the Royal Warrant. Lieutenant-Colonel S. Hickson has taken over medical charge of the Cambridge Hospital at Aldershot. Lieutenant Colonel S. C. Chilson, commanding the Station Hospital at Bareilly, has arrived home on leave of absence. Lieutenant-Colonel J. Donaldson, in medical charge of the Infectious Diseases Hospital at Aldershot, has been detailed by the War Office for a tour of service in South Africa and will embark during the coming trooping season. Lieutenant-Colonel W. H. Starr, on return from a tour service in Burma, has taken up duty at the Military Hospital, Lichfield. Major A. O. B. Wroughton, on return from leave of absence on medical certificate on half-pay, has been appointed to the Eastern Command for duty. Major H. O. B. Browne Mason has been appointed Specialist in Dermatology and Venereal Diseases to the Sixth (Poona) Division by the Principal Medical Officer of His Majesty's Forces in India. Major O. L. Robinson has been transferred from Kirkee to the Station Hospital at Poona for general duty. Major F. J. Brackenridge, specialist in state medicine, has been appointed to the medical charge of troops at Oxford. Major S. A. Archer has arrived home on leave of absence from Jullundur. Captain G. Baillie has joined the London District for duty on return from the West Coast of Africa. Captain E. Scott-Worthington, M.V.O., has been struck off the strength of the London District and has taken up duty as medical officer on the staff of H.R.H. the Duke of Connaught, Governor-General of Canada. Captain F. Forrest, stationed at Bangalore, has been granted eight months' leave of absence home from India. Captain F. J. Stuart has been transferred from the Eighth (Lucknow) Division to the Seventh (Meerut) Division as Specialist in Dermatology and Venereal Diseases. An exchange of position on the roster for service abroad has been sanctioned by the War Office between Captain A. F. Weston and Captain A. H. McN. Mitchell. Captain P. Davidson, D.S.O., has been appointed Company Officer at the Royal Army Medical Corps Depôt, Aldershot. Captain E. W. Powell and Captain A. H. Safford, specialists in the prevention of disease, have resumed charge of the Brigade Bacteriological Research Laboratories at Aden and Fyzabad respectively. Captain F. A. McCammon has been granted one month's extension of his leave of absence home from India. Captain E. V. Aylen has been transferred from the First (Peshawar) Division to the Second (Rawal Pindi) Division, and appointed Specialist in Dermatology and Venereal Diseases in succession to Captain D. de C. O'Grady, who has taken up duty at Peshawar in the same capacity. Captain D. S. Skelton and Captain J. E. Powell have been posted to the Northern Command for duty. Captain F. M. M. Ommanney, company officer of the 9th Company Royal Army Medical Corps, Colchester District, has been granted leave of absence preparatory to joining the Royal Army Medical College, London, for the promotion course for Captains commencing on Nov. 1st next. Captain H. B. Connell, on the termination of leave granted for duty on the

West Coast of Africa, has been appointed to the Irish Command and posted for duty at the Royal Infirmary, Phœnix Park, Dublin. Captain C. R. Sylvester Bradley has been appointed a Specialist in Physical Training and posted for duty to the Military Hospital at Cosham on completion of the course for promotion held recently at the Royal Army Medical College, London. Lieutenant F. W. M. Cunningham, from the Curragh, has taken up duty at Donard Camp. Lieutenant M. J. Williamson, from medical charge of the 18th Hussars at Hamilton Camp, Salisbury Plain, has been posted to the Military Hospital at Tidworth. Lieutenant E. C. Stoney has joined at Colchester on the return of Major C. W. Allport to the medical charge of the Military Hospital at Great Yarmouth.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel C. N. C. Wimberley has been selected by the Commander-in-Chief in India for appointment as Staff Officer of Medical Mobilisation Stores to the Sixth (Poona) Division, in succession to Major T. A. Granger, whose tenure of the appointment has expired. Lieutenant-Colonel Lloyd-Jones has taken up duty as Assay Master in the Bombay Mint in succession to Lieutenant-Colonel A. Milne, who has retired from the service. Lieutenant Colonel E W. Hore, second class agency surgeon, Bengal Presidency, has been granted six months' leave of absence home from India. Lieutenant-Colonel A. Street, on expiration of his leave of absence, has been permitted by His Majesty's Secretary of State to return to India for duty. Major R. F. Baird, from Mainpuri, has been selected to succeed Major R. G. Turner as Civil Surgeon at Gonda during the latter's absence on leave. Major W. Lethbridge, in medical charge of the Mewar Bhil Corps, has been granted one month's leave of absence. Major W. H. Kenrick, on special duty in connexion with the investigation of malarial fevers in India, has been attached to the office of the Sanitary Commissioner of the Central Provinces. Major J. Penny has been granted six months' extension of leave on medical certificate. The services of Captain G. Holroyd have been placed at the disposal of the Government of Bengal as a temporary measure for employment in the Jail Department of the Bengal Presidency. Captain A. D. White, officiating resident surgeon at the Medical College, Calcutta, has been selected for appointment as Second Resident Surgeon in the Presidency General Hospital, Calcutta, during the absence on deputation of Captain J. Masson. Captain H. E J. Batty has taken up duty as Civil Surgeon in the Malakand District, relieving Captain C. H. Cross. Captain A. Cameron has been appointed District Plague Medical Officer at Delhi. Captain Lee Abott has relinquished charge of the Ferozopore Central Jail. The services of Captain M. F. Reaney have been placed permanently at the disposal of the Honourable the Chief Commissioner of the Central Provinces. Captain R. B. Nicholson has been selected for appointment as Medical Officer to the 36th Jacob's Horse. Captain E. J. C. MacDonald has taken up duty as District Plague Medical Officer at Gurgaon.

TERRITORIAL FORCE.

Honourable Artillery Company.

Surgeon-Major Edward H. Myddelton-Gavey resigns his commission, retires into the Veteran Company, and is granted permission to retain his rank and to wear the prescribed uniform (dated Oct. 4th, 1911).

Yeomanry.

Royal East Kent (The Duke of Connaught's Own Mounted Rifles) Yeomanry: Surgeon-Lieutenant Campbell T. Fox to be Surgeon-Captain (dated August 26th, 1911).

Royal Engineers.

2nd London Divisional Engineers, Royal Engineers: Surgeon-Major William H. Bourke resigns his commission and is granted permission to retain his rank and to wear the prescribed uniform (dated Oct. 4th, 1911).

Infantry.

4th Battalion, The Welsh Regiment: Surgeon-Lieutenant William R E. Williams to be Surgeon-Captain (dated July 30th, 1911).

4th Battalion, The Oxfordshire and Buckinghamshire Light Infantry: Surgeon-Major Julius O. Sankey retires, under the conditions of Paragraph 116 of the Territorial Force Regulations, and is granted permission to retain his rank and to wear the prescribed uniform (dated Oct. 7th, 1911).

Royal Army Medical Corps.

1st Home Counties Field Ambulance, Royal Army Medical Corps: Lieutenant Sidney W. Milner resigns his commission (dated Oct. 4th, 1911).

1st London (City of London) Field Ambulance, Royal Army Medical Corps: Lieutenant Arthur Donald John Bedward Williams, from the List of Officers attached to Units other than Medical Units, to be Lieutenant (dated Sept. 7th, 1911).

2nd Eastern General Hospital, Royal Army Medical Corps: Hugh Nethersole Fletcher to be Captain (dated Oct. 4th, 1911). Frederick Arundel Stewart Hutchinson to be Captain (dated Oct. 4th, 1911).

1st Western General Hospital, Royal Army Medical Corps: Captain Robert C. Dun resigns his commission (dated Oct. 7th, 1911).

For Attachment to Units other than Medical Units.—Horace Guy Lankester Haynes (late Cadet Sergeant, Cambridge University Contingent, Senior Division, Officers Training Corps) to be Lieutenant (dated June 18th, 1911). Robert Craig Dun (late Captain, 1st Western General Hospital, Royal Army Medical Corps) to be Lieutenant (dated Oct. 7th, 1911).

Attached to Units other than Medical Units.—Captain David Walker to be Major (dated July 27th, 1911). Supernumerary Lieutenant David A. Hughes to be Captain (to remain supernumerary) (dated July 28th, 1911) Captain Herbert Meggitt resigns his commission (dated Oct. 7th, 1911). Captain Alexander H. Pirie resigns his commission (dated Oct. 7th, 1911). Captain John Forbes resigns his commission (dated Oct. 7th, 1911). Captain Charles Ernest Goddard, from the 1st London (City of London) Sanitary Company, Royal Army Medical Corps, to be Major (dated July 3rd, 1911).

The undermentioned officers resign their commissions (dated Oct. 4th, 1911):—Captain George R. F. Stilwell. Lieutenant Herbert P. S. Devitt.

EXAMINATION FOR COMMISSIONS IN THE ROYAL NAVY MEDICAL SERVICE.

The next examination of candidates for Commissions in the Royal Navy Medical Service will be held at Examination Hall, Thames Embankment, on Nov. 20th next and following days, when 15 Commissions will be offered. The regulations for entry and the form to be filled up by candidates will be supplied on application to the Medical Director-General, Admiralty, S.W.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

A short article in the October issue of the above journal which will be read with much interest reviews the Manuals of Physical Training in Germany, Austria, and Great Britain. The author, Captain J. A. Black, compares the methods of physical training in use in the armies of the different countries mentioned, and points out the direction in which our own system of physical training might be amplified. Incidentally Captain Black expresses the opinion that swimming should be taught in our army, and he appears to think that the addition of a swimming bath to every gymnasium is a counsel of perfection which is not likely to be realised. It is difficult, however, to imagine on what grounds the authorities could refuse to sanction so important an addition to the means for physical training, and for securing cleanliness, in the army. Captain Black's remarks on "obstacle training" deserve careful attention, as they not only show that training in the gymnasium in this connexion may be for all practical purposes useless, but also point out how the exercises if they are to be effective should be carried out. Lieutenant-Colonel C. H. Melville adds a note dealing with a new issue of *Turnvorschrift für die Infanterie* (Manual of Physical Training for Infantry), at the conclusion of which he says: "It is interesting to note that we who as a nation have always prided ourselves on getting our physical training out of our games should now be turning to formal exercises for that purpose, while the leading military nation on the continent is showing a distinctly opposite trend." The report on "An Experimental March to Investigate the Amount of Food Required by Men on Active Service" is continued.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—IN the *Daily News* of Oct. 3rd Dr. Macnamara was reported as having said to the Old Kent-road Brotherhood that he had received a letter from Mr. Lloyd George on the Insurance Bill, in which the Chancellor of the Exchequer stated: "You may tell your friends in London that the Government means to press the Insurance Bill through during the autumn session. There is no idea of abandoning any part of it. We shall stand or fall by it as a whole. The suggestion that we should at this stage divide the benefits—carry a third of them on to the Statute Book this session and postpone the rest—is a particularly fatuous one. No one who knows anything about the Bill or its history could ever have made such a proposal. Parliament has already after weeks of discussion settled the benefits. When we meet we shall proceed to a consideration of the machinery of distribution and control." If, therefore, the Bill is to be thrust through in its present form, as the Chancellor of the Exchequer seems to imply, it is now necessary to survey the position of the measure in so far as it affects the medical profession, and the degree in which the demands of that profession have been met.

These demands were definitely formulated in the six points which were laid down in the circular of June 3rd of the British Medical Association submitted to Members of Parliament by numerous deputations. The six points demanded were:—

1. An income limit of £2 a week for those entitled to medical benefit.
2. Free choice of doctor by patient, subject to consent of doctor to act.
3. Medical and maternity benefits to be administered by Local Health Committees and not by Friendly Societies.
4. The method of remuneration of medical practitioners adopted by each Local Health Committee to be according to the preference of the majority of the medical profession of the district of that committee.
5. Medical remuneration to be what the profession considers adequate, having due regard to the duties to be performed and other conditions of service.
6. Adequate medical representation among the Insurance Commissioners, in the Central Advisory Committee, and in the Local Health Committees, and statutory recognition of a Local Medical Committee representative of the profession in the district of each Health Committee.

So far as the Bill at present stands, though in many cases the amendments adopted in committee are conflicting, very little real concession has been granted.

1. The only income limit in the Bill is that of the income tax—namely, an income of £160 per annum—although Local Health Committees are empowered at their discretion to fix an income limit, and persons whose income exceeds this limit are to make their own arrangements for medical attendance and treatment. The £2 per week income limit suggested by the British Medical Association was rejected, and all that has been secured is a limit which may vary under different local conditions.

2. The principle of the free choice of doctor, "subject to consent of doctor to act," has been conceded, but unless the wording of Clause 14, Section 1, Subsection 2 (d), be amended, the doctor will have no option of refusal. The passage runs as follows: (Local Health Committees are to adopt such system as will secure) "the distribution amongst and, so far as practicable, under arrangements made by the several practitioners whose names are on the lists of the insured persons who, after due notice, have failed to make any selection, or who have been refused by the practitioner whom they have selected." The importance of this provision cannot be over-rated, and must in any case afford ground for constant disputes. The reasons for rejection by practitioners are obvious—age, chronic ill-health, residence at an extreme distance, any of these form a valid ground for rejection of attendance on the ordinary terms. Yet I can find no instructions to the local committees to allow any increase of fees for attendance on such persons, and there is a just fear that practitioners will find it impossible to refuse such cases, under the present wording of the provision. The words, "so far as practicable," are obviously capable of meaning nothing at all.

3. The removal of the control of medical benefits from the hands of Friendly Societies has been, in effect, very partially allowed, although the principle was carried by a large majority in Parliament. Not to mention the large representation of the Friendly Societies on the Local Health Committees, the Bill as it now stands contains a section of Clause 14—namely, Section 4, which provides that any system or organisation providing medical attendance and treatment and existing at the time of the passing of this Act if approved by the Local Health Committee and the Insurance Commissioners may be maintained. This section obviously covers the case of all existing medical clubs and associations. Thus it would seem that the Friendly Societies may still retain control of their medical benefits and their medical officers, and therefore the principle of the removal of control is largely nullified.

4 and 5. These two points dealing with the method and amount of remuneration are not considered in the Bill. If we may judge from the example of the Vaccination and Poor-law Acts the matter will be left in the hands of the Local Health Committees, though without the legal minimum of payment which at present exists in the case of vaccination; and it is quite evident that not much is to be expected in the way of support from the Insurance Commissioners when any demand for an increase in pay is made.

6. This point, dealing with adequate medical representation, has been nominally granted, though what the Government's idea of the meaning of the word "adequate" is remains to be seen. At present we only know that the medical profession will be represented on administrative bodies.

From this survey of the position as it is at present it is plain that the demands of the British Medical Association have been granted only to a very limited extent. Those points which are dealt with in the Bill—namely, points 1, 2, 3, and 6—are treated in such a way that what is given with the one hand is largely taken away with the other. The remaining points—namely, 4 and 5—dealing with the method and amount of remuneration, are left on one side, the Chancellor of the Exchequer's probable intention being to remit the matter to local administrative bodies. In this way the medical profession may be fought in scattered detachments, and it will be necessary for the medical profession (if the rank and file are to preserve the power of making a competent livelihood) to offer an obstinate resistance. What may be called the staff organisation of the profession has, I consider, already been out-generalled in the engagements which have at present taken place. It is now necessary for the units composing the medical forces—namely, the various local bodies of medical men—to see that in the probable forthcoming fights with local administrative bodies a strenuous resistance is offered to those whose wish it is to exploit the labours of the medical profession.

I am, Sir, yours faithfully,

Westerham, Kent, Oct. 6th, 1911. ARTHUR MAUDE.

To the Editor of THE LANCET.

SIR,—Will you permit me to make a short reply to the letters you have published criticising my suggestion as to a State Medical Service? I gather from these letters that there are only three alternatives to control by the State—1. That the profession should be controlled by Friendly Societies, either themselves or under the name of Health Committees, and should be left in each separate district to bargain with them as to remuneration. 2. That with the control of Health Committees fees should be paid for each separate attendance on persons insured. 3. That the medical benefits under the Bill should be dropped, leaving the people without any medical attendance except as at present in force.

1. I have pointed out the disadvantages of the question of remuneration being left open, and I purposely did not allude to the proposed medical representation on the Health Committees, as I thought it was clear to everyone that one or two medical men on a committee composed of representatives of Friendly Societies, local boards, and insured persons could have no weight, and in fact would not be listened to on a question of medical remuneration. 2. The suggestion of payment by fee for each attendance is a delightful dream, but purely Utopian and out of the range of practical politics, as it would land the Insurance Fund in bankruptcy in the

first year. 3 The proposal to drop the medical benefits is to my mind unthinkable; the great feature of this magnificent measure is the giving of full and sufficient medical service to people who have never been able to afford it, so that the health and therefore well-being of the nation shall be immensely increased.

I cannot see any objection to control by a department of the State which would consider the representations of medical men, Friendly Societies, and all others interested, but would be responsible for the appointment of medical officers and for an efficient and up-to-date medical service; nor can I see any chance of such a service degenerating into a glorified version of the present Poor-law Medical Service, which is condemned on every side and has but a short lease of life. I am, Sir, yours faithfully,

South Hampstead, N.W., Oct. 7th, 1911. ALBERT BENTHALL.

THE NOMENCLATURE OF SPINAL DEFORMITIES.

To the Editor of THE LANCET.

SIR,—It appeared to me that in his article of Sept. 2nd Mr. R. Timberg was particularly careful in his terminology when dealing with lateral curvature of the spine, and herein my impression differs from that of Mr. Paul B. Roth. I do not agree with Mr. Timberg's explanation of the cause of rotation of the vertebræ in lateral curvature, but I am very certain that he recognises the three distinct stages through which a lateral curvature passes, and a consideration of these three stages will do much to bring about that unity of expression which his critic advocates.

The first stage is that in which the spine assumes a lateral curve without any rotation. Experiments upon the cadaver have shown me the all-important influence of the presence of the ribs in the dorsal region upon the commencement of rotation, and that this first stage is limited by the amount of play in the costo-vertebral articulations. When this play has been taken up on the convex side of the curve the tubercles of the ribs on that side become firmly applied to the tips of the transverse processes of the vertebræ, with the result that further lateral movement of the posterior part of the column is resisted and a rotation is initiated which the forces bending the column outwards are bound to increase. This first stage must not be called skoliosis—there is no rotation or "twisting," and it is correctly alluded to by Mr. Timberg as "lateral deviation."

The second stage is that in which rotation and further side movement of the spine are accommodated by the general mobility of the thorax derived from the elasticity of the ribs and of their cartilages. The third stage commences when the extent of the said elasticity of the thoracic cage is reached, so that the ribs yield to prolonged and increasing pressure, and permanent bending, leading to fixation of the deformity, takes place. Both second and third stages are correctly termed skoliosis.

Bearing in mind these three stages, Mr. Timberg's meaning in the two following sentences is surely very clear: "At first it is merely a lateral deviation, but an added rotation of the interested vertebræ will soon convert it to a more or less fixed scoliosis." "The simple lateral deviation is generally easily amenable to treatment; and a curve in the second degree of severity—i.e., a true scoliosis, but not yet fixed—is, in favourable circumstances, capable of perfect recovery."

These three stages in the progress of a lateral curvature constitute the anatomical foundation of a classification of cases which may be set forth as follows:—Grade I.: Those in which the spine may be straightened out to normal by posture. Grade II.: Those in which the spine may be straightened out to some extent by posture, but in which some measure of the deformity still remains owing to bony displacement being maintained by muscular and ligamentous shortening. Grade III.: Those in which the deformity is so confirmed that radical changes in the shape of the ribs, and inferentially of the vertebræ, are palpable, and in which the alteration produced by posture is inconsiderable. These three grades pass imperceptibly one into the other, and the borderland between Grades II. and III. presents some cases occurring in patients of the "rigid" type, of which a correct estimate cannot be formed until the thoracic cage has been rendered mobile by means of suitable exercises. But, with experience in examination, there is little difficulty in relegating any one case to its proper grade; the distinction is about as definite as that between degrees of burn. Here, then, we have an example of a clear and rational way out of complex terminology, and I suggest that we follow the method adopted long ago by the Berlin school and classify our cases of lateral curvature as of Grade I., II., or III., as the case may be.—I am, Sir, yours faithfully,

J. S KELLETT SMITH.

Cavendish-place, W., Oct. 9th, 1911.

LIGATURE OF THE SPERMATIC ARTERY IN THE OPERATION FOR VARICOCELE.

To the Editor of THE LANCET.

SIR,—In an annotation on this subject in your last issue (Oct. 7th, pp. 1026-1027) you infer that Dr. E. Styles Potter by including in his ligature the spermatic artery as well as the veins is peculiar in his practice. This is not so. The great majority of surgeons like him do not trouble to exclude the artery from their ligature. To ligature the artery as well as the veins is the better practice; as by removing some veins only and not occluding the artery, a few veins alone are left to carry off the whole of the blood brought to the testicle by the spermatic and deferential arteries. Whilst if the spermatic artery is ligatured at the same time that the spermatic veins are removed there will be less work to do for the veins left behind as there will be less blood reaching and to be borne away from the testicle.

This balance between the entrance and exit of blood from the testicular area is upset by the operation for varicocele. But it is far less upset if the spermatic artery is ligatured with the veins than if it is left unoccluded. The clinical expression of the disturbance of this balance is the occurrence of œdema of the scrotum and hydrocele of the tunica vaginalis. On p. 279 of my "Male Diseases in General Practice" (Oxford Medical Publications) the results of the operation for varicocele are tabulated, and it will be noticed that hydroceles in some form were found in no less than 23 per cent. Thickening of the scrotal tissues was found in 50 per cent. of cases. Hence, it is obvious that the ordinary operation for varicocele with occlusion of the spermatic artery does disturb the "circulatory balance" of the testicular area. As a result of this knowledge, I now invariably whilst operating for varicocele draw the testicle into the wound and turn the tunica vaginalis inside out. This additional procedure—extroversion of the tunica vaginalis—has been most successful in lowering the percentage of the occurrence of hydrocele after varicocele operations.

You, Sir, state that Dr. Styles Potter designs to ligature the spermatic artery alone for varicocele. This has been done experimentally and with disastrous results to the physiological active tissues of the testis. Moreover, it produces venous engorgement of the testicular area by cutting off the main source of pressure, the arterial pressure, which drives the blood through the testicle and veins towards the heart. Hence ligature of the spermatic artery by itself is a far more disturbing procedure on the circulatory balance of the testicular area than the operation for varicocele as ordinarily practised, removal of part of the spermatic artery and many of the spermatic veins. In addition to this proceeding I would urge that extroversion of the tunica vaginalis be also done in every case. Stoppage of the blood-stream by atheroma inhibits what may be called the *vis a tergo* of the testicular circulation leading to venous engorgement, chronic inflammation, and, I believe, to the hydroceles of the men of, say, over 40. Atheroma of the spermatic arteries is the first stage of the involution of the testicles.

I am, Sir, yours faithfully,

Harley-street, W., Oct 7th, 1911. EDRED M. CORNER.

TOXIC EFFECT OF ASPIRIN.

To the Editor of THE LANCET.

SIR,—I would suggest to Dr. A. Brown that he try the effect of gr. v. of aspirin *in suspension* in the case in which a tablet of similar composition produced urticaria. I have not infrequently been told by patients that tablets of aspirin had caused fairly acute epigastric pain, but I have never had any similar complaints when the aspirin has been taken in suspension. The result of giving aspirin in suspension in

Dr. Brown's case would be of interest, not only in connexion with the toxicology of aspirin, but also in the more important and much-debated question—the etiology of urticaria.

I am, Sir, yours faithfully,

Brook-street, W., Oct. 9th, 1911. J. BRUNTON BLAIKIE.

NOTE ON TWO CASES OF TUMOUR OF THE PREFRONTAL LOBE IN CRIMINALS.

To the Editor of THE LANCET.

SIR,—Dr. W. C. Sullivan, under this title in THE LANCET of Oct. 7th, p. 1004, relates two cases of tumour of the prefrontal lobe. It would be interesting to know whether it was known if the patients were right- or left-handed, especially in the first case, in which a growth involved the left inferior frontal convolution without aphasic symptoms. In this latter case was any of the cortex left intact between the growth and the precentral sulcus?

I am, Sir, yours faithfully,

Cheltenham, Oct. 6th, 1911. A. E. TAIT, M.B. Edin.

THE INHERITANCE OF SYPHILIS.

To the Editor of THE LANCET.

SIRS,—On several occasions, and notably in the discussion on "Inherited Syphilis" before the Society for the Study of Disease in Children,[1] I have expressed the opinion that what we in England call congenital syphilis (hereditary syphilis of continental writers) was derived from the mother, and that there was no proof of direct paternal infection. Matzenauer in his exhaustive monograph, "Die Vererbung der Syphilis,"[2] has dealt with the matter in a most thorough manner. On the continent direct paternal infection is usually accepted as a matter of course, as a reference to text-books on syphilis will show. My object in again referring to the subject is to call attention to the opinion expressed by M. Jeanselme, a very careful observer, in a recent monograph on syphilis from the points of view of etiology and prophylaxis.[3] This is what he says: "En somme, dans l'immense majorité des cas, sinon dans tous, l'enfant tient la syphilis de sa mère." Such an opinion coming from a French expert is very important, for the paternal view is practically unchallenged in France. Dr. Carle of Lyons has also recently dealt critically with the subject of the direct paternal influence,[4] and relates an instructive instance of the ease with which an erroneous *paternal* conclusion may be arrived at. The matter is of interest as it must, to some extent, affect our views as to the length of time that should elapse between infection and marriage in the case of males. I do not propose to enter here into the various aspects of the subject, but would merely point out that in many cases the interval has been a much shorter one than that usually recommended by the medical man, patients (males) taking the law into their own hands without any untoward results ensuing, either as regards the female or her progeny.

I am, Sir, yours faithfully,

London, W., Oct. th, 1911. GEORGE PERNET, M.D.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Opening of the Medical Session: the Scope of Anatomy.

Professor G. Elliot Smith on Oct. 2nd gave the inaugural address at the opening of the medical session. The title of the lecture, "The Present Position and Scope of Anatomy," was sufficiently wide and comprehensive, and enabled the lecturer to deal in an attractive manner with the prospects of the science as a subject for the instruction of medical students. Certain reforms in the teaching of anatomy—"an ancient and royal study, with a very long tradition behind it"—were suggested. Ancient though its lineage might be, it could only be brought into a proper relation with other subjects of the medical curriculum by throwing off the trammels of its past. In many respects present-day methods of teaching anatomy were appropriate only to the surgery of a hundred years ago or more. It was necessary to break away from tradition and to teach students the anatomy which would be useful to them. According to Professor Elliot Smith there are still far too many lectures, from which the student can learn little more than from an efficient text-book. Of text-books in anatomy there are enough and to spare. Lectures on the bones left the student with nothing but disgust for the whole subject of anatomy, his initial "considerable enthusiasm" disappearing very rapidly. The sort of knowledge which is needed in the student of anatomy is a complete grasp of locality—the formation of a visual picture of anatomical structures. The student should be guided to do his practical work thoroughly. There were, however, the general principles of the science which would always have to be explained in lectures. The tradition of the Manchester school had been to keep before the student the practical application of the science, and in this connexion the lecturer dealt with the interesting subject of surface anatomy. Finally, Professor Elliot Smith mentioned the reforms which had been adopted on the continent in the teaching of this subject. The point of view of the reformers was that anatomy should be based on embryology. Anatomists must demand as their field the whole of anatomy, not mere gross human anatomy, but also fine microscopic anatomy which had been taken over by the physiologists. He thought that the physiologists would gain considerable advantage from their own point of view if they gave up histology entirely to the anatomists. Reference was made to the intimate relations between art and anatomy.

Life in Motion.

The lecture delivered by Professor W. Stirling, introductory to the course of lectures on Physiology, was entitled "Life in Motion." By means of the cinematograph the lecturer showed how cinematography could be used in schools, colleges, and universities to visualise many phenomena which the student may not have an opportunity for seeing for himself. To illustrate the application of the cinematograph to biological problems the lecturer showed a number of films on such subjects as imitations of amœboid movement, the rhythmical beating of a globule of mercury, contrasting this with the beating of the excised heart of a rabbit perfused with Locke's fluid, and the arrest of the beat by chloroform, its subsequent recovery, and finally the effects of perfusion of adrenalin on the same heart. The movements of a starfish righting itself, the movements of the tube feet of a sea urchin were also shown; but perhaps the film that most interested the audience was one showing the successive divisions of the eggs of a sea-urchin—the segmentation of the ovum—up to the formation of the pluteus stage. The audience could follow the division of the ovum first into two, then four, eight, 16, until the two layers of the embryo were formed. Many other films were shown, including one made by Dr. Comandon on the protrusion of pollen tubes from the pollen of a lily.

Oct. 10th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

Opening of the Medical Session.

THE custom, which in the main is an excellent one, of securing the services of some distinguished member of the medical profession to deliver the address on the occasion of the beginning of a new session at the medical schools of the country, was departed from at the University of Leeds this year, and the authorities of the School of Medicine were fortunate in getting Mr. Mark Sykes to undertake the duty. Mr. Sykes, who is one of the Members of Parliament for Hull and a member of a well-known Yorkshire family, has been a great traveller, and was able to speak from his own experience of the habits and of the medical and surgical methods of the nomadic Kurds and Arabs. He gave many interesting illustrations of the singular combination of apparently deep

[1] Reports of the Society for the Study of Disease in Children, vol. viii., 1908, pp. 74 et seq.

[2] Wien, 1903, vide pp. 74 et seq.

[3] Vide Etiologie et Prophylaxie des Maladies Transmissibles par la Peau et les Muqueuses Externes, Traité d'Hygiène, fasciculus xvii., p. 618, 1911.

[4] Influence Comparée des Générateurs dans l'Hérédo-syphilis (Annales de Dermatologie et de Syphilis, tome ii., No. 2, 1911, p. 73).

scientific insight and rank superstition which prevails among these people, and it was interesting and instructive to hear from the lips of an observant layman opinions formed from such premises as to the development of the science and art of medicine. On the influence of the imagination in the processes which lead to the recovery of the patient Mr. Sykes was distinctly amusing; perhaps it may be said that anyone might succeed in being so with such a topic, but Mr. Sykes was also instructive. He correctly grasped the legitimate position of the use of the imagination in therapeutics, and stated it in such a way that probably there are few members of the medical profession who would not be in agreement with his views, or, indeed, who have not acted in harmony with them.

Leeds and West Riding Medico-Chirurgical Society.

The opening meeting of this, the fortieth, session of the Leeds and West Riding Medico-Chirurgical Society takes place on Friday, Oct. 20th, when the chair will be taken by Mr. H. Littlewood, the president for the ensuing year. This society, founded on the old Leeds Medical Club, a small body consisting mostly of the members of the honorary staff of the infirmary, and meeting in succession at one another's houses, has had a flourishing existence and an increasing membership since it assumed its present form. The number of members now amounts to 395. Last session the average attendance at the meetings was 87·7, a number which is creditable when it is considered that a large number of the members are resident in remote parts of the West Riding. During the session 1910–11 the society held 11 meetings eight ordinary, one pathological, and two clinical. One of the meetings was devoted to a discussion on the diagnosis and treatment of tuberculosis. Most of the meetings are held in the General Infirmary, but, as a rule, the pathological meetings are arranged for at the Medical School.

Appointment of a Third Assistant Physician at the Infirmary.

Some time ago, as was mentioned in this column, a decision was come to to appoint a third assistant physician to the infirmary. It was arranged that his duties should be different in details from those of the other two members of the medical assistant staff, and that the recent rule adopted by the infirmary to the effect that members of the staff should not hold any other honorary appointment involving the charge of beds should not apply to the holder of the new appointment. The object of this special exemption was to permit of there being definitely included as part of his duties the charge of a certain number of beds at the hospital for tuberculosis. Dr. G. W. Watson, who has for some time held the position of assistant physician to the tuberculosis association, has been appointed to this position.

Oct. 10th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Opening of the Winter Session of the Medical Faculty of the University of Liverpool.

THE opening address was delivered on Oct. 3rd at the University by Sir Charles Ball, in the presence of a large and distinguished gathering. In the evening Sir Charles Ball was the principal guest at the annual dinner of the medical faculty, which was held at the University Club, under the chairmanship of Mr. Frank T. Paul, consulting surgeon to the Liverpool Royal Infirmary. There was a large muster of professors and lecturers, besides many local medical practitioners.

Gift to St. Paul's Eye Hospital by Grateful Chinamen.

An interesting ceremony was witnessed at the Town-hall last week, when the Lord Mayor received from a deputation of Chinamen a handsome gramophone with records for presentation to St. Paul's Eye Hospital, to be used by the staff of that institution for the entertainment of the inmates. The attendance at the function included representatives of the Chinese community in Liverpool and of the hospital committee and staff. The happy thought suggested itself to the Chinese community by the kindness shown at the hospital to two Chinamen who had been patients there. They were so impressed by the attention shown to them by members of the staff and the nurses that they conceived the idea of brightening the lives of the inmates by some form of entertainment for the benefit of those temporarily deprived of their sight. The project was warmly taken up by the Chinamen of the city, and within three weeks the funds necessary for the purchase of a gramophone and two dozen records were secured. Mr. G. A. Kirkham expressed the hope that that day's ceremony would strengthen the ties of friendship existing between this country and China, and would help them all to realise that there was only one brotherhood, formed of men of every colour and clime.

Port Sanitary Dispute.

The special committee appointed last year to inquire into the administration of the hospital at New Ferry belonging to the Liverpool port sanitary authority, presented its report to Birkenhead town council on Oct. 4th. The hospital is maintained for the treatment of seaborne cases of cholera, plague, and yellow fever entering the Mersey from foreign ports, and is the joint property of Liverpool, Birkenhead, Bootle, Wallasey, Lower Bebington, and Bromborough. The Liverpool corporation, as having the largest share in the partnership, was given the entire management of the hospital on behalf of the other authorities, who are annually apportioned a share of the cost of management and of the maintenance of the patients. It was said that Liverpool was using the hospital for its own city cases and that patients suffering from small-pox and other infectious diseases belonging to the city were conveyed there by the Wallasey luggage-boats. It was also alleged that the ambulance while on the boat was frequently brought in touch with other vehicles carrying foodstuffs and general merchandise. The port sanitary officials, among whom were the town clerk and medical officer of health, repudiated these allegations. The former wrote explicitly stating that the port sanitary hospital is used only for the accommodation and treatment of *bonâ-fide* seaborne cases, while Dr. E. W. Hope was equally emphatic on the point.

Annual Dinner of North of England Graduates of the University of Dublin.

The annual dinner of the graduates of the University of Dublin resident in the North of England will be held this year in Liverpool. The dinner will take place on Saturday, Oct. 21st, at 7.30 P.M., at the Adelphi Hotel. The Right Hon. Sir Edward Carson, K.C., will preside. The local committee of management expects a large gathering at this popular function.

Retirement of Mr. Arthur Price, M.R.C.S. Eng., H.M. Prison, Walton.

By the retirement of Mr. Arthur Price from the medical officership of H.M. Prison, Walton, the official circles of Liverpool have been deprived of a notable figure. During his lengthy career in the public service he has identified himself with many movements and institutions of a patriotic and civic nature, winning the high regard of all who have at heart the cause of citizenship. Joining the service in 1882 as assistant surgeon to H.M. Convict Prison, Parkhurst, Mr. Price was promoted five years later to the post of medical officer to H.M. Prison at Birmingham, and in 1897 was further promoted to the more important post of medical officer to H.M. prison, Walton, near Liverpool. For a number of years Mr. Price was connected with the Royal Naval Reserve (Volunteers), and was one of the pioneers for the reconstruction of the disbanded Royal Naval Artillery Volunteers, now known as the Royal Naval Volunteer Reserve. He also holds the rank of captain in the R.A.M.C. (T.). Only quite recently he successfully performed a difficult operation on a dog—a feat which was a tribute alike to his skill and to his courage, in connexion with which he was presented with the medal of the Society for the Prevention of Cruelty to Animals. The dog, in trying to scale some railings, had become impaled on one of the spikes. In its agony it bit Mr. Price, who, however, pluckily stuck to the work of rescue, and ultimately succeeded in releasing the poor animal, which he afterwards surgically treated and restored to health. Mr. Price has also been decorated with the Order of St. John of Jerusalem, a distinction conferred upon him on account of his services, extending over 32 years, as a lecturer on ambulance work in various parts of the country. In the many calls that have been made upon him to deal with and report upon dangerous criminals and lunatics he

has displayed a tact and fearlessness which have won for him the admiration both of the bench and the prison officials.

Oct. 10th.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

The University of Bristol.

ANOTHER session has begun amid change and a certain degree of confusion consequent thereupon, especially in the Faculty of Medicine. Briefly, what has happened is this. The increase of clerical and administrative work entailed by the conversion of University College into the University has necessitated an increase in the staff. Further, the Vice-Chancellor's office had to be found in a building in which it was not originally provided for. Adequate accommodation for the various offices has been secured by converting the wing used till now for the medical school into an administrative block, a step facilitated by the fact that the department of physiology had already been moved thence into the new wing opened in 1909. The only part of the wing, which hitherto has housed the medical school, that remains unaltered is the department of anatomy; the provision of a new dissecting room in any other part of the buildings was so difficult a matter that it was left alone. The principal changes which have been effected are, therefore, the conversion of the medical library into the council chamber, and the alteration of the museum, faculty room, students' room, and the pathology, medicine, and other lecture-rooms into offices. The removal of the library has been managed with considerable dispatch, and the books and periodicals are now housed comfortably in the buildings which formerly belonged to the Blind Asylum, by acquisition of which the University gains a frontage in Queen's-road. This is a main thoroughfare, and in course of time the existing Blind Asylum buildings will be replaced by a newer block more adapted to university requirements. For the present, however, the old asylum premises give convenient accommodation to the Arts and Science Library, and to that of Medicine—in the case of the latter the books find so much more room that it has been possible to set aside separate magazine and reading rooms, as well as a private reading and writing room, for members of the University staff and of the Medico-Chirurgical Society (who are part owners of the library). This removal of the library makes a difference to the meetings of the medical societies, which have hitherto been held in the old library. Last week the local division of the British Medical Association met at the Y.M.C.A. rooms, which are conveniently central, and the opening meeting of the Medico-Chirurgical Society will take place in the physiological lecture theatre of the University. The other great migration is that of the department of pathology to the top floor of the 1909 wing, directly above the department of physiology. The new pathological department will contain the public health laboratory, which until now has occupied an annexe of the old medical school wing, and also the museum, which is to be increased by contributions from the collections at the Royal Infirmary and General Hospital. Here, as in the case of the library, the extent of the accommodation is increased, but at the expense of concentration. Formerly the medical student found the departments of anatomy, physiology, and pathology, the library, and his various lecture-rooms in one compact block; now they are scattered over three blocks at some distance from each other. It remains to be seen what will be the effect of this on the medical school; the entry for this year is a comparatively good one. The annual granting of degrees will take place on Oct. 20th.

Death of Alderman C. B. Hare.

On Oct. 7th Alderman C. B. Hare was walking quietly through the Bristol Industrial Exhibition, which is being held at the Coliseum, when he fell suddenly and died in a few minutes. He was 70 years of age, and had for 40 years been a member of the city council, of which he had for some time been the "father." He served the city faithfully and unostentatiously in many ways, but in none more faithfully than as a vice-president and active member of committee of the General Hospital. Since he joined the committee, 28 years ago, he devoted the greatest energy to the service of the institution. He was particularly valuable as a financial administrator, and as such did a great deal to set the hospital in the enviable position of comparative financial stability which it now enjoys.

Notification of Cerebro-spinal Fever and Poliomyelitis.

Having obtained the consent of the Local Government Board the Bristol city council has issued a notice declaring acute anterior poliomyelitis and cerebro-spinal meningitis to be included within the provisions of the Infectious Disease (Notification) Act, 1889, for six months from Oct. 9th. This step is amply justified, for in the autumn of 1909 the number of cases of the former disease occurring in Bristol was so great as to warrant its description as an epidemic. There seems reason to believe that the total number of cases this autumn will be noteworthy.

The Salaries of Workhouse Medical Officers.

The Bristol board of guardians recently advertised for a medical officer to one of their workhouses at a salary of £100 per annum, with board and rations. No applications were received for the post, and they are now advertising the appointment with an additional £25 salary.

The South-Western Poor-law Conference.

The annual Poor-law Conference of the South-Western District was held at Weymouth on Oct. 5th and 6th, under the presidency of Sir Thomas Dyke Acland, and was largely attended by delegates from all the unions in Cornwall, Dorset, Devon, Somerset, and Wilts. Sir Thomas Dyke Acland, in his presidential address, alluded to the present wretched condition of filthiness and misery to be found among the poor living in the country, and dwelt on the importance of rural housing. A resolution was passed stating that the proposals of the County Councils Association were impracticable, and would not result in any corresponding improvement in administration, and resolutions were also passed in favour of immediate legislation in regard to the treatment of feeble-minded persons, and approving of the principle of combinations in unions for the joint treatment of imbeciles, &c.

Sanitary Inspectors' Association.

The annual meeting of the South-Western Centre (comprising six counties) of the Sanitary Inspectors' Association was held at Weston-super-Mare on Sept. 30th. There was a good attendance. Mr. J. A. Robinson, chief meat and food inspector for the Port of Bristol, gave an interesting address on the Need of a More Comprehensive Inspection of Food. He urged the importance of more uniformity in the inspection of tuberculous meat. He said that the Dairies, Cowsheds, and Milkshops Order had done much to assist in giving a pure and clean milk-supply, and he thought the promised Milk and Dairies Bill would materially strengthen the local authorities in their control over the milk-supply. In mentioning the inspection of "canned foods," he said it would be a great advantage if it were made compulsory to state on the cans the date of manufacture.

Oct. 10th.

WALES.

(FROM OUR OWN CORRESPONDENT.)

Tuberculosis in Cardiff.

THERE has been a steady fall in the death-rate from phthisis in Cardiff during the past 30 years. In 1881 the rate was 3·0 per 1000, and in 1910 it was 1·0 per 1000 of the population. There are, however, certain parts of the borough where the disease appears to be unduly prevalent. In the south ward, for example, where there is a population of about 10,000 persons, the death-rate in 1910 was 2·5 per 1000, and in previous years the rate in this ward has been above that recorded for the whole borough. At the end of 1910 a dispensary for tuberculous patients was opened in Cardiff, two rooms being set aside for that purpose in the basement of the city hall. The assistant medical officer of health, Dr. E. Fairfield Thomas, attended from 6 to 8 o'clock on three evenings in each week and had the assistance of the lady health visitor. During the 11 months ending August last there have attended the dispensary 787 patients. Of this number 20 have died, 11 are reported to be much worse, 32 are said to be stationary, 291 are improved, and 44 are much improved. Tuberculin treatment was carried out only at the end of the

period named. In a report on the whole question, recently issued by the medical officer of health, Dr. E. Walford, it is pointed out that the accommodation available for the dispensary has become entirely inadequate, more especially as the rooms are also used for the examination of school children and for infant consultations. In Dr. Walford's annual report for 1910 on the health of Cardiff, Dr. Thomas expressed the opinion that even by the end of that year the work had become so exacting as to require the whole-time services of a medical officer, for in order to obtain the best results he should visit the homes of the patients who attended at the dispensary.

A Municipal Lodging-house for Women in Cardiff.

The question of providing a municipal lodging-house for women in Cardiff has been actively engaging the attention during many months past of a committee of ladies, with whom Dr. Erie Evans has been prominently associated. The need for such an institution has been demonstrated by the fact that there is in the borough only one registered lodging-house for women, and that contains accommodation for 49. The Salvation Army provides accommodation for 50 more, and in unregistered houses about 100 can be received. As a result of representations which were made by this committee the health committee of the corporation held an inquiry for the purpose of ascertaining whether there was any necessity for such a lodging house, and subsequently recommended that the principle of a municipal lodging house "for women only" should be adopted. After various buildings had been inspected by the medical officer of health and the city surveyor it was decided to rent two centrally situated houses formerly in the occupation of the Salvation Army. Accommodation is proposed for 20 beds. The charge per night is to be 5*d.*, and it is estimated that the undertaking will be a charge upon the rates.

Housing Conditions in Gelligaer.

At a recent meeting of the district council very disquieting statements were made with respect to the overcrowding and insanitary state of a large number of houses in the Gelligaer urban district, which adjoins Merthyr Tydfil, and where there was a population at the last Census of 35,000 persons, an increase of over 18,000 since 1901. In one locality there was stated to be an average of eight persons to a house. At a subsequent meeting of the housing committee of the council the medical officer of health, Dr. W. W. Jones, reported the result of his examination of 45 houses in the district of Pontlottyn. Of these he considered that at least 14 were uninhabitable and only three were in a reasonably good sanitary condition, the remainder being capable of repair. Some of the dwellings were nearly 100 years old, and as the leases would soon fall in it was unlikely that the present owners would spend much on their repair. Dr. Jones advised the council to take immediate steps to erect 50 houses, and expressed the opinion that later another 50 would be necessary. The council decided to seek for suitable sites with a view of carrying out the recommendation of the medical officer of health.

Oct. 10th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Veterinary Degrees in the University of Edinburgh.

A SCHEME of coördination has been arranged between the University of Edinburgh and the Royal (Dick) Veterinary College, whereby the degrees of B.Sc. and D.Sc. in veterinary medicine will be awarded. The scheme, which awaits the approval of the Privy Council, provides for one year of study to be spent at the University and four academic years at the Veterinary College.

The Dr. Jessie Macgregor Lecture.

In accordance with the conditions laid down by the trustees of the Dr. Jessie Macgregor Fund, Dr. Agnes Ellen Porter, to whom the prize was awarded this year, delivered a lecture, entitled "A Short Survey of Immunity in Tuberculosis," in the Anatomical Department of the University of Edinburgh on Sept. 29th. The treasurer of the Royal College of Physicians of Edinburgh, Dr. Norman Walker, who introduced Miss Porter, referred to the high standard of the work submitted by the candidates for the prize. The next award will be made in 1914.

Opening of the New Pathological Institute at Glasgow Royal Infirmary.

An important addition to the equipment of the Royal Infirmary, Glasgow, has just been completed, and was formally inaugurated last week by Sir William Osler. This is the new Pathological Institute, which is handsomely housed in a new building and is part of the great reconstruction scheme of the Royal Infirmary itself. Sir William Osler said he wondered if they appreciated in Glasgow the delightful memories that crowded the mind of a man familiar with the story of medicine in Great Britain when the name of their Royal Infirmary was mentioned—memories of men who by their life and doctrine had set forth not alone the very best the profession had had to offer, but the very best that man had ever offered to his fellow men. He commended them for adopting the name "institute." He was sure that the name indicated that they felt the infirmary would bear its share with the University in advancing scientific medicine. For an institute was something more than a deadhouse, and very much more than an ordinary pathological laboratory; it was the cerebrum of the infirmary, the place where the thinking was done, where ideas were nurtured, where men dreamed dreams, and thoughts were materialised into researches upon the one great central problem that confronted the profession in each generation—the nature of disease. Observation, plus thinking, had given them the vast stores of knowledge they now possessed of the structure of the bodies of living creatures in health and disease. There had been two inherent difficulties—to get men to see straight and to get men to think clearly; but in spite of the frailty of the instrument the method had been one of the most powerful ever placed in the hands of man. The institute which they opened that day was a manifestation of the new spirit. In this great field of experimentation and research he cited names of interest in Glasgow, such as Professor Andrew Buchanan and Lord Lister. He then went on to refer to the relations of the infirmary with the University. With two modern hospitals the problem of the relation of their pathological departments to the pathological department of the University had been settled in the only way. In the interest of both institutions the union had been made organic, and the professors of the subject in the University had the same relation to the pathological laboratories of the hospitals as the professors of surgery had to their wards in the infirmaries. In addition he said the institute existed for the benefit of the public. There was not a patient in the wards who would not be helped by the work done in it. From laboratories had come not alone the war-cries of modern medicine, but the chief weapons against the acute infections. In connexion with the realisation of the preventability of infectious diseases, he stated that the sanitary story of the city of Glasgow in the last half century was one of which they might be justly proud. To wipe out typhus, to have made typhoid a last-ditcher, to have cut in half the mortality from tuberculosis, were among the peace victories in which the citizens of Glasgow had shared. In conclusion, Sir William Osler stated that in the field of medicine four great problems awaited solution. In the first place, literally thousands of workers were struggling to unravel the mystery of cancer. Secondly, the exanthems were still with them, still killing thousands, and the world awaited the researches which would reveal the cause of measles, of scarlet fever, and of small-pox. Thirdly, though perversions of metabolism were every day yielding up their fascinating secrets, the sure and certain studies that alone could give control of such common diseases as diabetes, gout, and arthritis were lacking. Fourthly, they were entering a new chapter in the researches upon the internal secretions and the functions of these mysterious glands, so insignificant anatomically, but so potent in their influence upon growth and nutrition. In addition, he said, there were scores of minor problems to be solved by this generation, and there was much knowledge to be sifted before it could be used to the best advantage. Considering the enormous quantity of sap they had collected, they might feel disappointed at the comparatively small bulk of sugar left after complete boiling; but sweeter or better sugar had never been tasted than that of their making, and among all samples in the market no brand ranked higher than that from the old Glasgow Royal

infirmary. It was for them in the new infirmary, and in that splendid institute, to see that the quality was maintained.

Scottish Universities and the Inclusive Fee.

A meeting of the University Court of St. Andrews was held on Sept. 30th. It was then reported that the resolution of the last meeting of the court, adopting the recommendations of a conference of the four Scottish universities with reference to the proposed institution of inclusive fees in the faculties of arts and science, had been intimated to the Lords Commissioners of H.M. Treasury and to the other Scottish universities, with an announcement that the University of St. Andrews was prepared, if the other Scottish universities were also willing, to introduce inclusive fees in the session 1911–12. The University Courts of Glasgow and Edinburgh had not yet discussed the proposals of the conference, but the University Court of Aberdeen had stated that they were prepared to introduce the inclusive fees in 1912–13. A letter was read from the Lords Commissioners of H.M. Treasury, in which it was stated that it was not to be assumed that the additional grants to the universities would be continued next year unless the arrangement as regarded the inclusive fees was extended before the beginning of the academic year 1912–13 to all the faculties except that of divinity; and in any case the question of increasing the grants to the full sum contemplated by the Treasury could not be considered until the inclusive fees had been instituted in the faculties of law, medicine, and applied science. The University Court agreed to invite the other Scottish universities to appoint representatives, and reappointed Principal Sir James Donaldson, Principal Mackay, and Professor Burnet to represent the University of St. Andrews.

Medical Inspection of Schools in Kincardineshire.

In the second report to the secondary education committee of Kincardineshire submitted by Dr. R. King, the assistant school medical officer for the county, it is stated that the number of children examined during the year was 4412, of whom 2780 were found defective. Many of these defects are not of a serious nature, and Dr. King says that there seems to be no valid reason why the great majority of the defective should not get rid of their defects and take their place among other children. The statement shows that the most common defects are: enlarged glands, 668 boys, 621 girls, total 1289; decayed teeth under 6 years, 425 boys, 401 girls, total, 826; nits in hair, 175 boys, 536 girls, total 711; enlarged tonsils, adenoids, 272 boys, 277 girls, total 549; defective vision, 168 boys, 267 girls, total 435; external eye diseases, 112 boys, 152 girls, total 264. 78 per cent. of the children had suffered from measles, 70 per cent. from whooping-cough, 6 per cent. from scarlet fever, 2 per cent. from diphtheria, 36 per cent. from mumps, and 22 per cent. from chicken-pox. From the statistics it appears that rural and urban schools have about the same percentage of defective children, and that in nearly every case the number of defective girls is larger than that of defective boys. This is largely due to the greater number of girls with nits in their hair and the greater number with defective vision. Kincardineshire at almost every age exceeds the standard for the whole of Britain as to height and weight, but at the age of 14 the averages for height and weight of both boys and girls are below the standard. At ages 12, 13, and 14 the girls are superior to the boys in both height and weight, the boys appearing to stand still, while the girls advance rapidly. At a later age the boys seem to shoot ahead while the girls remain stationary, thus attaining the relative standards maintained throughout life.

Oct. 10th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Poor-law Medical Officers and the Insurance Bill.

AT a meeting of delegates of dispensary medical officers, held in the Royal College of Surgeons in Ireland, Dublin, on Oct. 4th, the following resolutions were passed:—

1. That we, the delegates assembled here to-day, view with alarm the amendment of the Insurance Bill suggested by the Select Committee of the Irish Party, proposing to delete the medical benefits, while retaining the sickness benefits, thus throwing over on us an enormous amount of extra work, without any corresponding remuneration, and that a deputation of dispensary medical officers be elected to wait on the Irish Parliamentary Party and Mr. Lloyd George.
2. In the event of medical benefits being denied to Ireland under the Insurance Bill, we hereby recommend our *confrères* in the dispensary service to refuse to carry out the work imposed on us, unless we are properly compensated for our extra work.
3. That the medical benefits of the Insurance Bill, as applied to Ireland, be not deleted.
4. That the deputation appointed to-day confer with the dispensary medical officers appointed by the Conjoint Committee of the British Medical and Irish Medical Associations, with a view to a settled policy, before waiting on the Irish party and Mr. Lloyd George.

Public Health of Dublin.

The corporation of Dublin has accepted the report of the public health committee recommending the appointment of an assistant medical officer of health. Up to the present the medical officer of health, who is not himself a whole-time officer, has not had any qualified assistant in his department. The corporation has also directed its paving committee to "ascertain whether more sanitary methods of removing the street dust could be adopted, either by sprinkling with tar or otherwise, so as to prevent citizens who keep their windows open at night from being poisoned with the dust." Steps are being taken also to obtain control of the various lanes and alleys in the city, which are not in the charge of the corporation. There are at present 894 such lanes, with a total mileage of some 38 miles.

Retirement of the Registrar of the Royal College of Surgeons.

Old students of the Royal College of Surgeons in Ireland will learn with regret that Mr. G. F. Blake, the registrar of the College, has found it necessary after a long period of service to resign his office. At a meeting of the Council held on Oct. 5th, in a resolution accepting his resignation with great reluctance and regret, the President, Vice-President, and Council state that "during the long period of 31 years that Mr. Blake discharged the onerous duties of registrar to the College, his devotion to its interests, his courteous deportment to all with whom he had relations, and the admirable manner and efficiency in which he carried out the important work connected with his office were beyond all praise. The President, Vice-President, and Council feel that by the resignation of Mr. Blake the College has lost the services of a most efficient officer, and a kind friend, whom it will be difficult adequately to replace. They hope that in the many years which they trust are before him he will enjoy his well-deserved rest from duty. He may at the same time be assured that his valuable services to the College will long be remembered and appreciated."

Emigration from Ireland.

According to the Registrar-General's return, during the month of September 3443 emigrants left Ireland, a decrease of 1087 compared with the corresponding month of last year. The total for the first nine months of this year is 25,782, compared with 27,539 for the first nine months of 1910. Of the 3443 emigrants in September, 442 were from Leinster, 917 from Munster, 1406 from Ulster, and 678 from Connaught. The destination of 2747 was the United States, 441 Canada, 12 South Africa, 65 Australia, 19 New Zealand, 130 England and Wales, and 29 Scotland. Out of 2578 steerage passengers to the United States 761 had their passages paid for in America.

Royal College of Physicians of Ireland.

The following were admitted Licentiates and Members of the College on Oct. 6th:—Charles Preston Ball, M.D., William Porter MacArthur, M.D., Lieutenant, R.A.M.C., and Robert James Rowlette, M.D.

The "Handy Woman" Again.

The North of Ireland papers of Oct. 5th contain the account of an inquest held by the coroner of South Armagh in reference to the deplorable death during her confinement of a farmer's wife at Dromilly, near Balleek. It would appear that a fortnight before the event occurred the husband arranged with a fully trained and certificated midwife who lives at Mountnorris to attend his wife; but on Sept. 31st, when his wife became unwell, he, at her request, went for a neighbour and not for the midwife. On the next morning (Oct. 1st) the child was born at 6.30, and about 8 o'clock the woman who acted as "handy woman" went home. At half-past nine, three hours after the birth of the child, the mother died, and Dr. G. M. Irvine deposed that the cause was post-partum hæmorrhage. The jury found that death was due to post-partum hæmorrhage, the foreman adding

that the Crown, if they felt so disposed, "could pursue the matter wherever they like afterwards."

Water Scarcity.

Never in the recollection of anyone has there been such a water famine as at present exists in the North of Ireland, a place where, as a rule, there is a heavy rainfall. The question is now becoming a very grave one for Belfast, where the water is no longer turned on to the houses between 5 o'clock at night and 10 the next morning. In Londonderry there is little over a week's supply, in Belfast about three weeks', and in the former city many manufactories are closed, and the engines of the railway trains have to get their supplies in the country stations.

The Queen's University of Belfast.

The medical session opened on Oct. 10th, when the introductory address at the Royal Victoria Hospital was given by Dr. John E. MacIlwaine, who has succeeded the late Dr. W. B. McQuitty as assistant physician. During the day systematic lectures in the various classes began at Queen's College.

Oct. 10th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Milk Question in Paris.

AMONG the many problems that Paris has faced this year the lack of milk has caused great uneasiness for many weeks. Not only has milk been increasing in price, but, like butter, the supply also has diminished. Until recently the increase in price has only been expected, but now it has become a fact. A large milk concern in Paris has announced that from Oct. 15th the price of milk will be increased a halfpenny a litre, and, further, the population will be put on a milk ration, for since the end of July the daily amount of milk brought into Paris has fallen by 200,000 litres. Owing to the absence of a large number of Parisians on vacation this deficit has hitherto been of less moment, but the situation has now become alarming. The prefect of police has taken cognisance of it, and has summoned a conference of the three principal wholesale milk dealers in Paris to inquire into the causes of the milk famine and to concert measures to deal with it. This year, because there has been scarcely any grass, cattle have had to be fed with the hay crop. Fortunately this has been abundant. Nevertheless, the cattle have had to be put on a ration, and the absence of fresh grass as well as the diminution of food has resulted in a deficiency of milk. Aphthous fever has still further increased the difficulties. It has ravaged whole herds of cattle in the department of the Nord and in Normandy and also in the departments of the Midi. Those cows that have survived no longer furnish milk. Frequently they have had to be slaughtered on the first symptoms of the disease. The wholesale milk dealers estimate that the production of milk has become lowered by one-third. On all sides they have endeavoured to find fresh sources of supply, and have scoured even the most remote provinces for the purpose. In this manner they have succeeded now in limiting the deficit to a fifth, but there will be still a great deficiency of milk in Paris during the coming winter. The prefect of police has decided that care must first be taken of the infants' needs. The restricted ration will be enforced only on those who will hardly suffer much from it. Mothers of families with children under a year old are invited to state the amount of milk needed by them and they will be first served. At the present time the milk costs, according to neighbourhood, from 3*d.* to 4*d.* per litre.

Tetanus as an Accident of Work.

The Court of Appeal of the Seine pronounced judgment on an interesting point on Oct. 4th. The question arose whether a man who died from tetanus on Dec. 10th, 1910, could be regarded as the victim of an accident of work, his widow testifying that while at work on Dec. 10th he had sustained a slight puncture of the right foot. The court decided that the proof of the coincidence of the puncture with the beginning of the usual ten days' incubation of tetanus, and in a part of the body especially predisposing to that disease, imposed a liability on the master. The latter's insurance company, therefore, has been ordered to pay to the widow a life annuity of 490 francs, and also an income of 819 francs for the deceased's minor children.

Oct. 10th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Swiss Balneological Society.

THE twelfth annual meeting of the Swiss Balneological Society took place at Zürich on Oct. 1st and 2nd, Dr. Hans Lötscher being local president. The number of members has risen from 111 to 124. The German edition of the *Swiss Balneological Review* has been very favourably criticised; the French edition will appear shortly, and the English one in the spring of 1912. Every year balneological excursions are organised, as in Germany and France. The question was debated whether Switzerland could undertake in 1914 the International Balneological Congress, which brings together several thousands of members. It was decided that such an undertaking would be possible only with the financial support of the Swiss Societies of Hotelkeepers and of Commerce. As regards the scientific part of the proceedings, Professor Sommer of Zürich lectured on the therapeutic application of the newest rays (X rays and radium emanation). Dr. Lötscher spoke on the importance of the town of Zürich as an intermediate climatic station. He mentioned that the mortality had decreased by 3 per cent. in the last 20 years, and that the ratio of deaths from tuberculosis had declined from 22·8 to 18·7 per 10,000 inhabitants. The mortality from typhoid had decreased from 6 per 10,000 to 0·8 per 10,000 inhabitants (i.e., 15 cases a year). He referred to the excellent water-supply and various sanitary improvements. Professor Dr. Schweitzer lectured on the radio-activity of various Swiss springs, of which about 300 so far have been investigated, and of these Disentio in the Grisons was given first place. Dr. von Muralt of Davos read a paper on the Psychic and Nervous Symptoms in Tuberculous Patients. Dr. Diebold of Zürich spoke about the inhalation treatment adopted at the sulphur baths of Baden, near Zürich, and Dr. Markwalder, of Baden, read a paper on After-treatment of Stiff Joints at the Spa, Baden, the importance of which, as well as that of Schinznach, is increasing from year to year. The next annual meeting of the society will take place at Zermatt in 1912.

Treatment of Cardiac Disease.

In the *Korrespondenzblatt für Schweizer Aerzte* of Oct. 1st Professor Eichhorst of Zürich has published a concise article on the treatment of cardiac disease. In the treatment of cardiac insufficiency he considers rest and a milk diet of primary importance. Medicinally, a combination of powdered digitalis (not the infusion), 2 grains, with diuretine, 16 grains, given three times a day, stands first. Digalen, introduced into therapeutics by Professor Cloetta of Zürich, is also recommended. Powdered leaves of digitalis, 2 grains, and calomel, 1 grain, are often very efficacious. Finally, a properly titrated tincture of strophanthus or Boehringer's strophanthine must be mentioned. Massage of the œdematous lower extremities is often to be recommended, together with passive movement. Venesection on the lines adhered to by Professor von Liebermeister may give surprising results. Excitement of any kind is very detrimental, as shown by three fatal cases lately observed in Professor Eichhorst's clinique. Carefully prescribed carbonic acid baths, with or without the addition of sea-salt and Nauheim exercises, benefit certain cases when given under strict medical supervision. In cases of arterio-sclerosis with symptoms of angina pectoris, morphia or pantopon can be given with advantage from time to time. The nitrites, adrenalin, and the quite modern vasotonin must not be forgotten.

Zürich, Oct. 5th.

LONDON SCHOOL OF TROPICAL MEDICINE.—The annual dinner of the school will be held on Tuesday, Oct. 17th, at 7.15 for 7.30 P.M., at Prince's Restaurant, Piccadilly, W., under the chairmanship of Dr. M. Cameron Blair, senior sanitary officer, Northern Nigeria. Miniature decorations will be worn.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Formation of a Technical Museum in Vienna.

SOME very influential Austrian commercial men and educationists have taken steps to bring together the existing scattered collections of objects dealing with the development of technical occupations and to make such additions as may be required for the adequate representation of modern methods and conditions. In commemoration of the sixtieth anniversary of the Emperor's accession the State and the City of Vienna have coöperated in the formation of a new museum, the foundation-stone of which was laid on June 20th, 1909, and the building, which covers an area of over 20,000 square yards and is situated opposite the Imperial Palace of Schönbrunn, is now nearing completion. The purpose of the museum is to illustrate the development of handicrafts and industries in historical succession, and in connexion with it periodical exhibitions will be held so as to constitute it a centre of public education in such matters. A considerable stock of specimens has already been acquired for the museum, and technical scientists, manufacturers, and craftsmen of all countries are invited to assist the museum in securing suitable objects for exhibition, such as tools, machines, apparatus, models, materials, descriptions of methods of working, plans, books, illustrations, manuscripts, and information of all kind pertaining to industrial technology. The exhibits will be subdivided into several sections, such as mining, practical applications of electricity, chemistry, and several others. Special medical interest attaches to the section dealing with the preparation and distribution of food and beverages, and to the section on public health, which includes the sanitation of buildings, water-supply, drainage, systems of heating and lighting, appliances and methods for first aid, Red Cross stations, hospital railway trains, hospital ships, and town planning. In the section on chemistry, the pharmaceutical department, with its illustrative specimens of old and new remedies, will no doubt be of interest to medical practitioners. Particulars can be obtained from the office of the Technical Museum, Vienna I., Ebendorferstrasse 6.

Difficulties in Connexion with the New Clinics.

The building of the proposed new clinics has been suddenly interrupted by a controversy between the State and the corporation known as the "Spitalsfond," which is responsible for the upkeep of hospitals. This incident is a good illustration of what may happen when an antiquated bureaucratic institution is called upon to undertake a great task. The Government gave at the outset 20 million kronen (£800,000) for the purpose of erecting the new General Hospital, and the Spitalsfond ought, in addition, to have provided a similar sum by selling the ground on which the old hospital stands, but it is now found that after five clinics have been erected and nearly all completed, there is no more money available for the erection of the further necessary institutes. The officials of the Spitalsfond, moreover, declare that the clinics remaining in the old General Hospital need not be moved into new buildings, but can extend themselves into the premises vacated by the five clinics, which are now located in the new hospital. The fact that these old premises are of an antiquated type incompatible with modern requirements does not count for much with the financial magnates of the Spitalsfond, who say that they have no money, and whose reply to all remonstrances is, "If the new clinics are wanted, then let him pay for them who wants them." The indignation of the public at the attitude of the officials has led to bitter words being spoken and written about the matter not only in medical circles but also by the lay press. The Government, however, did not lose patience, and after prolonged negotiations, from which the old political enmities were with difficulty excluded, an arrangement was arrived at ensuring the continuance of work on the requisite new institutes, which are to be completed within five years.

Disappearance of a Historic Building.

An interesting old building is about to be pulled down in accordance with a scheme of street widening. It formerly belonged to the medical faculty of mediæval Vienna, and in it the first regular necropsy on a human body in a German-speaking country took place. Owing to religious prejudice such a procedure was extremely rare, and medical men had no means of making themselves acquainted with the position of the viscera except by opening the bodies of domestic animals. In the year 1404, however, the Emperor Frederic II., an enlightened man, permitted the dissection of a male corpse for the benefit of the students and doctors of medicine every five years; it was at the same time ordered that this dissection should take place secretly and that a mass should be read after it was finished and before the corpse was buried. Only six necropsies took place in Vienna in the fifteenth century—namely, in the years 1404, 1418, 1444, 1452, 1455, and 1459. The first female body dissected in Vienna was that of a woman who was hanged as a witch in 1452, together with five other unhappy victims. This necropsy was conducted by "Master Jacobus, the chirurgien," a German, whilst the first complete dissection was performed by the Italian scientist, Galearo of Padua, who devoted a full week to it! It is interesting to note that when the house became the property of Roman Catholic monks a solemn "purification" of the building from the sins committed in it by the prosectors was considered an absolute necessity. The above-mentioned dates are those which have obtained historical sanction, but from the registers of the faculty in this city it would appear that some other necropsies, at least of a partial nature, must have taken place here too, for the anatomical knowledge of the Viennese prosectors could not have been obtained solely from the dissection of the lower animals.

Oct. 7th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Conveyance of Infectious Diseases by Milk.

IN Nagyvárad, where two years ago a typhoid epidemic claimed about 300 lives, the sanitary board has issued small pamphlets among milk dealers, instructing them on the danger arising from contaminated milk. A great many dealers have also been fined for not returning their milk cans to the dairies clean and dry. Tuberculosis is very prevalent among the cows. The dairy inspectors have to pay special attention to this fact. To the public the following instruction has been sent. "Typhoid fever, scarlet fever, and diphtheria are sometimes conveyed by milk, especially typhoid, if the cans and bottles are washed in foul water and are not sterilised. Cities well supplied with water of good quality and having a modern sewerage system derive typhoid fever only from contaminated country milk or vegetables, or by the return of people in the autumn from less sanitary places. The bacteria in milk produce acids and toxins, which are injurious to infants and invalids. To destroy these milk is often pasteurised. This, however, is somewhat objectionable, as its destroys certain enzymes that are necessary for the digestion of the milk. It is easy enough, by diluting pasteurised cow's milk and adding milk sugar, to obtain milk identical in percentage of its principal constituents with mother's milk, but the trouble due to the indigestibility of the caseins remains; therefore, mother's milk is about the only thing for the baby."

War on Trachoma.

With the opening of the public schools the department of health renews its active struggle against trachoma. Inspectors are to visit every building as soon as possible, and the eyes of every child will be examined for traces of the disease, which is gradually beginning to give way under the continued assaults of the department. Children suffering from trachoma will be kept from school until they have undergone an operation or had appropriate treatment. The department will perform the necessary operation and administer treatment without charge. A certificate from a physician that a child has begun treatment will obtain readmission. It is believed that this inspection will show a great falling off in the number of trachoma cases. After the examination for trachoma has been completed it is proposed to test the eyes of the school children for defective vision.

Oct. 7th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Danger of Water Famine Averted.

THE unprecedentedly heavy rains of the past few weeks have saved New York from what would have been a serious shortage in the water-supply. The borough of Manhattan, containing some 2,000,000 inhabitants, would have been the sole sufferer among the five boroughs, but as it is the site of all the principal hotels, theatres, public buildings, as well as of the worst slums of the city, it would have felt the want of its good water most grievously. Just before the beginning of the heavy rainfall the health authorities had begun an attempt to purify the water remaining in the reservoirs by the use of chloride of lime; 700 cases of typhoid fever occurring in ten weeks had awakened them to the gravity of the situation. It was found that part of the supply was coming from a small stream that received the dejecta of a village in which there were several cases of typhoid fever. All danger is now passed, and New York has resumed its usual extravagant use of water.

A New Inebriety Hospital.

The commission appointed by Mayor Gaynor to consider means for dealing with habitual inebriety met on Sept 12th at the City Hall and decided first to select a suitable site for the contemplated hospital for inebriates, which must be found not more than 35 miles from the city. Legislation will be urged to permit the incarceration of chronic drunkards without the permission of their relatives or their own consent.

Plans Further to Reduce Infant Mortality.

The committee for the reduction of infant mortality, of the New York Milk Committee, expresses itself as satisfied with the results obtained by the allied agencies this summer. It will now turn its attention to the prevention of infant deaths due to congenital troubles, which cause about 17 per cent. of all infant deaths. The committee is giving attention to 1000 expectant mothers to enable them if possible to bring into the world children strong enough to meet the stress of life. An arrangement will be made with the Russell Sage Foundation by which a special nurse will be detailed for this work. In addition to medical care and hygienic precautions, help will be provided if the mother is overworked. No midwives will be permitted to handle any of these cases. After confinement rest will be provided for the mothers, and the children will be referred to the milk stations.

Death of a Medical Journalist.

Dr. De Santos Saxe, a young urologist and gynæcologist, died in his thirty-fifth year on Sept. 10th. He was one of the assistant editors of the *New York Medical Journal*, and his death makes a second gap in the *personnel* of that publication. Dr. Saxe had command of five languages, and was a promising writer in addition to his professional attainments.

Wholesale Destruction of Stray Animals.

The New York Society for the Prevention of Cruelty to Animals has been collecting stray dogs and cats since June 1st last. During that time 113,186 animals have been painlessly put to death, the record for a single night being 886 cats. Stray animals are now believed to be carriers of infection and the society's crusade thus serves a double purpose.

Compulsory Antityphoid Vaccination in the Army.

Major-General Leonard Wood, who, it may be remembered, was originally an army surgeon, issued an order on August 28th making it compulsory for every officer and enlisted man in the United States Army under 45 years of age to subject himself to vaccination against typhoid fever. Heretofore, it has been voluntary on the part of either officer or private to subject himself to what was considered an experiment. The War Department is now thoroughly convinced of the efficacy of antityphoid vaccine.

Vacancies in the Philippines.

The United States Civil Service Commission announces an examination to secure eligible medical men for vacancies in the positions of bacteriologist and pathologist in the Bureau of Science at Manila. The salary is £400 per annum, with opportunities for promotion. It has recently been difficult to secure men to fill these positions, just as it is hard to persuade young practitioners to present themselves for examination for positions in the army, and especially in the navy. The pay of surgeons in the army and navy is about the same as in Great Britain, although no American surgeon reaches the emoluments of the English surgeon-general.

A Scandal about "Fee Splitting."

Certain members of the Erie County Medical Society are accused of fee splitting, or dichotomy. This practice consists of division of the fee for a surgical operation between the surgeon who performs the operation and the medical attendant who sends the patient to that particular surgeon. It is customary for the medical attendant to accompany his patient to the surgeon, and patients are prone to consider such a trip as a friendly duty on the part of their adviser, and seldom offer to defray even his travelling expenses. In its least objectionable form the fee splitting has been restricted to the surgeon's including the advising practitioner's expenses in his bill; but the practice has quickly outgrown this simple form, and certain medical men, it is alleged, have made a custom of sending their patients to the surgeon who was willing to pay the largest commissions. Reprehensible as this custom is, it is an inevitable outcome of the crowding of the profession by the small, proprietary medical schools, chartered, generally with great pride, by communities that have been newly furnished by the Federal Government with a State constitution. The various States are only now waking up to the evils which they, unthinkingly and with mistaken liberality, fostered years ago.

Hygienic Precautions in Secret Societies.

A Chicago alderman has come to the conclusion that danger of infection lurks in the "hoodwink," or blindfolding bandage, used on candidates for admission to various secret societies, and that serious eye diseases might be communicated by its use. The alderman, who is a medical man, proposes to introduce a city ordinance to compel the use of a new bandage for each candidate, or the interposition of a piece of fresh sterile gauze between it and the eyes.

The Mortality from Patriotic Crackers.

Owing to regulations passed in various cities and States forbidding the use of giant crackers on July 4th, the number of deaths from their use has fallen from 466 in 1903 to 57 in 1911, and of the non-fatal injuries from 3983 to 1546.

Oct. 2nd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

A Curious Fatality.

A VERY curious occurrence involving the death of a young medical man took place at St. Kilda recently. Three young men who had been playing tennis together entered a small bathroom for the purpose of having a hot shower bath. The bathroom was a very small apartment, almost without ventilation and containing a gas heater. They locked the door on entering. About half an hour later a message was taken up to one of them, but no response could be elicited from within the bathroom, although the bath tap could be heard running. The door was forced and the three occupants of the room were seen lying apparently unconscious on the floor. On dragging them out two were found to be still breathing, but the third was dead. The young man who thus lost his life was Dr. T. L. Gill, a recent graduate of the Melbourne University, who after a brilliant student career had held resident appointments at the Melbourne and Children's Hospitals, and had acted as demonstrator of pathology in the University. He was about to be married and to begin private practice. The survivors can give no clear account of what happened. All that is remembered by one of them is that he heard Dr. Gill, who was in the bath, complain of sudden dizziness, and then everything became blank. The other recollects nothing. A necropsy showed death to be due to suffocation, and the inquiry was adjourned. It is supposed that death was due to carbon-monoxide poisoning.

State Sanatoriums.

In Victoria the Government has now established three

sanatoriums for consumptives. At Greenvale there are 67 patients, and the highest number has been 82. This is stated to be chiefly an educational institution and patients are retained there only three months. At Amherst there is accommodation for 65, with a present total of 19. At Daylesford four patients are in residence. Before the end of the present year a home for advanced and hopeless cases will be opened at Cheltenham and will accommodate 100 patients. The total number of probable cases in Victoria has been estimated at about 5000.

Health of South Australia.

The Registrar-General for South Australia reports a total population of 430,000 in an area of 380,000 square miles. The infant mortality figure is the lowest in the world. The death-rate from phthisis is below that of Victoria, but higher than that of any other State except Tasmania. A very disquieting feature of the report relates to vaccination. During 1910 the births numbered 10,540, while only 1800 successful vaccinations were recorded. The total amount paid by Government to 191 public vaccinators was £293. The marriage rate for 1910 is the highest yet recorded.

Prevalence of Syphilis.

At the last Australasian Congress there was marked difference of opinion as to the prevalence of syphilis in Australia. During 1910, as I explained in my last letter, Dr. Burnett Ham of Victoria obtained a Government grant to have a free test by Wassermann's method of any specimen forwarded from the metropolitan area. Syphilis was gazetted notifiable under impersonal conditions and an account of each specimen was sent as regards sex, age, and disease. The report of the advisory committee, signed by Professor H. B. Allen, from which I was able to quote, stated that 5000 distinct cases were registered and examined. Of these 1900 gave a positive reaction and over 400 a partial reaction. The report said: "Experience has shown that out of 100 cases of syphilis only about 60 will give a positive reaction, so that 60 positives represent 100 cases of syphilis. Therefore 1900 positives represent 3167 cases of syphilis, or 63·3 per cent. out of the 5000 reported. On the metropolitan population of 600,000 this means that more than 0·5 per cent. were found to be syphilitic." The *Australasian Medical Journal* objects that these figures cannot be taken as statistically accurate, but withholds definite criticism until a fuller analysis is made, which is being done for the Sydney Congress in September. The whole of the 5000 tests were performed by Dr. Konrad Hiller. In conjunction with the supposed result of the report a "campaign" has been inaugurated to endeavour to lessen the incidence of syphilis. The daily press has viewed the matter sympathetically, and the Government promises to act on any practicable suggestions laid before it. The feeling against Contagious Disease Acts and lock hospitals is even stronger here than in England, so that it is difficult to see what legislative measures would be considered.

Ninth Australasian Medical Congress.

The arrangements for the Ninth Australasian Medical Congress are now well forward, and an interesting gathering is assured. In Medicine attention will be directed to arteriosclerosis. In Surgery the chief topics will be the Surgery of the Large Intestine, the Treatment of Fractures, and Surgical Shock. In Obstetrics the Hæmorrhages of Pregnancy and Parturition will be discussed. The subject for full congress will be Serum and Vaccine-Therapy. All the special sections are being well filled. The proposals for autonomy for the Australian branches of the British Medical Association will be considered. So far as present indications go these will be favourably received, although New South Wales has always opposed any move in such a direction in former years.

Cancer Cure.

About six years ago the procedure of a notorious cancer-curer named Davis was made the subject of much newspaper correspondence. His claims were championed by Sir John Madden, Chief Justice of Victoria, and as a result of this support the then Premier granted a board of inquiry into the alleged cure. This was composed of medical men and laymen in about equal proportions and presided over by Dr. W. P. Norris, chairman of the Board of Public Health. The committee has just presented its report, in which it is stated that the preparation was an arsenical one, and that in no instance had it cured cancer or fulfilled the claim made by its proprietor. In addition, the committee considered that in some instances its use had entailed unnecessary suffering. The committee also made some suggestions for the restriction of unqualified practice by cancer-curers.

Federal Quarantine.

A new post as assistant medical officer has been created by the Federal Government in the Department of Quarantine at a salary of £650 per annum. It has been filled by the appointment of Dr. J. H. L. Cumpston, who was assistant medical officer in the Western Australia Health Department, and is a graduate of the University of Melbourne. Dr. Cumpston will have charge of the department during the absence on leave for six months of Dr. Norris, the Inspector-General.

Sept. 2nd.

Obituary.

JOHN HUGHLINGS JACKSON, M.D. ST. AND., F.R.C.P. LOND., LL.D., D.SC., F.R.S.,

CONSULTING PHYSICIAN TO THE LONDON HOSPITAL AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

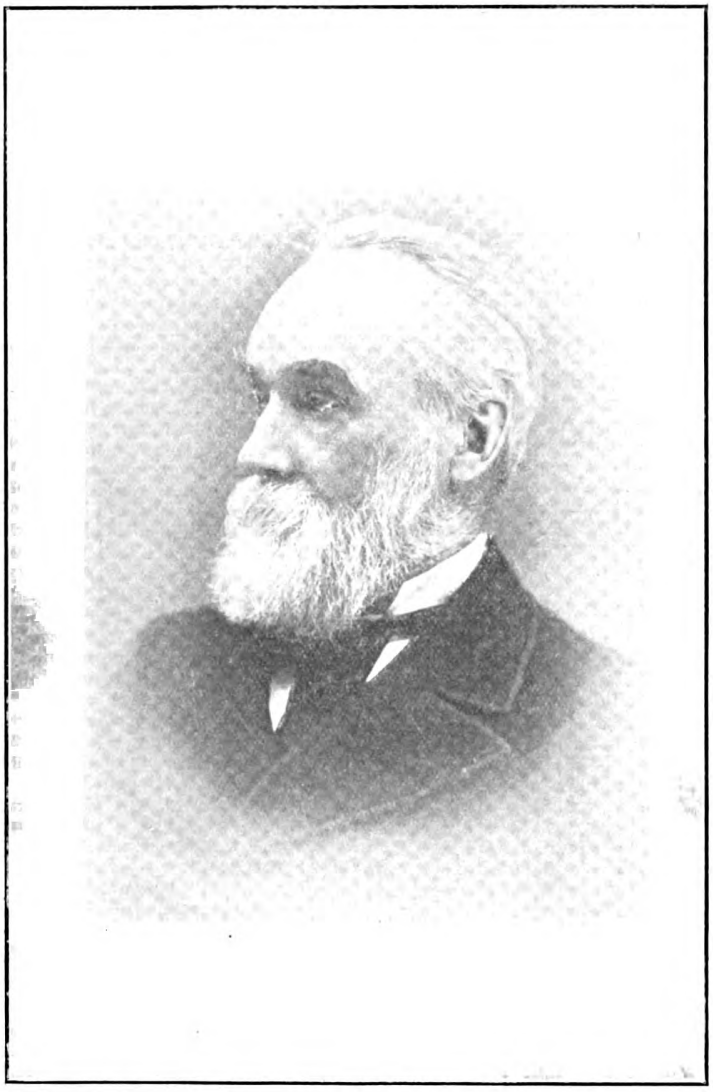
Dr. John Hughlings Jackson, whose death occurred on Saturday, Oct. 7th, at his residence, 3, Manchester-square, London, was a Yorkshireman. He received his early medical training by acting as an apprentice in York and attending the York Medical and Surgical School, where Dr. Shann, physician to the dispensary, lectured on anatomy and physiology, and Mr. J. Milner superintended the dissecting. The school, though small, was a good one, and Jackson was well grounded when he proceeded to St. Bartholomew's Hospital. From this hospital in the space of a few months he qualified as M.R.C.S. Eng. and L.S.A. Lond. This was in 1856, and for a short time he returned to York as resident medical officer to the dispensary, but in 1859 he began that connexion with the London Hospital which was so fruitful in opportunities of work for him, and has redounded so much to the honour of the hospital, for in that year he was appointed lecturer in pathology and morbid anatomy, and also lecturer on histology and the microscope in the summer session. He owed these appointments to a great extent to the introduction of Sir Jonathan Hutchinson, whose interest in him was partly due to the fact that both received their early medical education at the York School. In 1860 he took the M.D. degree at the University of St. Andrews and in the following year was admitted a Member of the Royal College of Physicians of London. He was appointed assistant physician at the London Hospital and lecturer on physiology at its medical school in 1864. Even at that time he was recognised as a neurologist of mark, for we find him coupled with J. S. Ramskill and C. B. Radcliffe as an original member of the staff of the National Hospital for the Paralysed and Epileptic, to which hospital he became in due course full physician and consulting physician. In 1872 he became full physician at the London Hospital, passing on to the consulting staff in 1894. Occasion was taken of his retirement from the active staff to present him with his portrait in oils and a silver ewer and stand from his colleagues of the medical and surgical staff and numerous friends both at home and abroad, "in recognition of their esteem and admiration of his great services to the London Hospital Medical College, his distinguished position in the profession, and the advances he has effected in medical science by his laborious investigation and profound insight into diseases of the nervous system." Sir James Paget, in making the presentation, remarked on the fact that Jackson and Jonathan Hutchinson were among the first students he had taught, and he dwelt on the constant effort of Jackson to bring all clinical and scientific facts into harmony for the practical good of the patient. He laid special emphasis on Jackson's fruitful researches into the localisation of brain function, which, he said, had "given lucidity to physiology and guidance to surgery." Dr. Stephen Mackenzie remarked that Sir Jonathan Hutchinson had told him that the "greatest work he had ever done was to discover Dr. Hughlings Jackson." In 1868 Dr. Jackson was elected to the Fellowship of the College of Physicians, and in the same year he delivered the Croonian lectures of the College, taking as his subject the Evolution and Dissolution of the Nervous System. These

lectures were published in THE LANCET at a subsequent date. In 1869 he delivered the Goulstonian lectures on Certain Points in the Study and Classification of Diseases of the Nervous System, which were published in THE LANCET of February and March of that year. In 1872 Dr. Jackson delivered the Hunterian Oration, in which he discussed the question of education in its widest sense, pointing out the impossibility of preserving the artificially abrupt separation commonly made between mind and body. As physiologists, he said, we were concerned with physiological phenomena, with coördinations of impressions and movements of different orders, and not with memory, will, and the like. He pointed out that such coördinations were experimented on for us by disease, and from these experiments we might hope ultimately to obtain a knowledge of such physiological phenomena in their entirety. In 1877 he delivered the annual oration before the Medical Society of London on Ophthalmology in its Relations to General Medicine (THE LANCET, May 12th, 1877), a subject which served him also in 1890 for his presidential address to the Ophthalmological Society of the United Kingdom (THE LANCET, Oct. 26th, 1890); and in 1879 the Diagnosis of Epilepsy was the topic of a series of lectures given by him before the Harveian Society.

In 1885 he delivered the Bowman lecture before the Ophthalmological Society, on Ophthalmology and Diseases of the Nervous System, which was published in THE LANCET of November of that year. In 1889 he delivered the address in medicine at the Leeds meeting of the British Medical Association on the Comparative Study of Diseases of the Nervous System—a subtle address on those obscure relations of evolution to medicine, regarding which the profession was then, as now, groping towards the light, assured, however, that the day of fuller illumination is not far distant. In 1890 he was Lumleian lecturer, and took for his subject Convulsive Seizures, a subject that he had made peculiarly his own, for almost a quarter of a century had elapsed since the clinical and pathological study of convulsions due to gross local organic disease of the brain—now almost universally known as Jacksonian convulsions—had led him to enunciate the doctrine that the Rolandic region of the brain was "motor," and that in it the movements of the different parts of the body were represented. These lectures, which contained the latest views of his riper experience, were remarkable for their closeness of observation, clearness of argument, and the marvellous powers of induction of which they were the outcome. In 1897 Dr. Jackson delivered the first of the Jacksonian lectures, founded by the Neurological Society in his honour. These lectures, on the Relations of Different Divisions of the Central Nervous System to one Another and to Parts of the Body, were published in THE LANCET of Jan. 8th, 1898.

His literary work was extensive, but solid and unpretentious rather than ostentatious. Much of his work is to be found in those of our columns devoted to hospital reports. In 1868 he contributed the article on Convulsions and Epilepsy to Vol. II. of "Reynolds' System of Medicine." In the same year was published his "Cases of Disease of the Nervous System in Patients the Subjects of Inherited Syphilis." An "Abstract of a Paper on the Psychology of Language" was published by him about this time. In 1869 he published a reprint of his address before the St. Andrews Medical Graduates' Association on Cases of Disease of the Nervous System in Patients the Subjects of Inherited Syphilis, in which he conveyed the lesson that hemiplegia, chorea, and other diseases of the nervous system might be traced to the influence of hereditary syphilis, even when the patient presented none of the usual signs of the disease. The study of the family history was insisted on by him as of the highest importance, as tending towards the establishment of a right clue whereby cases otherwise hopelessly unintelligible might be benefited by specific treatment. In 1870 he published "A Study of Convulsions," to which we make further reference, and in 1879 "Some Remarks on the Routine Use of the Ophthalmoscope in Cerebral Disease." But Jackson's best literary work was in the form of communications to periodical medical literature. These were numerous and always important, reporting his wonderfully acute clinical and pathological observations and drawing from them deductions that formed at once an introduction to, and an abstract of, the numberless physiological experiments that have since been carried out, many of the results of which have been incorporated in the ordinary medical creed. The pathological and physiological knowledge to which they, together with the work of Ferrier, Schäfer, and others, were the prelude, have had as their sequel the brilliant surgery which in this country is identified with the names of Macewen and Horsley. Many of the more important of these communications appeared in our columns, as, for example: On a Case of Disease of the Posterior Columns of the Cord—Locomotor Ataxy (with Mr. Lockhart Clarke) (THE LANCET, June 10th, 1865); Clinical Remarks on Emotional and Intellectual Language in Some Cases of Disease of the Nervous System (THE LANCET, Feb. 17th, 1866); on Anatomical and Physiological Localisation of Movements in the Brain (THE LANCET, January, February, and March, 1873); a lecture on Softening of the Brain (THE LANCET, Sept. 4th, 1875), in which the precision of thought and language and the strict adherence to that only which is justified by clinical and pathological observation, which formed always such a valuable part of Dr. Jackson's treatment of a question, were very noticeable (in this lecture Jackson called attention to the frequent misuse of the term "softening of the brain" in cases which were really cases of nervous exhaustion, remediable by common-sense measures); On Nervous Symptoms with Ear Disease (THE LANCET, March 24th, 1877); On Tumours of the Cerebellum (THE LANCET, Jan. 24th, 1880); lecture on a Case of Intracranial Syphilis (THE LANCET, Feb. 21st, 1880); On Aphasia with Left Hemiplegia (THE LANCET, April 24th, 1880); A Case Illustrating the Value of the Ophthalmoscope in the Investigation and Treatment of Disease (THE LANCET, June 12th, 1880); Lecture on Auditory Vertigo (THE LANCET, Oct. 2nd, 1880); Eye Symptoms in Locomotor Ataxia (THE LANCET, Dec. 18th, 1880); The Psychology of Joking (THE LANCET, Oct. 22nd, 1887), an interesting paper in which it is stated that, Dr. Johnson to the contrary notwithstanding, punning should not be despised. His last paper in our columns was published (in conjunction with Mr. Leslie Paton) on March 27th, 1909, On Some Abnormalities of Ocular Movements.

Some 16 years ago an index to his published writings, from 1861 to 1894 inclusive, was printed in the *London Hospital Gazette*. They reached the astonishing total of 202, and the list was not complete. The amazing fertility of his genius can, perhaps, best be appreciated when it is noted that in three consecutive years (1873 to 1875) no fewer than 40 contributions to neurology emanated from his study, many of them long and elaborate, but all reflecting that intellectual power and comprehensiveness of view at which the reader of to-day still marvels. The first paper, in addition to those in our own columns, of which there is a record is entitled "Cases of Reflex Amaurosis, with Coloured Vision," which appeared in the Royal London Opthalmic Hospital Reports for 1861. It was followed ere long by "Observations on Defects of Sight in Brain Disease," "On Ophthalmoscopic Examination during Sleep," and "On the Use of the Ophthalmoscope in Affections of the Nervous System," all in the same series of reports. Thus early was Dr. Jackson instrumental in popularising the use of the ophthalmoscope, the most valuable of all weapons in the neurologist's diagnostic armamentarium. In 1864 came "Loss of Speech with Hemiplegia on the Right Side," and "Loss of Speech: its Association with Valvular Disease of the Heart, and with Hemiplegia on the Right Side." These contributions appeared very shortly after the discoveries of Broca, and served to elaborate and substantiate the contentions of the French *savant*. In 1866 a paper was published entitled "Remarks on those Cases of Disease of the Nervous System in which Defect of Expression is the most striking Symptom," which merits attention, inasmuch as it contains proof that Dr. Jackson had observed the phenomena and fully appreciated the significance of what has come to be known as apraxia 34 years before Professor Liepmann published the account of a case which has become a classic in the study of that subject. In these early years, too, appeared observations on "Regional Palsy and Spasm," on "The Disorderly Movements of Convulsion," on "The Sequence of Spasm in Unilateral Convulsions," and on "A Study of Convulsions," in which his unerring clinical acumen and scientific



JOHN HUGHLINGS JACKSON, M.D., F.R.C.P., LL.D., D.SC., F.R.S.
(Reproduced from a photograph by Messrs. Maull and Fox.)

imagination led him to postulate the existence of a motor area in the cortex and of centres in that motor area, and to determine their arrangement—brilliant speculations which subsequently received complete corroboration by the experimental work of Fritsch, Hitzig, and Ferrier. Merely to scan the titles of the lectures (Croonian, Lumleian, Hunterian, Bowman, &c.), presidential addresses, communications, papers, and notes that constitute the record of these fertile years leaves on the mind an indelible impression of the indefatigable industry and catholicity of interest of him whose superlative genius was equalled by his modesty. On July 15th, 1893, there was published in THE LANCET the first of that delightful series of "Neurological Fragments" which continued to appear at intervals for many years—chips from the workshop of a master mind. In his later years Dr. Jackson was wont whimsically to remark that he was afraid the younger generation of investigators would "find him out," and he was "found out," but not in the sense that amused his fancy. The psychologist of to-day has adopted Dr. Jackson's hypothesis of "levels" in the central nervous system; the physiologist has established the truth of his views on the functions of the motor cortex and of the cerebellum; the clinician and the pathologist are reaping in many fields where he sowed.

We have said enough to indicate that by the death of John Hughlings Jackson English neurology has suffered a loss, the extent of which it would be difficult to exaggerate. His was a figure that never came prominently before the general public, and while by reason of his age and his unusually retiring disposition he had perhaps become even to many of the profession not much more than a name, to his friends and to neurologists generally he was the "Grand Old Man" of their affection and esteem. No less than half a century has elapsed since he first ventured as a pioneer into the unexplored region of clinical neurology, to illumine its recesses by an unparalleled series of researches, conducted with unflagging zeal and enthusiasm, and animated by a rare scientific temper. Many of these researches culminated in discoveries which made his name familiar wherever medicine is taught the world over, but it is not merely because the present generation of the medical profession has entered into the fruit of these labours that he was regarded as the Nestor of neurology. The affection cherished for him by all who enjoyed the inestimable privilege of working with him as colleagues or pupils was no less striking than the unanimity with which his neurological genius was reverenced. Not a few whose names are as familiar to-day in foreign medical schools as his own were proud to call him their master. To come into close contact with that philosophic mind was to discover that discussions were somehow raised to its own high level, and that minuteness of detail could be combined with breadth of principle without either being sacrificed. It is because the modern student of scientific neurology was taught by Dr. Jackson how to think and how to work that the extent of his indebtedness cannot be readily estimated.

We may well close this notice with a few words from one of his pupils which show vividly what an admirable teacher and master Hughlings Jackson was. Dr. F. J. Smith writes: "The death of Hughlings Jackson takes me back in memory to the days when I first clerked under him in the very early 'eighties' of last century, when he had already gained great renown as a (perhaps the) leading neurologist, and consequently excited most reverential awe in the minds of us students, to whom his powers of diagnosis seemed little short of marvellous. We loved to go round with him because we felt that what he told us was true and was the outcome of real clinical observation, coupled with sound deduction, and not a mere quotation from others; for, indeed, we could find but little in our text-books that could compare with his teaching, or, rather, with which we could test his words. This must have been our reason, though, perhaps, we never admitted it to ourselves, for it would be idle to suggest that he talked freely, or in what would now be considered the correct fashion; we had from him no detailed results of examination of spinal fluid, no occult views on the precise methods by which nerve degeneration occurred, nor upon the precise meaning to be attached to every detail of a microscopic field; but we did get a knowledge of how to test reflexes, and of the significance to be attached to their increase or decrease, and of how to differentiate between their real and their apparent alterations. How we relied, too, upon his opinion as to whether optic neuritis was or was not present! In those days the ophthalmoscope was almost a novelty, and it became our ambition (never fulfilled by the way) to discover optic neuritis before Jackson did, and to draw his attention to its earliest appearance. It was, I think, by his appreciation of these our endeavours to tell him something we had discovered, that he attracted our love as well as our admiration, for it never could be said that his teaching or manners to us were attractive in the showy sense of the word. It has given me the keenest pleasure in later years to find how little I have had to unlearn that Jackson taught me, and to perceive how little inclined even modern neurologists are to sneer at anything he ever said or wrote; and frequently enough I have had the delight of telling some of them that they have only just re-discovered what Jackson had told us five and twenty years ago. Of his personal character I can say but little. We were too far removed in age to ever have been intimate, but the little I can say is that I never knew Jackson to do or say an unkind word to anybody; he had the modesty which only belongs to true genius, and when we approached him with some fancied discovery he never made one 'feel small'—rather did he profess his own ignorance of the point in question and give us the joy of believing we had helped him, though inwardly he must have chafed a little, I think, for he had to listen, doubtless, to much nonsense. To me Jackson will always remain as the greatest original I ever knew, for there was little foundation laid by others upon which to build. He has left a monument indeed for others perhaps to gild, but scarcely to improve its architecture."

Dr. Jackson had many honours conferred on him. He received the honorary degree of LL.D. from the Universities of Glasgow and Edinburgh, that of D.Sc. from the University of Leeds, that of M.D. from the University of Bologna, and the honorary Fellowship of the Royal College of Physicians of Ireland. He was, of course, a Fellow of the Royal Society. He was also a corresponding member of the Royal Academy of Medicine of Belgium. In 1907 a marble bust of him was placed in the National Hospital for the Paralysed and Epileptic.

JOSEPH BELL, M.D. EDIN., F.R.C.S. EDIN., J.P., D.L.,

CONSULTING SURGEON TO THE ROYAL INFIRMARY EDINBURGH, ETC.

WE regret to announce the death of Dr. Joseph Bell, which occurred at his residence Maurice Wood, Milton Bridge, Midlothian, on Wednesday, Oct. 4th. Dr. Joseph Bell's distinguished surgical career was very intimately associated with Edinburgh. The eldest son of Benjamin Bell, an Edinburgh surgeon, he was educated at Edinburgh Academy and the University of Edinburgh, and did his clinical work as a medical student at the Edinburgh Royal Infirmary. Having taken the degree of Doctor of Medicine in 1859 he served in all the junior posts at the infirmary. In 1863 he took the Fellowship of the Royal College of Surgeons of Edinburgh, was for a time demonstrator of anatomy in the University, and was elected assistant surgeon to the Royal Infirmary in 1871. He had not long to wait for a vacancy as full surgeon, and in the meantime had been appointed surgeon to the Edinburgh Eye Infirmary shortly after qualification, and later surgeon to the Royal Hospital for Sick Children, Edinburgh. Upon the staff of all of these institutions he served with distinction for the full term of office, and was duly elected consulting surgeon in each case. His private practice grew with his public appointments. At the University of Edinburgh he held several educational appointments and examinerships.

He was not only an extremely skilful surgeon, but carried, as is well known, the art of diagnosis very far by his extraordinary faculty of detecting the ordinary routine of his patient's careers or the environments in which they lived. Bell was not that dangerous person the "lightning diagnostician," but, having behind him a very full surgical equipment, he was able to reinforce his scientific knowledge by a wide familiarity with the ordinary conditions of life, and an almost uncanny intuition of the part which those conditions had played in the healths and lives of any man, woman, or child who happened to come before him. By this faculty he became famous throughout the world owing to the accidental circumstance that Sir Arthur Conan Doyle, when completing his medical education in Edinburgh some 30 years ago, worked under Bell, and was so

impressed by the display of his chief's deductive faculties that he was led to create his famous hero Sherlock Holmes. Sir Arthur Conan Doyle has recorded a typical episode, which occurred in the out-patient department of the infirmary, when a new patient was told, without being questioned, that he was a soldier, a non-commissioned officer, who had served in the West Indies. The speech then made by Bell was exactly similar to the many speeches with which the great detective confounds the not over-ready wit of his friend Watson, and it is easy to see how the dramatic side of Joseph Bell's highly developed gifts of observation led to the fashioning of Sherlock Holmes.

Joseph Bell was a successful though not very prolific author, but for no less than 23 years edited the *Edinburgh Medical Journal* with conspicuous ability. A small manual upon surgical operations, a subject on which he had lectured at the University of Edinburgh, ran through seven editions, and "Some Notes on Surgery for Nurses" achieved almost as great a success. He was a Fellow of the Royal Society of Edinburgh and a Deputy Lieutenant of the county. His wife was the daughter of the Hon. James Erskine Murray, but he had for a long time been a widower.

LOUIS STROMEYER LITTLE, B.A. LOND., F.R.C.S. ENG., M.D. KIEL,

LATE SURGEON TO THE LONDON HOSPITAL AND TO THE SHANGHAI GENERAL HOSPITAL.

AFTER a long illness the death of Louis Stromeyer Little took place at his residence at Bletchingley, Surrey, on Oct. 4th. Mr. Little, who was 70 years of age, was a student at the London Hospital, where he subsequently held the posts of lecturer in anatomy, curator of the museum, and surgeon to the hospital. He took the M.R.C.S. Eng. in 1862, and proceeded to the Fellowship four years later, while he graduated in Arts at the University of London. He also took the degree of Doctor of Medicine in the University of Kiel, and held surgical appointments at the London National Orthopædic Hospital and at St. Mary's Dispensary for Women and Children. In or about 1876 he went to Shanghai in China, where he resided for nearly 20 years, and was surgeon to the Shanghai General Hospital. He then returned to England and lived in retirement at Bletchingley in Surrey.

During the war in 1864 Little was present at the campaign in Schleswig from February to May in that year, doing much good work in tending the wounded, Prussians and Danes, over 2000 in number. In his "Notes on the Campaign" Dr. Little made some interesting observations on his own experiences and those of the great Esmarch with whom he worked. He was buried at Bletchingley.

GEORGE THOM, M.R.C.S. ENG., L.S.A., J.P.,

CONSULTING SURGEON TO THE ROYAL ALBERT HOSPITAL DEVONPORT.

Mr. George Thom died at his residence, 1, Clarendon-terrace, Devonport, on Oct. 8th, in his sixty-sixth year. He received his medical education at King's College Hospital, London, and took the M.R.C.S. and L.S.A. qualifications in 1870. He was shortly afterwards appointed resident medical officer at the Royal Albert Hospital, Devonport. He resigned this post after six years' service, and commenced practice at Devonport. He was for many years on the honorary staff of the Royal Albert Hospital, and at the time of his death was consulting surgeon to the institution. Mr. Thom had a large practice in the "Three Towns," where he was most highly respected. He was one of the oldest borough magistrates for Devonport, and attended to his magisterial duties as recently as Oct. 4th. He had been in failing health for some time, but had continued his professional work up to a few days before his death. He will be much missed in Plymouth, Devonport, and Stonehouse, and great sympathy is felt there for his widow, daughter, and three sons, one of whom is a member of the medical profession.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Julius von Michel, professor of ophthalmology in the University of Berlin, from cardiac disease, at the age of 68. He had been somewhat unwell for a good while, but, notwithstanding reports to the contrary, proposed to continue to carry on the active duties of his chair. His student days were passed in Würzburg and Zürich. Before the Franco-German war, in which he took part, he was assistant in the Zürich ophthalmic clinic under Professor Horner. Subsequently he went to Leipsic, where he worked under Coccius, Ludwig, and Schwalbe, and afterwards became professor of ophthalmology successively in Erlangen, Würzburg, and Berlin, where he followed Professor Schweigger. He published a number of papers, besides a large text-book on the eye, and edited a well-known ophthalmological journal.—Dr. Starling Loving, professor of medicine in the Starling-Ohio Medical College.—Dr. Meyer-Steinegg, *privat-docent* in the University of Jena.—Dr. Mitscherlich, sanitary councillor of Charlottenburg.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the Second Professional Examination in Anatomy and Physiology held on Sept. 28th and 29th, and Oct. 2nd and 3rd, 73 candidates presented themselves, of whom 40 were approved and 33 were rejected. The following is a list of the successful candidates:—

Charles Layton Balkwill, Birmingham University; Otto Barkau, B.A. Oxon., Oxford and Freiburg Universities; Dhirendranath Basu, Calcutta and Middlesex Hospital; William McHuchison Binning, University College; Cecil Bluett, London Hospital; Geoffrey Alwyn Gershom Bonser, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Frederick Wyndham Chamberlain, Middlesex Hospital; Edwin Lionel Christoffelsz, Ceylon Medical College and London Hospital; John Edgar Davies, Guy's Hospital; William Sadgun Desai, L.M.S. Bombay, Bombay University; Alma Percy Ford, London Hospital; Frank Brayshaw Gilhespy, University College; Evan Williams Griffith, University College, Cardiff; Frank Arnold Gunesekera, L.M.S. Ceylon, Ceylon Medical College; Donald Herbert Hargrave, London Hospital; Joseph Francis Holmes, Calcutta and Charing Cross Hospital; Oswald Ryle Horwood, M.A. Cantab., Cambridge University and London Hospital; Arthur Maddock Jones, Charing Cross Hospital; James Phillips Jones, Guy's Hospital; Walter Hewitt Jones, St. Mary's Hospital; Joseph Georges L'Etang, St. Bartholomew's Hospital; Desmond Manus MacManus, Guy's Hospital; Samuel Mallinick, Halle University and London Hospital; George Frederick Meinertzhagen, St. Bartholomew's Hospital; Arthur Rennie Muir, Cardiff and University College; Henry Felix Mullan, London Hospital; Kenneth Montague Nelson, St. Mary's Hospital; Walter Justice Paramore, University College; Leonard Robert Pickett, Guy's Hospital; John Wootton Rammell, London Hospital; Cecil Arthur Robinson, St. Mary's Hospital; Gordon Wilfred Ritchie Rudkin, University College; Henry Christmas Samuel, Ceylon Medical College and Middlesex Hospital; Mohammed Sharaf, Cairo and St. Mary's Hospital; Cuthbert Shaw-Crisp, St. Mary's Hospital; Alan Edward Staffurth, Cambridge University and St. Thomas's Hospital; George Sydney Stathers, St. Bartholomew's Hospital; Herman Crowther Viehoff, Liverpool University; Philip Pennefather Warren, London Hospital; and Ernest Jenner Wright, St. Mary's Hospital.

At the quarterly examination in Practical Pharmacy held on Oct. 5th the following candidates were approved:—

Malcolm Barker, L.D.S. Eng., Charing Cross Hospital; William Fletcher Barrett, Birkbeck College and private study; Alexander William Charles Bennett, St. Thomas's Hospital; Ellis Campbell Bowden, London Hospital; Robert Graham Brown, London Hospital; Richard Challoner Cobbe Clay, Westminster Hospital and private study; Charles Frederick Constant, Guy's Hospital; George Malcolm Coope, Manchester University; Edward Dance Fountain, St. Mary's Hospital; Henry Charles Coutts Hackney, King's College Hospital; Arthur Edward Huxtable, Charing Cross Hospital; Henry Barry Hyde, St. Thomas's Hospital; Thomas Hitchings James, London Hospital and private study; Kenneth John Taylor Keer, Guy's Hospital; William Morgan Langdon, Guy's Hospital; James Lafayette Lauder, Guy's Hospital; Gerald Laurence, Middlesex Hospital; Edmund Thomas Howard Lea, Westminster Hospital and private study; Frederick Martin Lipscomb, King's College Hospital; Eustace Fernando Llarena, Guy's Hospital; Bryen McDermott, Guy's Hospital; Maurice Mackenzie, London Hospital; William Frank Morgan, London Hospital; William Henry Parr, London Hospital; Claud John Burgoyne Pasley, Westminster Hospital and private study; James Remers, Manchester University; Herbert Thomas Retallack-Moloney, London Hospital; Denys Revell Reynolds, St. Bartholomew's Hospital; Henry Charles Rigg, Charing Cross Hospital; Harold Robinson, Manchester University; Maitland Scott, Guy's Hospital; Ambrose Huntington Warde, St. Thomas's Hospital; and Nathan Judah Wigram, Sheffield University.

UNIVERSITY OF GLASGOW.—The following have passed the First Professional Examination for the degrees of M.B. and Ch.B. in the subjects indicated (B., Botany; Z., Zoology; P., Physics; C., Chemistry):—

Robert Aitken (Airdrie) (B., P.), William Dick Allan (B., P.), John Alston (B., P.), William Baird (B., P.), William Barras (B., P.), Monindra Nath Bhattacharjie (B., P.), Thomas Blackwood (B., P.), Robert Mitchell Stewart Boyd (Z., C.), William Ernest Boyd (Z.), John Bradford (Z., C.), John Buchanan (P., C.), Donald Ronald Colin Cameron (B., Z., P., C.), Dugald Stewart Campbell (B., P.), John Ferguson Campbell (B., P.), William Campbell (B., P.),

Thomas Watson Carstairs (Z., P.), Joseph Chalmers (B., P.), Allan La Barte Clark (Z., C.), Douglas Hamilton Coats (B., P.), John Connal (B., C.), William Kerr Connell (B., P.), Alexander Findlay Cook (B., P.), Archibald Shankland Cook (B., P.), Walter Gow Cook (B.), Robert Stobo Crawford (B., Z., P., C.), Henry Paterson Crow (Z., C.), John Freeland Cunningham, M.A. (B., Z., C.), William Cunningham (B., P.), John Williamson Dalglish (B., P.), Ronald Stevenson Dickie (B., Z., P.), John Dunbar (B., P.), Ernest M'Murchie Dunlop (B., Z., P., C.), James Jackson Finlay (Z., C.), Thomas Finlay (B., Z., P.), Thomas Fleming (B., P.), George John Fraser (C.), Matthew Mair Frew (B., P.), Walter Weir Galbraith (C.), Leonard Woodburn Gemmell (C.), John Albert Frank Gibson (Z.), Robert Stuart Gibson (Z., C.), Norman William Gilchrist (P.), Robert Kinnear Hay Gillespie (B., Z., P.), Colin Campbell Blair Gilmour, M.A. (B.), John Gray Gilmour (B., Z., P.), John Glaister (B., P.), Peter Fife Auchinachie Grant (B., P.), David Heard (B., P.), Arnot Campbell Hepburn (B., Z., P.), William Allan Higgins, M.A. (B., P.), Arthur Robert Hill (B., P.), Oswald Johnston (B., P.), John Crawford Knox (B., C.), Robert Kyle (Z.), Robert Milne Lang (B., P.), Hugh Brown Lawrie (C.), James Alexander Leiper (B., Z., P., C.), Peter Young Lyle (B., Z., P.), Hugh Lawrence M'Cormick (B., Z., P.), Patrick M'Diarmid (B., P.), Robert William MacDonald (P.), James Wallace Macfarlane (B., P.), John Mandeville Macfie (B., P.), Arthur Daniel Clark M'Gowan (P.), Archibald M'Innes (B., Z., P., C.), John MacInnes (B., Z., C.), Alexander Fraser M'Intosh (B., P.), James MacAlister Mackintosh (B., P.), Keith Stuart Macky (B., P.), George Maclean (P., C.), Peter Donald MacLean, M.A. (P.), Donald Macphail Macmillan (Z., P.), Frederick Robertson Martin (B., P.), John Campbell M'Intyre Matheson (B., P.), Alexander M'Callum Millar (B.), William Duff Miller (B., P.), John Desmond Milligan (B., P.), Peter Orr Moffat (C.), Frederick William Morrison (B., Z., P., C.), William Watson Morrison (B., P.), Alexander Morton (B., P.), John Hughes Murray (B., Z., P.), Thomas Fraser Noble (P.), Michael O'Callaghan (B., Z.), James Alphonsus O'Connor (B., P., C.), Robert Lamont Ormsby (B., P.), Arthur William Panton (B., P.), John Roberts Pate (Z.), James Alexander Paterson (B., Z.), Thomas Smith Paterson (B., Z., P., C.), James Herbert Paul, M.A. (B., P.), William James Poole (B., P.), William Burns Primrose (B., C.), Hugh Quigley (P.), Robert Scott Reid (B., P.), James Gordon Rennie (P.), John King Rennie (B., P.), James Richardson (B., P.), Kenneth M'Alpin Ross (B., Z., P.), Andrew Stenhouse (B., Z., P.), Douglas Stuart Stevenson (B., Z., P.), Pat Adam Stewart (B.), William Mitchell Stewart (B., P.), Archibald Sutherland Strachan (B., C.), John Brunton Sweet (B., Z.), Clement Bennet Templeton (B., P.), Robert Taylor Todd (B., P.), John Lawrence Torley (B., Z., P.), Adrian Johannes van der Spuy (B., P.), George Turnbull Walker (B., P.), Robert Richmond Waters (B., P.), John Dalglish Watson (B., P.), William James Cunningham Watt (B., P.), Robert Smellie Weir (B., P.), Thomas M'Skimming Wilson (B.), and John Thomas Wylie (B., P.)

Women.—Christina Blair Buchanan (B., P.), Maud Christine Cairney (B., P.), Ann Kelly Cormack (B., Z., P., C.), Jane Beattie Davidson (B., Z., P.), Jessie Crawford Gilchrist (B., P.), Janet Fraser Henderson (Z., P.), Helen Isobel Winifred Kerr (B., Z., P., C.), May Constance Broughton Leigh (B.), Dorothy M'Cubbin (B., P.), Margaret Jane Maclachlan (B., P.), Effie Cowan M'Vie (B., C.), Elizabeth Stewart Martin (B., P.), Mary Anderson Noble (B., P.), Mary Helen Routledge (B., P.), Mary Scott (B., Z.), Ishbel Mary Sinclair (Z.), Jane Stalker (B., P.), Margaret Ann Hendry Stewart (B., Z., P.), Isabel Stirling Thomson (B., P., C.), Marion Baillie Darling Wilson (B., P.), and Isabella Henrietta Younger (P.).

The following passed with distinction in the subjects indicated:—

Botany, Zoology, Physics, and Chemistry.—Ernest M'Murchie Dunlop.

Botany and Physics.—John Mandeville Macfie, Jane Stalker, and John Thomas Wylie.

Botany.—Donald Ronald Colin Cameron and John Crawford Knox.

Zoology.—Henry Paterson Crow.

Physics.—John Alston, Thomas Blackwood, Christina Blair Buchanan, William Cunningham, John Dunbar, Dorothy M'Cubbin, Frederick William Morrison, Robert Smellie Weir, and Marion Baillie Darling Wilson.

Chemistry.—Effie Cowan M'Vie, William Burns Primrose, and Archibald Sutherland Strachan.

The following have passed the Second Professional Examination for the degrees of M.B. and Ch.B. in the subjects indicated (A., Anatomy, P., Physiology, M., Materia Medica and Therapeutics):—

Douglas Kinchin Adams, M.A. (M.), Alexander Baird (M.), Henry Stanley Banks, M.A. (M.), Archibald M'Allister Blackwood (A., P.), Abraham Blashky (A., P.), John Smith Knox Boyd (M.), James Law Brownlie (A.), Samuel Bryson (P.), Alexander Grahame Buchanan (P.), Edmund Tytler Burke (A.), John Joseph Burke (A.), John Cameron (A.), William Leonard Cassells (M.), Benjamin Cohen (M.), George Gibson Cooper (M.), Thomas Muir Crawford (A., P., M.), Lawrence Cromble (P.), William Cullen (M.), Gabriel Daniel de Kock (A., P.), Alexander Dick (M.), John Nairn Dobbie (A.), Joseph Dunbar (A., M.), Walter Elliot Elliot, B.Sc. (A., M.), William Campbell Fleischmann (P., M.), James Bryan Fotheringham (P.), William Fraser (P., M.), Ian Grant (P.), John Galloway Hendry (A., P., M.), Thomas Cameron Houston (M.), William Yuill Jamieson (A. M.), William Joseph Brown Lavery (A.), Alexander Lindsay (A., P.), James Walter M'Donald (P., M.), John M'Ghie (A., M.), James Graeme M'Kinna (P.), Kenneth Norman MacLean (M.), Neil MacLeod (A., P.), Robert Martin M'Minn (M.), Ewen Stewart Macphee (A., M.), William Strelley Martin, M.A. (P., M.), John Park Mathie (A.), Thomas Spence Meighan (M.), Archibald Underwood Millar, M.A. (A., P., M.), Thomas Augustine O'Brien (A., P.), James Leslie Ruthven Philip (A., P., M.), Adam Rankine (M.), David Reid Eccles Roberts (M.), Stewart Dewar Robertson (M.), Neil Islay Sinclair (A.), William Robertson Snodgrass, M.A. (A., M.), John Fraser Steven, M.A. (P.), Henry Stewart, M.A. (A.), Ronald Stewart (M.), William Ballantine Stewart, (P., M.), Henry Currie Watson (M.), James Whiteside (A., P.), Alexander Sweet Wilson (A., P.), Andrew Morton Young (M.), and John Miller Young (M.).

Women.—Cecilia Small Turnbull Anderson (M.), Grace Gillies Turnbull Anderson (A., P.), Margaret Jarvey Brown (A., P.), Ethel Crawford, (A., P., M.), Lillias Beverley Hardie (M.), Mary Pringle Hislop (M.), Annie Rankine M'Kail (A., P., M.), Sarah Anderson Jamieson Rankine (M.), Margaret Walker (P.), and Josephine Adelaide Woods (M.).

Mr. John Smith Knox Boyd passed with distinction in the subject of Materia Medica and Therapeutics.

The following have passed the Third Professional Examination for the degrees of M.B. and Ch.B. in the subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):—

John Campbell Hill Allan (M.), James Angus (P., M.), Richard Archibald Barlow, B.Sc. (P., M.), Samuel Blumenfeld (M.), Vynne Borland (P., M.), James Wilson Burton (P., M.), Norman Cameron (M.), George Wilson Clark (P., M.), Robert Craig, M.A. (M.), George Dalziel (P., M.), James Henry Dible (M.), Philip Figdor (M.), Adolph Robert Hanns Geyer (P.), Leopold Glushak (M.), Cecil William Fletcher Greenhill (P., M.), James M'Farlane Grier, M.A. (P., M.), John Ferguson Hutton, M.A. (P., M.), Thomas Pollock Inglis (M.), Andries Johannes Joubert (M.), Charles Joseph Hamilton Kirk (P.), Robert Aim Lennie (P.), John Aloysius M'Connochie (M.), John Henry Magoveny (M.), William Montgomery (M.), Kenneth Duncan Murchison (P.), Arthur Alexander Murison (M.), Andrew Neilson, (M.), Andrew Peden (P.), James Purdie (M.), James Francis Quigley (Lambhill) (P., M.), David William Reid (M.), John Ritchie Richmond Ritchie (M.), Alfred Leopold Robertson (M.), Edwin Robertson (P., M.), James Gordon M'Gregor Robertson (P., M.), James Inglis Robertson (M.), Archibald Watson Russell (M.), John Finlayson M'Gill Sloan (P.), Hendrik Cornelius van der Wat Smit (M.), James Anstruther Smith (P.), John Kenneth Smith (P., M.), Alexander Robert Bogue Soga (P., M.), John Alexander Stewart (M.), William Patrick Andrews Stewart (P., M.), William Rowland Taylor (P., M.), Ernest Graham Young Thom, M.A. (P., M.), Edward Napier Thomson (M.), Angus Walker (M.), Thomas Walmsley (M.), Matthew White, M.A. (P., M.), Frederick John Whitelaw (P., M.), and William Brockie Wilson (M.).

Women.—Jane Kerry M'Elroy Hunter (P.), Mary Anne Kirk (P., M.), and Janet Morris Walker (M.).

Mr. William Brockie Wilson and Miss Mary Anne Kirk passed with distinction in the subject of Medical Jurisprudence and Public Health.

The following have satisfied the examiners in the Fourth (Final) Professional Examination for the degrees of M.B. and Ch.B.:—

Mark James Aitken, Alexander John Archibald, Thomas Stewart Barrie, William Egon Halman Beard, James Elliot Black, John Bower, David Sands Brough, Angus Dugald Buchanan, William Murdoch Buchanan, Charles Cameron, M.A., John Campbell, George Cochrane, M.A., James Alphonsus Joseph Conway, Robert Corbett-Corbett, James Findlay, M.A., Leander Lowrie Fyfe, William Gordon Goudie, John Radcliffe Grice, M.A., Charles Hope Haddow, James Stewart Hall, Daniel Christopher Hayes, John Richmond Herbertson, Andrew Gray Holms, Isabel Inglis, James Johnstone, Alexander Kirkhope, John M'Callum Lang, Norman M'Farlane, Barbara Macgregor, Murdo Mackinnon, William Wyllie MacNaught, Katherine Stewart Macphail, Farquhar Matheson, James Matheson, John Mitchell, Andrew Muir, Ellen Brown Orr, Hugh Paterson, James Eric Paterson, Henry Charles Deans Rankin, Hugh Young Riddell, William Logan Scott, Christina Hamilton Shearer, Alexander Hunter Sinclair, James Smith, Isabel Jane Stark, James Alexander Hamilton Telfer, William Tudhope, James Lachlan Ure, Gordon Alexander Valentine, Hugh Ferguson Watson, L.R.C.P., Archibald Wilson, Douglas Wilson, and Walter Percy Yates.

The following passed with distinction in the subjects indicated:—

In (*a*) Surgery and Clinical Surgery, (*b*) Practice of Medicine and Clinical Medicine, (*c*) Midwifery: Charles Cameron, M.A. In (*a*) Surgery and Clinical Surgery, (*b*) Midwifery: David Sands Brough. In (*a*) Practice of Medicine and Clinical Medicine, (*b*) Midwifery: Farquhar Matheson and James Eric Paterson. In Midwifery: Mark James Aitken, William Egon Halman Beard, John Bower, Robert Corbett Corbett, James Stewart Hall, Katherine Stewart Macphail, Ellen Brown Orr, Alexander Rae, and Henry Charles Deans Rankin.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin: Dr. Carl Keller, *Oberarzt* of the Gynæcological Department of the Charlottenburg Hospital, has been granted the title of Professor.—*Brussels:* Dr. E. H. Starling, Professor of Physiology in the University of London, has been elected Foreign Corresponding Member of the Belgian Royal Academy of Medicine.—*Catania:* Dr. F. Zangri has been recognised as *privat-docent* of Medical Pathology.—*Christiania* (centenary celebration): In addition to the names already announced the honorary doctor's degree has been conferred upon Sir T. Barlow (London), Sir W. Osler (Oxford), Dr. Bacceli (Rome), Dr. Bang, Dr. Gram, and Dr. Salomonson (Copenhagen), Dr. Golgi (Paris), Dr. Hammarsten (Upsala), Dr. Tigerstedt (Helsingfors), Dr. Kocher (Berne), Dr. Pawlow (St. Petersburg), Dr. Ramón y Cajal (Madrid), and Dr. Weichselbaum (Vienna).—*Freiburg:* Dr. Marx has been appointed temporarily in place of Dr. Killian to act as Professor of Laryngology. Dr. Hermann Determann, *privat-docent* of Medicine, and Dr. Adolf Oberst, *privat-docent* of

Surgery, have been promoted to Extraordinary Professorships.—*Genoa:* Dr. G. Moro has been recognised as *privat-docent* of Surgery and Dr. R. Carreras as *privat-docent* of Odontology.—*Gratz:* Dr. A. Wittek, *privat-docent* of Orthopædic Surgery, has been granted the title of Extraordinary Professor.—*Innsbruck:* Dr. Rudolf Schmidt of Vienna has been appointed to the chair of Medicine and Director of the Medical Clinic in succession to Dr. Ortner.—*Kiel:* Dr. Ludwig Bitter has been recognised as *privat-docent* of Hygiene.—*Lausanne:* Dr. Beitzke of Berlin has been offered and accepted the chair of Pathological Anatomy, which has been vacant since the death of Dr. Stilling.—*Modena:* Dr. I. Bruchi has been recognised as *privat-docent* of Surgery and Operative Medicine.—*Naples:* Dr. G. Ferulano has been recognised as *privat-docent* of Surgical Diagnosis.—*Padua:* Dr. G. Monzardo has been recognised as *privat-docent* of Operative Medicine.—*Parma:* Dr. E. Bertarelli has been promoted to the Ordinary Professorship of Hygiene.—*Pisa:* Dr. G. Gentili, Dr. S. Luschi, and Dr. F. Ravenna have been recognised as *privat-docenten* of Internal Pathology.—*Prague (German University):* Dr. E. J. Kisch, Professor of Balneology, has resigned.—*Rome:* Dr. Pietro Frascella and Dr. Filippo Lofaro have been recognised as *privat-docenten* of External Pathology.—*St. Louis (Washington University):* Dr. Ernest Sachs has been appointed Adjunct Professor of Surgery.—*Vienna:* Dr. Hugo Leischner has been recognised as *privat-docent* of Surgery.

SALARIES OF DISTRICT MEDICAL OFFICERS.—The Camberwell board of guardians have accepted the resignation of Mr. W. E. Morgan as district medical officer for the Camberwell district. The board met in committee, when the guardians came to the decision that in view of the number of cases they did not consider the remuneration at present paid of £100 per annum adequate for the post of district medical officer, and recommended an increase to £125 per annum, subject to the approval of the Local Government Board. At a meeting of the board on Oct. 5th Mr. S. Sayer proposed that the salary remain at £100. The late medical officer had been satisfied with that sum, and it was strange to offer an increased salary without any reason being given. It was for Mr. Morgan to say if the salary was too small, but he had never applied for an increase. It was the same amount they gave all their district medical officers when they commenced. There was something less than an hour's work in the morning, with only half-a-dozen cases to visit. It was an easily earned £2 a week. The guardians were increasing salaries all round, and he protested against it. Mr. C. E. Renouf, in seconding, said they treated their district medical officer very well when they gave him £2 a week. Only two guardians voted for the reduced salary, the proposal to grant £125 being carried.

ST. MARY'S HOSPITAL.—The annual dinner of the school was held at Princes Restaurant on Oct. 3rd, Mr. A. T. Norton, Master of the Apothecaries' Company, being in the chair. There were 152 present. After the loyal toasts had been honoured, the chairman rose to propose "St. Mary's Hospital and Medical School." He gave a vivid description of taking a country walk in his youth in the district now known as Paddington. There was a glorious wood in those days where the Great Western terminus now stands, and a creek meandered along the present Westbourne Grove. When he entered the hospital as a student there was no necessity for a preliminary examination, and two and a half years were considered sufficient to gain all the knowledge required to obtain the M.R.C.S. or L.S.A. The development of surgery he then traced from the time when one theatre and one afternoon a week were ample for a hospital of the size of St. Mary's, to the present day when several theatres in use every day, and sometimes all day, alone suffice for the needs of the hospital. Having described the conditions of 50 years ago he speculated on the possibilities of 50 years hence. Perhaps operations for appendicitis or perityphlitis would be unknown. The scope of serums and vaccines had still to be determined. He uttered a grave warning about the Insurance Bill. "Unless," he said, "it is altered to suit the medical man there will be a further falling off in the recruits of the profession." Mr. W. Austin Leigh (chairman of the hospital board) responded. He laid stress on the work of the hospital during the summer months. The three largest hospitals in the neighbourhood—Middlesex, St. George's, and Paddington Green—all being closed for considerable periods, the work was excessive, "and," he added, "we hope we will never again have to do the work of four hospitals during the hottest part of the year." Sir John Broadbent, also responding, pointed out the success of the hospital in gaining for the seventh year in succession one of the coveted gold medals of the London University, and also the gaining of the Middlemore prize awarded by the British Medical Association to Mr. C. W. G. Bryan. He drew attention to the falling off generally in the entrance of medical students. In spite of this falling off in numbers, in spite of provincial competition, and in spite of the Insurance Bill of Mr. Lloyd George, St. Mary's had already a considerably larger entry this year than last. Dr. J. O. Symes proposed "The Chairman" in an eloquent and sincere speech. "Mr. Norton's opinion was," he said, "pre-eminently a sound one, founded on wide experience, sound judgment, and keen powers of observation. Behind it all was a simple and great-hearted man." The chairman made an appreciative and sympathetic response.

PHLEBOTOMUS FEVER IN ITALY.—For many years during the months of June, July, and August in various provinces of Italy, especially in the north, a special form of epidemic fever has been observed. The characteristics of the epidemic are the suddenness of the onset and the rapidity of its diffusion. The disease is never fatal. The fever lasts for about 60 hours and leaves the patient very prostrated in mind and body for about a fortnight. The usual clinical picture is the following: an individual in good health is overcome by malaise, followed by frontal headache, pain in the limbs and in the loins; the fever reaches its highest point in some 12 hours, and then descends slowly without remissions and ceases in about 60 hours. The patients usually preserve appetite, but the tongue is white and the bowels are confined; in a few cases the tonsils or pharynx are reddened; occasionally there is epistaxis; the spleen is not enlarged; there is no albuminuria. A symptom present in almost all cases is a very marked and persistent redness of the face, such as one does not meet with in other diseases. Relapses are common. The infection is due to a virus which will pass through a Berkefeld filter. This virus is transmitted from man to man by the phlebotomus pappatasii, an insect that lives on human blood and is found in houses, especially in the bedrooms. The virus can remain active in these insects for ten days. To contract the disease numerous bites by these insects are necessary. The incubation period is from four to five days. (Annali di Igiene Sperimentale, Vol. XXI., Fasc. II., reviewed in Rivista Critica di Clinica Medica, XII., 38).

DONATIONS AND BEQUESTS.—The late Mr. Gibson, a former mayor of Newcastle, has, among other large bequests, left £2000 to the Newcastle Royal Infirmary.—By the will of the late Mrs. Charlotte Maud Barnato the testatrix bequeathed £1000 to the London Hospital (for the women's ward), and £500 each to the Cancer Hospital (for the women's ward), St. Mary's Hospital, Paddington (for the women's ward), the Samaritan Women's Hospital, Marylebone-road, the Children's Hospital, Paddington-green, the Middlesex Hospital (for the children's ward), the Hospital for Sick Children, Great Ormond-street, the Jews' Hospital and Orphan Asylum, and the Hospital for Women, Soho-square.—The late Mr. Albert R. T. Momber has by will bequeathed the following approximate amounts to the various institutions—viz., £2520 to the Governors of University College, London, upon trust to apply the income in maintaining a scholarship or scholarships for science; £2160 to University College Hospital; £1440 each to the London Hospital and the Queen-square Hospital, W.C.; £1080 to St. George's Hospital; £3600 equally between the Lister Institute, Chelsea, the Marine Biological Research Association, Plymouth, the Cancer Research Institution, and the Tuberculosis Research Institution; £720 each to the Royal Sea-Bathing Infirmary, Margate, the Hospital for Consumptives, Ventnor, the Royal Asylum for the Blind, Chelsea, the Home for Crippled Children, Chelsea, and the Frimley Sanatorium in connexion with the Brompton Hospital; and £180 each to Dr. Barnardo's Homes, the Malvern Rural Hospital, the Royal Free Hospital, Gray's Inn-road, the Royal Society for the

Protection of Birds, the Royal Society for the Prevention of Cruelty to Animals, and the Naples Society for the Protection of Animals.—Under the will of the late Miss Ellen Baker the Worthing Infirmary will receive £500.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.—A meeting of this society will be held at 11, Chandos-street, Cavendish-square, W., on Friday, Oct. 20th, at 8.30 P.M., when Dr. A. G. Bagshawe will read a paper on Recent Additions to our Knowledge of Sleeping Sickness.

THE PROPOSED ISOLATION HOSPITAL IN TORONTO.—The Toronto Local Board of Health has recommended recently the purchase for $30,000 (£6000) of a site overlooking the ravine and comprising 10 acres for the erection of an isolation hospital.

Dr. Charles F. Harford has been transferred from the post of physician to the Church Missionary Society to that of the secretary of the medical committee, with supervision of the medical missions of the society, comprising 48 stations, in which 91 medical men and women and 59 nurses are working. The statistics for the last completed year were: beds, 3388; in-patients, 31,871; out-patients, 1,136,518. Dr. Harford still continues as Principal of Livingstone College, as he did when holding his former post.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—The first ordinary meeting of this society was held on Oct. 5th. The retiring President, Dr. E. N. Burnett, occupied the chair, and there were present 56 members. After some business proceedings, including the reports of the honorary secretaries and treasurer, Dr. Burnett vacated the chair and invited the President-elect, Dr. Andrew Smith, to occupy it. Dr. Smith then delivered the presidential address, his subject being "The Country Doctor," which was received with great enthusiasm by the large meeting.

THE VENTILATION OF SMALL DWELLINGS.—Lord Mount Edgcumbe, who resides at Mount Edgcumbe, near Plymouth, has, through the local press, made an offer to give £50 for the best paper on the subject of ventilation for small dwellings. Lord Mount Edgcumbe "states that if some persons with practical knowledge of the subject, such as medical men, clergymen, architects, &c., would care to express an interest in the matter, a meeting might perhaps be arranged and a committee appointed to propose a mode of competition." Lord Mount Edgcumbe considers "that the subject of ventilation of small dwellings is worth more consideration than it has hitherto received on the part of those who are interested in public health."

LITERARY INTELLIGENCE.—Vol. V. of the new edition of "Allen's Commercial Organic Analysis" is announced for publication by Messrs. J. & A. Churchill. This volume has been rewritten under the editorship of W. A. Davis, B Sc., and S. S. Sadtler, S.B. The subjects and authors are as follows: Tannins, Leather, Dyes, and Colouring Matters, by W. P. Dreaper; Diphenylmethane and Triphenylmethane Colouring Matters, &c., by J. T. Hewitt; Colouring Matters of Natural Origin, by W. M. Gardner; Analysis of Colouring Matters, by W. P. Dreaper and E. Feilmann; Inks, Carbon Papers, Typewriter Ribbons, &c., by P. H. Walker; Colouring Matters in Food, by A. F. Seeker.

MEDICAL OFFICERS OF HEALTH SOCIETY.—Dr. A. G. R. Cameron, President of the Southern Branch of the Society of Medical Officers of Health, in his address at the annual meeting of the branch at Chichester on Oct. 6th, dealt with the subject of the unequal manner in which the Public Health Acts and regulations are enforced in rural and small urban districts. Dr. Cameron quoted instances, and advocated annual Government grants to sanitary authorities as an incentive to the carrying out of sanitary measures, as was already done in the case of public elementary schools. Dr. Cameron strongly recommended that the powers of executive officers should be strengthened, and that adequate administrative facilities should be afforded for the carrying out of their work and the coördination of the duties of medical officers of health and clerks of district councils.

BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, AND CO., LIMITED, Ruskin House, 44 & 45, Rathbone-place, London, W.

Famous Chemists. By E. Roberts, B.Sc. Lond. Price 2*s.* 6*d.*

ARNOLD, EDWARD, 41 & 43, Maddox-street, London, W.

The House-Surgeon's Vade-Mecum. By Russell Howard, M.B., M.S. Lond., F.R.C.S. Eng., Surgeon to Poplar Hospital. Price 7*s.* 6*d.* net.

BAILLIÈRE, TINDALL, AND COX, London.

Rose and Carless's Manual of Surgery. For Students and Practitioners. Eighth edition. Revised by Albert Carless, M.B., M.S. Lond., F.R.C.S., Professor of Surgery in, and Surgeon to, King's College Hospital, London. Price 21*s.* net.

Clinical Immunity and Sero-Diagnosis. By A. Wolff-Eisner, M.D., Berlin. Translated by Ray W. Matson, M.D., Portland, Oregon, U.S.A., Professor of Histology, North Pacific College of Dentistry and Pharmacy. Revised and edited, with a special Introduction, by the Author. Price 7*s.* 6*d.* net.

BOERICKE AND TAFEL, 1011, Arch-street, Philadelphia, Pa., U.S.A.

The Blood and its Third Anatomical Element. By A. Béchamp, Formerly Professor in the Medical Faculty of Montpellier (France). Translated from the French by Montague R. Leverson, M.D., of the Baltimore Medical School and M.A. and Ph.D. of the University of Göttingen. Price, cloth, $1.50.

CASSELL AND COMPANY, LIMITED, London, New York, Toronto, and Melbourne.

A Manual of Physics for Medical Students. By Hugh C. H. Candy, B.A., B.Sc. Lond., F.I.C., Lecturer on Chemistry at the London Hospital Medical College and Arnott Professor of Natural Philosophy in Queen's College, London. Price 6*s.* net.

Hygiene and Public Health. By Sir Arthur Whitelegge, K.C.B., M.D., B.Sc. Lond., F.R.C.P., D.P.H., and Sir George Newman, M.D., D.P.H., F.R.S.E. Twelfth edition, revised throughout. Price 8*s.* 6*d.* net.

Surgical Applied Anatomy. By Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D., F.R.C.S., Serjeant Surgeon to H.M. the King. Sixth edition, revised by Arthur Keith, M.D., LL.D. Aberd., F.R.C.S. Eng. Fortieth thousand. Price 9*s.*

Diseases of the Skin. An Outline of the Principles and Practice of Dermatology. By Sir Malcolm Morris, K.C.V.O. Fifth edition. Revised by the Author with the Assistance of S. Ernest Dore, M.D. Cantab., M.R.C.P. Price 10*s.* 6*d.*

The Methods of Race-Regeneration. By C. W. Saleeby, M.D., F.R.S.Ed., F.Z.S. (New Tracts for the Times. Promoted by the National Council of Public Morals, Holborn Hall, London, W.C.) Price 6*d.* net.

SCIENTIFIC PRESS, LIMITED, London.

Sanatoria for the People, or the State Campaign Against Consumption. By Charles H. Garland and Thomas D. Lister, M.D. Price 1*s.* net; 1*s.* 2*d.*, post free.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

COHEN, M. W., M.B. Lond., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

D'ERF WHEELER, PERCY, M.D., F.R.C.S. Edin., L.R.C.P. Lond., has been appointed Medical Superintendent of the Deptford Medical Mission.

FELDMAN, W. M., M.B., B.S. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Consulting Physician to Stepney Jewish Schools.

JOHNSON, ALFRED E., M.B., B.Ch. Vict., F.R.C.S Eng., has been appointed Assistant Surgeon at Middlesex Hospital.

KELLOCK, T. H., M.D., M.C. Cantab., F.R.C.S. Eng., has been appointed Fourth Surgeon at Middlesex Hospital.

LAWRY, RICHARD COGER, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health of Penzance, Cornwall.

LITTELJOHN, A. R., M.R.C.S., L.R.C.P. Lond., D.H.P., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

MOORE, SYDENHAM F., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at the Warneford, Leamington, and South Warwickshire General Hospital.

MORRISON, Professor J. T. J., M.B. Cantab., F.R.C.S. Eng., has been appointed one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 22, to be attached more particularly to Bromsgrove, Redditch, and Droitwich County Courts.

PARSONS, HARRY COMPTON, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health of Great Torrington, Devon.

PYBUS, FREDERICK C., M.S. Durh. F.R.C.S. Eng., has been appointed Assistant Surgeon to the Hospital for Sick Children, Newcastle-on-Tyne.

RATTRAY, P., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Slaithwaite District of the county of Yorks, West Riding.

ROSSITER, H. T., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

VAUGHAN, RICHARD GRENVILLE, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer for the Caldicot District by the Chepstow (Mon.) Board of Guardians.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATTERSEA DISPENSARY FOR PREVENTION OF TUBERCULOSIS.—Medical Officer. Salary £250 per annum.

BIRMINGHAM EAR AND THROAT HOSPITAL, Edmund-street.—House Surgeon for six months. Salary at rate of £70 per annum, with board, lodging, and washing.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £140 per annum, with rooms, rations, laundry, and attendance.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House Surgeon. Salary £75 per annum, with board, apartments, and washing.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CARDIFF INFIRMARY (GENERAL HOSPITAL).—House Surgeon for six months. Salary £30, with residence, board, and laundry.

CARLISLE DISPENSARY.—Resident Medical Officer. Salary £150 per annum, with apartments.

CHESTERFIELD, BOROUGH OF.—Medical Officer of Health. Salary £400 per annum.

CLAYBURY, LONDON COUNTY ASYLUM, Woodford Bridge, Essex.—Junior Assistant Medical Officer, unmarried. Salary at rate of £160 per annum, with board, apartments, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL, Coventry.—House Physician and Junior House Surgeon. Salary in each case £90 per annum, with rooms, board, washing, and attendance.

CROYDON GENERAL HOSPITAL.—Junior House Surgeon. Salary £75 per annum, with board, laundry, and residence.

DENBIGH, DENBIGHSHIRE INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, apartments, laundry, &c.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

EAST SUFFOLK COUNTY EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £250 per annum.

EDMONTON UNION INFIRMARY, 77, Bridport-road, Upper Edmonton.—Second Assistant Medical Officer, unmarried. Salary £120 per annum, with residential allowances.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—House Physician. Salary at rate of £60 per annum, with board, residence, and washing.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—House Physician and Assistant House Surgeon for six months. Salary of former at rate of £90 per annum, and of latter at rate of £80 per annum.

GLASGOW DISTRICT MENTAL HOSPITAL, Lenzie.—Junior Assistant Medical Officer. Salary £125 per annum, with board, lodging, and washing.

GLOUCESTER COUNTY ASYLUMS.—Assistant Medical Officer, unmarried. Salary £150 per annum, with rooms, rations, laundry, and attendance.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—Surgeon to Out-patients.

HASTINGS, EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary at rate of £70 per annum, with residence, board, and washing.

HITCHIN, THREE COUNTIES ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, washing, and attendance.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for six months. Salary 30 guineas.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Assistant Casualty Medical Officer, unmarried, for six months. Salary £30, with board, residence, &c.

HUDDERSFIELD ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £60 per annum, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Two Assistant House Surgeons. Salary at rate of £60 per annum, with board and lodging.

INVERNESS DISTRICT ASYLUM.—Junior Assistant Physician. Salary £140 per annum, with board, lodging, and laundry.

LEEDS GENERAL INFIRMARY.—Resident Medical Officer. Salary £150 per annum, with board, residence, and washing. Also Resident Obstetric Officer and Two House Physicians for six months, each with board, lodging, and washing. Also Three House Surgeons for twelve months. Also Resident Medical Officer for the Ida and Robert Arthington Hospitals for six months. Salary £30, with board, lodging, and washing.

LEICESTER INFIRMARY.—House Surgeon. Salary at rate of £120 per annum, with board, apartments, and washing. Also Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

LIVERPOOL EYE AND EAR INFIRMARY, Myrtle-street.—Honorary Assistant Surgeon.

LIVERPOOL HOSPITAL FOR WOMEN, Shaw-street.—House Surgeon.

LIVERPOOL ROYAL INFIRMARY (LOCK DEPARTMENT).—Honorary Surgeon.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon, unmarried. Salary £80 per annum, with board and residence.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham Hill-road.—House Surgeon. Salary £100 per annum, with apartments and board.

MELROSE, ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary £160 per annum, with board, lodging, and washing.

METROPOLITAN HOSPITAL, Kingsland road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon for six months. Salary of House Physician and House Surgeon at rate of £60 per annum, with board and washing. Salary of Assistant House Physician and Assistant House Surgeon at rate of £40 per annum, with board and washing. Also Ophthalmic Surgeon.

MIDDLESEX HOSPITAL, W.—Resident Medical Officer, unmarried. Salary £200 per annum, with residence and board.

NEWCASTLE-UPON-TYNE, ROYAL VICTORIA INFIRMARY.—Medical and Surgical Registrars.

NEW HOSPITAL FOR WOMEN.—Female Clinical Assistants.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, lodging, and washing.

OLDHAM ROYAL INFIRMARY.—Third House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.

OLDHAM UNION WORKHOUSE.—Resident Assistant Medical Officer.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Senior House Surgeon. Salary at rate of £135 per annum, with board and residence.

PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Senior House Physician. Salary £75 per annum. Also Senior House Surgeon. Salary £75 per annum. Also Junior House Physician. Salary £50 per annum. Also Junior House Surgeon for six months. Salary £50 per annum, with residence, board, and laundry.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, N.E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

READING, ROYAL BERKSHIRE HOSPITAL.—House Physician and Second House Surgeon for six months. Salary £80 and £60 per annum respectively, with board, lodging, and washing.

ROUSAY AND EGILSHAY, PARISH OF.—Resident Medical Officer. Salary £71 per annum.

ROYAL EAR HOSPITAL, Soho.—House Surgeon. Salary £40 per annum.

ROYAL NAVAL MEDICAL SERVICE.—Fifteen Commissions.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Honorary Dental Surgeon.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square, W.—Honorary Surgeon. Also Resident Medical Officer. Salary £150 per annum, with apartments, attendance, coals, and light.

ST. MARY'S HOSPITAL, London, W.—Casualty Physician. Salary £75 per annum.

SHEFFIELD ROYAL INFIRMARY.—Three Junior Resident Medical Officers. Salaries £60 to £65 per annum.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—House Physician. Salary £82 per annum, with board, residence, and laundry.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House Surgeon, unmarried. Salary £150 per annum, with board, lodging, and washing.

STOCKPORT INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, washing, and residence.

SURREY COUNTY COUNCIL.—Assistant Medical Officer for Inspection of School Children. Salary £250 per annum.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board lodging, and laundry.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Physician, unmarried. Salary £100 per annum, with board, residence, &c.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Junior House Surgeon. Salary at rate of £80 per annum, with board, residence, and washing. Also Honorary Ophthalmic Surgeon.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY.—Junior House Surgeon. Salary £100 per annum, with rations, washing, and apartments.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Clonavaddy, in the county of Tyrone; and at Stornoway, in the county of Ross and Cromarty.

Births, Marriages, and Deaths.

BIRTHS.

BARENDT.—On Oct. 4th, at Rodney-street, Liverpool, W., the wife of Frank H. Barendt, M.D. Lond., F.R.C.S. Eng., of a son.

SMALLEY.—On Oct. 5th, at Suva, Fiji Islands, the wife of James Thornton Smalley, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MARRIAGES.

EDMUNDS—STRATFORD.—On Oct. 4th, at Locking Church, Somerset, by the Rev. F. Jackson, M.A., Arthur Edmunds, M.S. Lond., F.R.C.S. Eng., youngest son of the late Joseph Edmunds of London, to Maud Dampier, youngest daughter of the late Martin Stratford of Gloucester.

DEATHS.

BELL.—On Oct. 4th, at Mauricewood, Milton Bridge, Midlothian, Joseph Bell, M.D., F.R.C.S.E., J.P., D.L.

CAMPBELL.—On Oct. 8th, at Palace Gardens-terrace, Kensington, Brigade-Surgeon Alexander Dugald Campbell, late H.M.'s Bengal Medical Service.

GÜNTHER.—On Oct. 6th, at Hampton Wick, Theodore Günther, M.D., aged 77 years.

JACKSON.—On Oct. 7th, at Manchester-square, W., John Hughlings Jackson, M.D., LL.D., D.Sc., Hon. M.D. Bologna, F.R.S., Consulting Physician to the London Hospital and to the Hospital for Epilepsy and Paralysis, aged 76 years.

LITTLE.—On Oct. 4th, Louis Stromeyer Little, B.A. Lond., F.R.C.S. Eng., M.D. Kiel, of The Roughets, Blechingley, and late of Shanghai, China, in his 71st year.

MILLER.—On Oct. 9th, at Overfield, Bickley, Kent, John Nicholas Miller, M.D. Lond., aged 74 years.

THOM.—George Thom, M.R.C.S., of 1, Clarendon-terrace, Devonport, died suddenly on Oct. 8th.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

QUACKERY IN THE EAST.

AN Indian correspondent has sent us some pages from a price-list issued by a native saddler in Cawnpore. Our correspondent remarks that it is a unique example of the extremes to which uncontrolled quackery can run, and that it shows the type of remedy for which there is a demand in India. Incidentally, he adds, the advertisements have a humorous aspect, and with this we find it hard to disagree. The catalogue of the Medicine Department of Messrs. Mohamed Shafi and Co. has for its text the admirable sentiment, "Health is the Life of the Body," and it fills seven quarto pages. The 80 or so preparations (which are all compounded under the eye of "a very able doctor," Mohamed Sayed) cost from 1 to 5 rupees each, and they are guaranteed to be infallible remedies for almost all the ailments and disabilities to which mankind is heir. An "Oil for the remedy of the errors of youth" is especially recommended, and a Tonic for Weakness which "proves to be a stuff for old people." But there is something for everybody in Mohamed Shafi's price list, and no one need despair who has a rupee or two to invest. Barrenness, baldness, and bugs disappear like the mists of morning, and "foreign humours" can be driven from a "disorderly stomach." A charm for removing snakes and scorpions can be bought for the same price as a specific for small-pox marks which "removes the complexion." With reference to condensed milk at 12 annas the tin, "the public are informed not to be deceived by buying cheap and superious milk." Prophylactic bangles and lockets cost only 2 or 3 rupees each and effectually ward off "cholera weakness, cold, thinness, fever cough, inflammation of the eyes, erysipelas, indigestion, small-pox, impurity of blood, fits, and many other diseases to which children are subject." A plaster which has cured hopeless cases will "heal any old man and obstinate ulcer," while if Tooth Oil is used intelligently the user for the rest of his life "will have a set of unshaken teeth." Jawahar Mohra (or Tone Restorer) "makes a man patent," and Sukha cures "infants who pine away and ultimately die." Although "the inflammation of kidney is fatal," Mohamed Shafi has a remedy which never fails to cure it, and the price of a box is 2 rupees. Should you wish to give up opium, chandoo or spirituous liquors, he has a "life-saving thing which will relieve you radically" for 5 rupees the bottle. All through the catalogue there is an echo of the familiar clap-trap of Western quackery, and, though the reverse might be expected with a bait intended for ignorant and superstitious Orientals, the claims are not more impudent and the suggestions not more frankly obscene. The saddler of Cawnpore has not much to learn from the patent medicine vendors of the United States.

A REMINISCENCE OF MATTHEW WEBB.

To the Editor of THE LANCET.

SIR,—I read with great interest the recent comments and account of the Channel swim, for I knew Matthew Webb well, the first to accomplish that great feat. Matthew Webb before his last fatal effort came to consult me professionally in New York, where at that time I was practising medicine. He was then suffering from deafness produced by his arduous life, commonly known there as "sailor's deafness"; he had perforation of the tympanum. I examined him and had a special opinion also on his case, and as a result advised him on no account to attempt the desperate exploit, telling him that it appeared to be an absolutely impossible thing for any man, under any circumstances, to accomplish such a feat, while failure meant certain death. He was not to be dissuaded, however, but said, "I shall do it, sir, and you will be the first gentleman that I shall see when I return." So I said, "Good-bye, Webb," and he departed.

Matthew Webb before that had been an A.B. seaman before the mast on the R.M.S. *Russia* of the Cunard service, and performed there a wonderful deed. Two men were working on the after part of the saloon deck of the vessel; the ship was going from New York to Liverpool, with close-reefed topsails, at 17 knots an hour, Captain Theodore Cook, commander. At 4 o'clock in the afternoon the cry was raised "Man overboard." Webb's mate had been washed overboard and Webb followed him. The ship was put about, and for an hour and a half the man was not visible from the fore top-mast. Webb was picked up and came on board with the cap of the unfortunate man, the only souvenir of his lost mate. When asked why he did it, he said: "I thought I could save my mate, and I knew that the little captain would not leave me." His after-history is well known, as well as his fatal swim. His body was never found. Knowing Webb well as I did, I had many opportunities of observing his striking personality; he was the model of an English sailor—calm, self-possessed, and brave, and one to whom duty was everything.

I am, Sir, yours faithfully,

Bournemouth, Sept. 30th, 1911. R. A. CALDWELL.

BREATHING EXERCISES FOR CHILDREN.

To the Editor of THE LANCET.

SIR,—Can any of your readers tell me of a small book, about 1*s.* to 2*s.* 6*d.*, suitable for nurses giving instructions in the above?

I am, Sir, yours faithfully,

Oct. 3rd, 1911. BERK.

Anti-humbug.—The two symptoms arise from so many conditions that there can be no specific cure for them. Where they arise from special causes the dermatologist should be consulted; he will be able to advise if any general line of treatment would be useful in addition to, or instead of, local measures, and to indicate where advice should be sought.

"*Rustic*," a medical man, would be glad of advice from his medical brethren as to the treatment of a boy aged 5 years who has recently begun to stammer. His health is excellent, he does no lessons, and leads an out-door life. His father stammered as a boy and his uncle and great-uncle stammer.

J. D. L. writes:—"Can any reader of THE LANCET tell me where I can hire or buy a set of lantern slides suitable for a course of popular lectures on hygiene, especially showing bacteria, &c., and where I can procure a set of suitable diagrams?"

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1911:—

April–October.—Rome Exhibition (United Italy's Jubilee).
" 29th–Oct. 26th (Turin).—International Exhibition.
May 3rd–Oct. 31st (Glasgow).—Scottish Exhibition.
" 6th–Oct. 31st (Dresden).—International Hygiene Exhibition (British Section opens June 14th).
May 12th–Oct. 31st (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
May 18th–October 31st (London, Shepherd's Bush).—Coronation Exhibition.
Sept. 19th–Oct. 31st (London).—Earl's Court Exhibition.
" 23rd–Oct. 21st (London, Olympia).—Electrical Exhibition.
September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Oct. 12th–18th (Rome).—Fifth Annual Meeting of the Italian Society for the Advancement of Science.
" 13th–16th (Turin).—Third National Congress of Professional Diseases.
" 15th (The Hague).—International Opium Conference.
" 20th–22nd (Roubaix).—Second National Congress of the Mutalité Maternelle.
" 22nd and 23rd (Lyons).—Twelfth French Congress of Medicine.
" 25th–27th (New York City).—Annual Conference of Sanitary Officers of the State of New York.
" 26th–28th (Rome).—Congress of the Italian Society of Laryngology, Otology, and Rhinology.
" 31st–Nov. 4th (London, Royal Horticultural Hall).—Twenty-second Universal Cookery and Food Exhibition.
October (Paris).—First Congress of the International Medical Association for the Prevention of War.
Nov. 1st (opens) (Turin).—International Exhibition of Hygiene.
" 10th–25th (Manchester).—Smoke Abatement Exhibition.
" 14th and 15th (Vienna).—Jubilee of Union of Austrian Dental Surgeons.
" 21st–23rd (Montreal).—Canadian Public Health Association (First Annual Meeting).
November (Rome).—Fourth International Congress of Physical Education.
" (London).—Motor Exhibition.
Dec. 4th–9th (Havana, Cuba).—American Public Health Association
" 19th–23rd (Moscow).—Third Pan-Russian Therapeutical Congress.

In 1912:—
Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
April 14th–20th (Rome).—Seventh International Congress on Tuberculosis.
" (Rome).—Seventh International Congress of Dermatology and Syphilology.
" (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 29th–31st (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.
May (London).—International Horticultural Exhibition.
June (London).—Missionary Exhibition.
July 2nd–6th (Doncaster).—Seventy-third Annual Show of the Royal Agricultural Society of England.
" 25th–28th (Berlin).—Royal Institute of Public Health.

July 30th (York).—Royal Sanitary Institute.
,, (Liverpool).—British Medical Association, Eightieth Annual Meeting.
,, (York).—Twenty-seventh Congress of the Royal Sanitary Institute.
,, (London).—Imperial Congress of Universities.
Aug. 7th–10th (Glasgow University).—Thirty-second Annual Meeting of the British Dental Association.
Sept. 4th (Washington, D.C.) and Sept. 6th–13th (New York).—Eighth International Congress of Applied Chemistry.
,, 23rd–28th (Washington, D.C.).—Fifteenth International Congress on Hygiene and Demography.
September (Prague).—International Congress of Radiology and Medical Electrology.
(Budapest).—Tuberculosis Exhibition.
(Stockholm).—Olympic Games.
(Düsseldorf).—Third International Medical Accident Congress.

In 1913:—
(Easter week) (Berlin).—Fourth International Congress for Physiotherapy.
Aug. 6th–12th.—(London).—Seventeenth International Congress of Medicine.
,, 22nd–28th (Cambridge).—International Mathematical Congress.
(London).—Historical Medical Exhibition. (Organised by Mr. Henry S. Wellcome.)
(Chicago).—Congress of the International Association of Refrigeration.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION (Hon. Secretaries—H. Charles Cameron, H. H. Dale): at 4.30 P.M.

Presidential Address:
Dr. W. E. Dixon, F.R.S.

Paper:
Mr. P. P. Laidlaw: Laburnum Poisoning.

PATHOLOGICAL SECTION (Hon. Secretaries—J. C. G. Ledingham, A. E. Boycott): at 8.30 P.M.

Dr. A. Leitch: Carcinoma of the Uterus in a Rabbit.
Dr. Poynton and Dr. Paine The Experimental Production of Appendicitis by Intravenous Inoculation of a Diplococcus.
Dr. J. B. Cleland: An Organism Isolated from an Abscess in the Neck of a Bullock.
Dr. P. Cole: The Muci-carmine Staining Method (Demonstration).

THURSDAY.

DERMATOLOGICAL SECTION (Hon. Secretaries—J. H. Sequeira, Wilfred Fox), at 11, Chandos-street, W.: at 5 P.M.

Demonstration of Cases.

FRIDAY.

OTOLOGICAL SECTION (Hon. Secretaries—Sydney Scott, A. Logan Turner), at 11, Chandos-street, W.: at 5 P.M.

Presidential Address:
Dr. W. Milligan.

Cases will be shown by:
Mr. Yearsley, Mr. Lake, Mr. Nixon Biggs, Mr. Arthur Cheatle, Dr. Milligan, Dr. Dundas Grant, Mr. West, and others.

ELECTRO-THERAPEUTICAL SECTION (Hon. Secretaries—G. Harrison Orton, Cecil R. C. Lyster): at 8.30 P.M.

Presidential Address:
Mr. Archibald D. Reid.

MEDICO-LEGAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

TUESDAY.—8.30 P.M., Mr. R. Burrows: Note on a Recent Murder Trial.—Mr. W. Asten: Traumatic Neurasthenia.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover-square, W.

WEDNESDAY.—8 P.M., Mr. T. W. Butcher: Structural Details of Coscinodiscus Asteromphalus.—Mr. A. Flatters: Abstract of Paper on the Wheat Plant.—Rev. H. Friend: New British Enchytraeids.—Mr. W. Bagshaw: Instantaneous Exposure in Photomicrography.

OPHTHALMOLOGICAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Card Specimen will be shown by Mr. G. Coats. 8.30 P.M.: The President: Introductory Address. Mr. E. Nettleship: A New Case of Hereditary Night-blindness.—Mr. J. S. Manson: A Case of Hereditary Cataract (communicated by Mr. Nettleship).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.

WEDNESDAY.—4 P.M., Dr. C. T. Williams: Harveian Oration.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. G. Pernet: Clinique (Skin). 5.15 P.M., Lecture:—Mr. H. B. Robinson: Internal Strangulation.

TUESDAY.—4 P.M., Dr. R. H. Miller: Clinique (Medical). 5.15 P.M., Lecture:—Dr. J. Donelan: Some Points in the Diagnosis and Treatment of Intra-nasal Suppuration.

WEDNESDAY.—4 P.M., Mr. A. H. Tubby: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. F. W. Price: The Early Diagnosis of Pulmonary Tuberculosis.

THURSDAY.—4 P.M., Mr. V. W. Low: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. J. Morrison: Induction of Premature Labour.

FRIDAY.—4 P.M., Mr. E. B. Waggett: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. R. Jones: The Medical Treatment of Insanity.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Berstein: Blood Examination—Morphology.

WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Dr. Beddard: Practical Medicine. (Lecture I.).

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Morton: Radio-Therapeutics.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Clinical Lecture:—Dr. D. Robinson: Gynæcological or Obstetrical Subjects.

SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 3.30 P.M., Special Lecture:—Mr. Cargill: Hints on the Routine Examination of the Eyes.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Mr. Pendlebury; Cæcostomy.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson).

TUESDAY.—Clinic:—10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting).

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture: Mr. H. W. Carson: The Late Complications of Peritonitis.

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Mr. J. G. French: Pharynx and Naso-pharynx.
FRIDAY.—3.45 P.M., Dr. Abercrombie: Pharynx and Naso-pharynx.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Eczema (its Varieties, Symptoms, and Causes).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. H. Tooth.
FRIDAY.—3.30 P.M., Clinical Lecture:—Mr. L. Paton: Oculo-motor Paralysis.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. C. H. Melland: The Treatment of Heart Disease. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (18th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (19th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (21st).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 11th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Oct. 5	30·02	N.E.	0·02	71	59	48	49	50	Raining
,, 6	30 07	E.	0·25	87	59	49	49	50	Fine
,, 7	29·93	E.	...	60	54	49	49	50	Overcast
,, 8	30·04	W.	0·14	82	59	46	50	52	Cloudy
,, 9	30·23	N.E.	...	93	57	46	48	51	Overcast
,, 10	30·50	N.E.	...	88	57	44	45	46	Fine
,, 11	30·48	E.	...	80	59	46	50	52	Overcast

The following journals, magazines, &c., have been received:—Indian Medical Record, Monthly Cyclopædia, Boston Medical and Surgical Journal, Journal of the Royal Institute of Public Health, American Journal of Medical Sciences, Maryland Medical Journal, Yale Medical Journal, Australian Medical Journal, International Journal of Surgery, Canadian Medical Journal, Medical Review of Reviews, Medical Review, Indian Public Health, Medico-Surgical Journal of the Tropics, Bulletin of the Manila Medical Society, Edinburgh Medical Journal, Public Health, Indian Medical Journal, St. Bartholomew's Hospital Journal, Archives Générales de Médecine, La Tuberculosi, School Hygiene, Revue de Psychiatrie, Transvaal Medical Journal, American Journal of Gastro-Enterology, British Journal of Inebriety, Revue de Gynécologie, Journal of the Royal Army Medical Corps.

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Harveian Oration

ON

OLD AND NEW VIEWS ON THE TREATMENT OF CONSUMPTION.

Delivered before the Royal College of Physicians of London on Oct. 18th, 1911,

BY C. THEODORE WILLIAMS, M.V.O., M.D. OXON., F.R.C.P. LOND.,

CONSULTING PHYSICIAN TO KING EDWARD VII. SANATORIUM AND TO THE BROMPTON HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—Two hundred and fifty-five years have elapsed since William Harvey instituted this festival, directing that a Fellow of the College shall be appointed to make an oration in commemoration of all the benefactors of the said College, "with an exhortation to all Fellows and Members of the said College to search and study out the secrets of Nature by way of experiment; and also for the honour of the profession to continue in mutual love and affection among themselves, without which neither the dignity of the College can be preserved nor yet particular men receive that benefit by their admission into the College which they might expect, ever remembering that 'Concordiâ res parvæ crescunt, discordiâ magnæ dilabuntur.'" Such are the words of Harvey, and such are the precepts which this College has, to the best of its ability, endeavoured to obey for centuries.

We have had many and distinguished benefactors, and these have been duly celebrated in the various orations, but as Harvey, by his immortal discovery, has outshone all the other luminaries, and as he was the founder of the institution, the numerous orations have been, for the most part, dedicated to the celebration and exposition of his magnificent labours and achievements. When we bear in mind the numbers and the distinction of the past orators and the many periods of history in which they lived it will be obvious to all here to-day that it is impossible for me to say anything regarding the discovery of the circulation which has not been already said; for again and again the Harveian orators have eloquently set forth its originality and importance, the steps by which it was attained, and the work of previous labourers in the same field.

When you, Sir, appointed me Harveian orator and conferred on me the highest honour you have to bestow in this College, you accompanied the command with a desire that, after due and proper reference to the work of our great benefactor, I should dwell more particularly on the subject to which I have devoted a large portion of my life—viz., tuberculosis; and I will endeavour to carry out your wishes to the best of my ability.

First, to comply with my orders, let us briefly contemplate the state of knowledge concerning the circulation of the blood before Harvey commenced his investigations.

KNOWLEDGE OF THE CIRCULATION IN THE EARLY TIMES.

Aristotle had taught that in man and the higher animals the blood was elaborated from the food in the liver, whence it was carried to the heart and distributed through the veins over the body. His successors of the Alexandrine School of Medicine, Erasistratus and Herophilus, further amplified his system, and explained that while the veins carried blood from the heart to the members, the arteries carried a subtle kind of air or spirit. According to Dr. Pye-Smith's admirable epitome of the subject, only two changes had been made, for the practical physician, in this theory of the circulation between the Christian era and the sixteenth century.

Galen had discovered that the arteries were not, as their name implies, merely air tubes, but that they contained blood as well as vital air or spirit, and it had been gradually ascertained that the nerves (*νεῦρα*) which arose from the brain and conveyed animal spirits to the body were different from the tendons and sinews (*νεῦρα*) which attach themselves to bones.

The state of knowledge may be summarised as follows:—

1. At the time of Linacre (1524) physicians knew that the blood was not stagnant in the body, for this had been apparent even to the ancient augurs when they inspected the entrails of a victim and, as Dr. Pye-Smith remarked, to every village barber who "breathed" a vein; but no one had a conception of a continuous stream returning to its source—i.e., of a circulation in the true sense of the word—either in the system or lungs, for they were only cognisant of some slow and irregular movement of the blood.

2. Physicians, before Harvey, supposed that one kind of blood flowed from the liver to the right ventricle of the heart and thence to the lungs and the general system by the veins, and that another kind flowed from the left ventricle to the lungs and general system by the arteries.

3. They supposed that the heart's septum was pervious and allowed blood to pass directly from the right to the left side.

4. They had no conception of the functions of the heart as the motor power of the movement of the blood. They doubted if its substance were muscular; they supposed its pulsations to be due to the expansion of the spirits it contained. They believed the only dynamic effect which it had on the blood to be that of sucking it in during its active diastole; they supposed the chief use of its constant movements to be the due admixture of blood and spirits.

When we come to the sixteenth century we find that Jacobus Sylvius discovered the valves of the veins, more fully described later by Fabricius, and that Vesalius ascertained that the septum between the right and left ventricle was complete in the adult. Servetus, whose works, having been burnt, were probably never seen by Harvey, had certain theories of the existence of the lesser circulation, which were confirmed later by Realdus Columbus, for the latter taught that blood and spirits pass from the right to the left ventricle, not through the septum, but through the lungs.

DISCOVERY OF THE MECHANISM OF THE CIRCULATION BY HARVEY.

Such was the state of knowledge when Harvey commenced his long and painstaking series of researches and observations, and he prefaces his account of them with the following words, with which all students of cardiac pathology have probably some time or other felt sympathy:—

> When I first gave my mind to vivisections as a means of discovering the motions and uses of the heart, and sought to discover these from actual inspection and not from the writings of others, I found the task so truly arduous, so full of difficulties, that I was almost tempted to think with Frascatorius that the motion of the heart was only to be comprehended by God. For I could neither rightly perceive at first when the diastole took place, nor when and where dilatation and contraction occurred by reason of the rapidity of the motion, which in many animals is accomplished in the twinkling of an eye, coming and going like a flash of lightning, so that the systole presented itself to me now from this point, now from that; the diastole the same; and then everything was reversed, the motions occurring as it seemed, variously and confusedly together.
>
> At length by using greater and daily diligence, having frequent recourse to vivisections and employing numerous observations, I thought I had attained to the truth that I should extricate myself and escape from this labyrinth and that I had discovered what I had so much desired, both the motion and the use of the heart and arteries. Since which time I have not hesitated to expose my views upon these subjects, not only in private to my friends, but also in public in my anatomical lectures, after the manner of the Academy of old.

Then after many years of demonstrations, in his Lumleian lectures, he published his well-known "Exercitatio de Motu Cordis et Sanguinis," a work of 67 pages, marvellous for its conciseness, in which he proves for all time—

> (1) That it is the contraction, not the dilatation of the heart which coincides with the pulse, and that the ventricles, as true muscular sacs, squeeze the blood which they contain into the aorta and pulmonary artery; (2) that the pulse is not produced by the arteries enlarging and so filling, but by the arteries being filled with blood and so enlarging; (3) that there are no pores in the septum of the heart, so that the whole blood in the right ventricle is sent to the lungs and round by the pulmonary veins to the left ventricle, and also that the whole blood in the left ventricle is again sent into the arteries round by the smaller veins into the venæ cavæ, and by them to the right ventricle again, thus making a complete double "circulation"; (4) that the blood in the arteries and that in the veins is the same blood; (5) that the action of the right and left sides of the heart, auricles, ventricles, and valves is the same, the mechanism in both being for reception and propulsion of liquid and not of air, since the blood on the left side, though mixed with air, is still blood; (6) that the blood sent through the arteries to the tissues is not all used, but that most of it runs through into the veins; (7) that there is no to-and-fro undulation in the veins, but a constant stream from the distant parts towards the heart; (8) that the dynamical starting-point of the blood is the heart and not the liver.

One part of the circulation Harvey did not discover—viz., the capillaries. He had demonstrated the communication between arteries and veins in three situations—the choroid plexus, the spermatic vessels, and the umbilical vessels—but having no microscope he had to leave the discovery of the

capillaries to others, and four years after his death Malpighi, by the use of the newly invented microscope, showed in the lungs of a frog how the blood passes from one set of vessels to the other. Thus was the wondrous cycle made complete and the circulation of the blood, both lesser and greater, manifested to mankind.

Though Harvey's discovery was attacked and subjected to the severest criticism he lived to see it firmly established in the annals of medicine and to witness the conversion of the greater number of his opponents, but this is not to be wondered at when we consider the mass of evidence from observations and experiments on all classes of creation on which the discovery rests, the splendid and convincing logic of Harvey's arguments, and the modest and unpretending simplicity with which the discovery was put forward.

SOME RESULTS OF THE DISCOVERY.

With your permission, Mr. President, let us now picture Harvey contemplating some of the scientific truths which have been revealed as the result of the great discovery. Harvey himself sanctions such speculation, for in his second disquisition to John Riolanus, Junior, he remarks "how speedily is pain relieved or removed by the detraction of blood, the application of cupping glasses, or the compression of the artery which leads to the part. It sometimes vanishes as if by magic." He then refers us to his medical observations where his views will be found at length exposed and explained, observations which were, alas, destroyed when his house was sacked by Cromwell's soldiers. He could then see local abstraction of blood and the use of the tourniquet set forth, but when our great master glanced over ages to come he would soon have come upon a harvest of new facts, physiological, clinical, pathological, and therapeutical, which might all be traced to his grand discovery! What would he have thought of the phenomena of embolism of the arteries, which is the key to so many conditions of the brain and other organs, or again, of thrombosis and the inflammatory conditions of the walls of the veins and their effects on the circulation?

How delighted Harvey would have been with the discovery of mediate auscultation by Laennec and the consequent provision of a ready method for ascertaining and of estimating the sounds and murmurs of the heart! With what interest would he not have followed the experiments carried on in this city by Hope, C. J. B. Williams, and Glendinning, which, to use the terms of the report, concluded "that the first or systolic sound is essentially caused by the sudden and forcible tightening of the muscular fibres of the ventricles when they contract, and that the second sound, which accompanies the diastole of the ventricle, depends solely on the reaction of the arterial columns of blood on the semilunar valves of the arterial orifices."

Harvey would also have welcomed the graphic method introduced by Ludwig and his disciples and applied by Volkmann, Chauveau, and Marey to the registration of the pulse in the form of the cardiograph, sphygmograph, and to the measurement of the blood pressure, and probably, if he could have availed himself of such help, he would further have enriched our field by fresh discoveries of no small importance.

When we come to the practical uses of the knowledge of the circulation, what would Harvey not have thought of transfusion of blood, of the administration of anæsthetics, of hypodermic injections, &c., all which depend on this knowledge. Transfusion of blood[1] is only used in extreme and exceptional cases, and then is a procedure fraught with some danger, but the administration of anæsthetics is one of the greatest boons that have ever been granted to human and animal suffering, and has, in Sir James Paget's words, more than any other discovery, added to the sum of human happiness.

> Past all counting is the sum of happiness enjoyed by the millions who for the last years have escaped the pains which were inevitable in surgical operations, pains made more terrible by apprehension, more keen by close attention, sometimes awful in a swift agony, sometimes prolonged beyond the most patient endurance and then renewed in memory or in terrible dreams.

What a delight to Harvey to feel that his discovery had been the foundation of such blessed advances in medicine and surgery!

Intravenous injections of medicines, according to Sir Lauder Brunton, were first practised by Sir Christopher Wren, the famous architect of St. Paul's, who was a medical graduate of Oxford and a very successful experimenter, and, according to Bishop Spratt,[2] "by his injections divers creatures were immediately purged, vomited, intoxicated, killed, or revived according to the quality of the liquor injected." Intravenous injection was certainly an outcome of Harvey's discovery, and the process has been perfected by successive experimenters, and largely employed. But perhaps more important and certainly more useful has been hypodermic injection, the first instrument for which was devised by Dr. Alexander Wood, and which is so simple a procedure that it is employed not only by medical men and nurses, but too frequently by patients themselves and often to their disadvantage. Not only are drugs of various kinds administered in this way, but the different vaccines, tuberculin, and the like, and this method to which Harvey's discovery opened the door presents a vista of possibilities of which the master could hardly have dreamed.

TUBERCULOSIS.

I will now proceed according to your wishes, Mr. President, to give some account of the knowledge of tuberculosis which existed at the time of Harvey, and, with your permission, will trace the steps by which that knowledge has been extended and increased in the centuries which separate us from Harvey. The tale is not altogether a pleasant one, but one moral, at any rate, can be drawn—viz., that no satisfactory progress can be made in the investigation of disease unless the Harveian system of searching out the secrets of nature by way of experiment is employed.

SCROFULA.

When I take up my parable concerning tuberculosis of various kinds a smile of contentment would, I think, spread over Harvey's philosophic countenance as he realised the successive advances in knowledge; for in his time the principal treatment for "les scrofules dites écrouelles"—i.e., cases of scrofula or king's evil—was the royal touch, which was held to be of special virtue when the sovereign had just been consecrated. One of the first acts of Henry IV. of France when he entered his new capital, Paris, was to administer his royal touch to 600 scrofulous patients who flocked to him. According to Laurens, who published a book in 1609 on the subject, and also according to Professor Landouzy, to whom I am much indebted for information, the king's evil was regarded as a disease both hereditary and contagious, for the suppurating sores were held capable of contaminating healthy people, and their healing was difficult. In 1645 a pious lady founded in the Isle of France a hospital dedicated to St. Marcoul reserved for contagious scrofulous cases (*reservé au mal des écrouelles qui se communique*). The practice of the royal touch began in France with Clovis and in England with Edward the Confessor, and continued to a late period, in France till Charles X. (1824). In Spain the practice was in great vogue, and the Spaniards who were scrofulous would crowd to any city visited by their king for "*le Roy les touchant, Dieu les guérit.*" According to Dr. Pettigrew,[3] in no reign in the history of England did the practice prevail to such an extent as it did in that of Charles II., and it is not a little remarkable that more people died from scrofula, according to the bills of mortality, during this period than in any other. It was even recommended by the faculty, for at the instigation of Sir John Floyer, a physician of eminence, Samuel Johnson was "twice touched by Queen Anne," and as Boswell remarked "evidently without success." Both William III. and George I. declined to touch for king's evil, the latter referring the child of an English gentleman to the Pretender as possessing the hereditary power of the Stuarts. The English gentleman took his advice. His son was touched and recovered, and the father was converted to the Stuart cause.[4]

I will say no more on the king's evil, as it has been the subject of the Fitz Patrick lectures at the College this year and has been ably and exhaustively treated by Dr. Raymond Crawfurd, whose book I have read with much interest.

[1] Transfusion of normal saline solution is practically free from danger, and has proved of the greatest value in saving life in cases of profuse hæmorrhage.

[2] History of Royal Society of London for the Improving of Natural Knowledge, by T. Spratt, late Bishop of Rochester.

[3] Sir Richard Quain's Harveian Oration. 1885, p. 13.

[4] Chambers's History of the Rebellion.

SOME EARLY WRITERS ON TUBERCULOSIS.

Harvey's writings do not contain many references to tuberculosis, though it is possible the lost "Medical Observations" treated of the subject, but I have taken the pains of going carefully through that remarkable document the "Prælectiones Anatomiæ" published by the College, which owing to the deciphering skill of Mr. Scott of the British Museum and the liberality of the College, supplies us with Harvey's Latin notes of his famous lectures, interspersed with sundry English expressive annotations. These contain much that is remarkable and instructive, but I failed to find any reference to consumption or other forms of tuberculosis. The "prælectiones" contain a good description of the anatomy of the lungs and of the process of respiration—so that, although we are acquainted with Harvey's views on many diseases, we do not know what doctrines he held on tuberculosis.

The first writer on this and other kindred subjects after Harvey's period was Dr. Christopher Bennett (Benedictus), a Fellow of this College, who published (in 1656) a little book in Latin entitled, "Tabidorum Theatrum sive Pthisios Atrophiæ et Hecticæ Xendochium," which gives an account of several forms of tabes or wasting, and devotes some 30 pages to phthisis, basing the diagnosis of that disease on the character of the sputum, its frequency, the fact of its being tinged with blood, the pains in the chest and the shortness of breath, and colliquative night sweats. He dwells on the weak, small, and frequent pulse, on the falling off of hair and the curving of the nails, and above all on the so-called "Hippocratic" countenance, "seu ipsa mortis imago, viz., facies lurida ac emortua, oculi subsidentes, nares acutæ, gena depressiores, collapsa tempora, corpusque totam strigosum sceleto finitimum." And to complete the horrors of the poor patient he adds as a characteristic, "omnium virtutum deficientia." The descriptions are picturesque, though often obscure, but the treatment proposed is bleeding, cough mixtures, and inhalations with hygienic and dietetic rules, some of the latter excellent, but there is no mention of fresh air, tonics, or exercise.

MORTON'S "PHTHISIOLOGIA."

The next work of importance on consumption in this country was published at the beginning of the eighteenth century, to wit, Richard Morton's "Phthisiologia, or Treatise of Consumption." It was originally published in Latin, afterwards translated into English, and ran through more than one edition, being evidently widely read and approved in the eighteenth century. The author treated of "Consumptions," not only of pulmonary consumption, but of many kinds of wasting disease, such as that arising from discharging abscesses, from diabetes, from loss of blood, and from excessive diarrhœa due to various causes, but he devoted his chief attention to pulmonary consumption, of the acute forms of which disease he certainly was an attentive observer, and had a considerable experience. Some of his distinctions are shrewd, such as those between the different kinds of cough prevailing in consumption and catarrh, and his remarks on the "prognosticks" are occasionally quite sound, as, for instance, "every Consumption, though it be cured, is apt to return, and he that has once been in a Consumption, unless he governs himself very regularly, falls back into the same Condition, even upon the least Occasion. For not only the Lungs, being already impaired by a former Attack from the Distemper, are the more apt to receive a new Impression, but there is likewise a greater Inclination and Dispesition to this Distemper from the Habit of the Body itself in these, than in other Persons. Yea, moreover, even after the most perfect Cure of a Consumption, there is reason to suspect that there are some crude Tubercles yet remaining, which at length may, by often meeting with an Occasion, be inflamed, and ripen into Apostemes, and so at last become Ulcers." What, however, can we say of his view of the etiology as thus set forth: "The cause of a Consumption of the Lungs in general is a vitiated Disposition of the Mass of Blood and of the Spirits in the Nerves, contracted gradually from several procatartick or predisposing Causes, in which the sharp or malignant Serum or Water of the Blood being separated by the soft and glandulous Substance of the Lungs, does stuff, inflame, and at length also exulcerate the Lungs themselves, which is the immediate Cause of this Distemper." Morton maintained that the dry cough of consumption was caused by tubercles in the lobes of the lungs which cause a tickling in the upper part of the windpipe, and stated that the same dry cough may be caused by "chalky stones" generated in the substance of the lungs. He also observed the same symptoms arising "from 3 Nails, that slipt by Chance" (as the person was laughing) "through the Windpipe down into the Lungs and Continued for a whole Year, the sick Person being in other respects very well"! Morton was a believer in the doctrine of phthisis ab hæmoptoe and does not seen to attribute the hæmoptysis to pre-existing tubercle. He also gives illustrations of phthisis by contagion for which, according to him, the prognosis is very unfavourable. Morton's pathology is very obscure and somewhat indefinite, but when we come to treatment of his cases, most of which are acute, he begins by bleeding "to prevent the Hectick and colliquative Heat or Catarrhous State of the Blood"; then, in order to carry off the load of the dispirited and diseased humours lodged in the habit of the body with convenient medicines, he recommends vomits, purges, diuretics, and sweating medicines. Finally, he administers woodlice, crab's eyes, the simple powder of crab's claws, red coral, and white amber in the form of powders or julep to "temper the Sharpness of the Blood." Poor consumptive, who might well exclaim with the Frenchman, "Laissez-moi mourir, mais ne me tuez pas!"

TREATMENT ADVOCATED BY SYDENHAM.

Sydenham,[5] the great physician of gout and fevers, dismisses phthisis in a few pages of his epistles. After a short and rather striking sketch of an advanced case he describes a less acute case, and considers that the treatment "which would suffice would be to abstain from meat and wine for a few days and to take a balsam of sulphur and anise with sugar in the form of tablets and then a cough mixture of oil of sweet almonds, syrup of maidenhair, and syrup of violets; this to be taken off a stick of liquorice. If the cough do not yield to these remedies, or if it have arisen from peripneumony or pleurisy, or is accompanied by fever, and this is generally the case, it is folly to trust to pectorals," the disease must be attacked by bleeding and purging; but if, "notwithstanding the latter method, the cough not only continue, but do shake the lungs as to have paved the way for phthisis," he recommends balsam of Peru; but Sydenham concludes "that of all the remedies for phthisis, long and continued journeys on horseback bear the bell, in respect of which must be noted, that if the patient be past the prime of life, more exercise of the sort in question must be taken than if he was a youth or boy. Bark is no surer a cure for ague than riding for phthisis."

LATER VIEWS.

In Mr. Ancell's[6] "Treatise on Tuberculosis" (1852) will be found a list of the different theories which have prevailed in bygone ages to explain the occurrence of tuberculous diseases. These are 54 in number and extend from the time of Hippocrates to that of Dr. Hughes Bennett, and they are as diverse as they are numerous. They show the large amount of attention bestowed on the subject in all ages and, in many cases, testify to the lively imagination of their authors. Most of these theories refer the cause of consumption to errors of digestion and errors in the formation of the lymph or chyle, or blood, or to defective respiration, or they assign an origin from inflammation, and as a rule mistake predisposing causes for the *vera causa*, which, though long suspected, was never actually discovered till Robert Koch appeared on the scene.

Laennec's benefit to this department of medicine was twofold. He successfully applied his great discovery to the clinical phenomena of pulmonary consumption and he also gave us the first good account of the morbid anatomy of tubercle, and insisted on what has been definitely proved since his time—viz., on the unity of the disease.

Matthew Baillie had in 1795, from observations on children, stated that tubercles were the essential cause of consumption and demonstrated their seat in the cellular tissue, distinguishing them from lymphatic glands, but the first to properly describe miliary tubercle was Bayle, the friend and contemporary of Laennec, and to this day the miliary tubercle found in the serous membranes is called in France "granulations de Bayle."

[5] Works of Sydenham, Sydenham Society, vol. ii.
[6] Ancell: A Treatise of Tuberculosis, p. 552.

Bayle, like Laennec, denied an inflammatory origin to miliary tubercle, and held it to be a product *sui generis*.

Broussais,[7] on the other hand, considered that tubercle had an inflammatory origin and that consumption depended on a chronic phlogosis, inflammation of the lungs, or catarrh, parenchymatous or bronchial, which, if prolonged by the cause that produces it, could impress the lymphatics of the lungs with a certain impulse, leading to the formation of tubercle or various deposits of tuberculous matter.

Anyone studying the writings of Andral and Bayle will soon come to the conclusion that they, with Laennec, had grasped the main truth of the nature of tubercle and its close association with consumption, proving that they were opposed to Broussais's opinion that tubercle originated from inflammation; but, unfortunately, whatever their pathology might be, they, in common with other pathologists of the time, founded all their *treatment* on an anti-inflammatory basis, and did not seem to have been able to contemplate any treatment for any serious disease without anti-inflammatory measures.

TREATMENT BY BLOOD-LETTING, &C.

Concerning blood-letting, Morton, Donar, Mead, Pringle, and Munro all recommended it for the early stages of consumption to subdue inflammation. Cheyne advised bleeding in hæmoptysis, where it certainly has great effect, in order to reduce the inflammatory state of the lungs produced by the irritation of tubercle and to arrest the progress of the disease. Even Sir James Clark, who was a very cautious physician, counsels bleeding under certain restrictions, as the following extract will show. He was of opinion[8]—

> That keeping before us the condition of our patient, the nature of his constitution, and the pathological condition of his lungs, and considering the utmost benefit which we can generally expect to derive from the practice is the removal, or the diminution, of congestion or inflammation, complicated with, and often dependent on, the presence of tubercles, keeping all these circumstances in view, blood may be abstracted with advantage at any stage of consumption, when the symptoms require it. After pulmonary congestion has been diminished by general bleeding, the abstraction of blood by cupping or leeches, where further depletion is necessary, has a very beneficial effect.

Most of the above authorities advised bleeding on the ground of reducing inflammatory conditions of the lungs, but some of the French physicians entertained other views of its possibilities. Laennec's opinions on the subject are highly interesting, and are evidently more shrewd than those of his contemporaries. He says:—

> The most rational indications for the treatment of phthisis are, first, to prevent the secondary eruption of tubercles, as in this case, if the primary tubercular masses were not extremely large or numerous, which they very seldom are, a cure would necessarily take place after they, the masses, are softened and evacuated; secondly, to promote the softening and evacuation or absorption of the existing crop of tubercles.

Laennec remarks that bleedings and derivatives have been used to prevent the development of tubercle, the greater number of physicians, however, not considering these a means of curing or even of preventing phthisis, but only calculated to allay the inflammatory affections with which it is complicated, but he adds that Broussais maintained that by bleeding he stopped the inflammatory conditions and rendered the occurrence of phthisis rare. Laennec himself held that bleeding could neither prevent the formation of tubercles nor cure them when formed. He says: "It ought never to be employed in the treatment of consumption except to remove inflammation or active determinations of blood, with which the disease may be complicated; beyond this its operation can only tend to a useless loss of strength." Laennec doubted if any one of the remedies reported to promote the softening of the tubercles really did so, but he thought the alkalis, including the carbonates of ammonia and soda, helped expectoration. He considered the best means of opposing the disease was by sea voyages or a residence on the sea coast in a mild climate, and he attempted to establish an artificial marine atmosphere in the Clinical Hospital in Paris, where he placed 12 consumptives in a ward the air of which was impregnated with fresh seaweed. He states that in all of these patients the disease remained stationary, and in some the emaciation and fever were sensibly lessened, and that nine left believing themselves to be cured.

Louis seems to have been sceptical about the treatment of phthisis generally, and only believed in palliative measures.

Another method of treatment which was much in vogue in the eighteenth and the beginning of the nineteenth century was by emetics, as we know by the evidence of Morton, Parr, Bryan, Reid, Marryatt, Young, and Sir James Clark himself, for the latter cites the cures of De Vettis at Naples by emetics of tartarised antimony, and states the benefit derived from this form of treatment is chiefly in threatened consumption, explaining that the repeated action of emetics may prevent the deposition, or at least the retention of tuberculous matter in the bronchial ramifications and air-cells, and thus prevent the localisation of the disease.

COMPARATIVE DURATION OF LIFE OF CONSUMPTIVES.

I have dealt rather fully with the treatment of consumption at the time of Laennec, Louis, James Clark, and others, because I wished to show that the short duration of life in their cases was clearly connected with the depressing measures then in vogue, and that the disease was not, as has been urged, of an utterly different type from that which prevails now, when the duration of life is much greater, and this can be proved by a comparison of some of the clinical descriptions. The best evidence on this point is that of Dr. C. J. B. Williams,[9] a favourite pupil of Laennec, who in 1871 gave the following facts:—

> In the first ten years of my practice (1830-40) the beneficial effect of treatment was limited to incipient cases, and especially to those who were able at an early stage to take long voyages, such as those to Australia and to India.

He adds:

> My general recollection of the histories of the developed disease at that time is that of distressing tragedies, in which no means used seemed to have any power to arrest the malady; and life was rarely prolonged beyond the limit of two years, assigned by Laennec and Louis as the average duration of the life of a consumptive.
>
> In the next period of ten years (from 1840 to 1860) a marked improvement took place in the results of treatment, apparently in connexion with the allowance of a more liberal diet, and the habitual use of mild alterative tonics, as they might be termed, particularly iodide of potassium with sarsaparilla, or other vegetable tonics. Several of the early cases recorded were treated in this way and with improved results in respect of the general health of the patients and diminution of cough and expectoration.
>
> It was in the latter half of this period that chemists began to produce cod-liver oil of sufficient purity and freshness to be fit for the human stomach; and I have no hesitation in stating my conviction that this agent has done more for the consumptive than all the other means put together.

TONIC TREATMENT OF PHTHISIS.

When I entered London practice in 1866 the tonic treatment of consumption had commenced, and according to the evidence of the first Brompton Report and of Dr. Hughes Bennett, Dr. C. J. B. Williams, and others, cod-liver oil was at the head of all consumption treatment and was in extensive use in hospital and private practice. The prevalent idea of treatment was, at that time, partly tonic, including a liberal dietary, and partly sedative to subdue symptoms. The climatic treatment was changing from the warm moist atmosphere of Madeira and the cold moist one of Pau to the dry warm and more bracing air of the Mediterranean shores. Sea voyages were still in vogue, and a few patients wintered in Egypt, while the English winter resorts were also in fashion. To live in an equable temperature, to sleep in a well-warmed room, and to winter in a more or less warm climate was the order of the day, and the era of unmitigated open air by day and night had hardly dawned. The Brompton Hospital experiment of sending patients to Madeira and my statistics drawn from my father's cases demonstrated that Madeira was undesirable for nearly all forms of consumption, as in spite of most of these patients being especially selected as suitable, they lost appetite and became languid, while the disease progressed rapidly and excavation proceeded.

That the introduction of cod-liver oil into the treatment of consumption exercised a wonderful effect on the outlook of the disease was well seen in the raised average of life among Dr. Pollock's out-patients at Brompton, in contrast to former estimates, and this seemed due to the oil alone, as these patients enjoyed no other special advantages in the way of food, exercise, climate, or sanitation, and my statistics also showed that the patients who persevered in the use of cod-liver oil at home did better than those who were sent to warm climates for the winter and did not persevere in its use.

In the Medico-Chirurgical Transactions of 1870 were

[7] Ancell, loc. cit., p. 553.
[8] Treatise on Pulmonary Consumption, p. 340.
[9] Pulmonary Consumption, first edition, 1871.

published my statistics on the Duration of Life in 1000 Cases of Pulmonary Consumption among the Upper and Middle Classes. These patients were selected with the limitation of having been under treatment for one year and upwards, thus excluding most of the acute cases, which group was calculated to amount to 3 to 5 per cent. of the whole number. Of the 1000, 198 had died, and the average duration of their life since the onset of the disease was 7 years and 7 months; 802 were living, with a good expectation of further life in 72 per cent., and a present duration of 8 years 2·19 months since the first attack. This was the result arrived at before the era of sanatoriums, high altitude treatment, and vaccines. Now let us consider sanatorium treatment.

INTRODUCTION OF FRESH-AIR TREATMENT BY BODINGTON.

It is well known that the open-air and sanatorium treatment was originated in 1840 by Bodington of Sutton Coldfield and supported by Henry MacCormac, but it had been practically ignored in this country until a much later date and until after it had been adopted by Brehmer of Görbersdorf 15 years after Bodington's time, and later on by Dettweiler of Falkenstein.

It is curious to see in Bodington's original essay on the "Treatment and Cure of Pulmonary Consumption on Principles, Natural, Rational, and Successful," how completely its author grasps the principles of open-air treatment when he says "the only gas fit for the lungs is the pure atmosphere freely administered, its privation is the most constant and frequent cause of the progress of the disease. To live in and breathe freely the open-air without being deterred by wind or weather is the one and essential remedy in averting its progress." Bodington, as the late Dr. Bulstrode,[10] whose admirable Milroy lectures this College had the privilege of listening to some years ago, points out, had a clear insight into the requirements of the consumptive working man, for he says "provision should be made for the employment of the convalescent and cured patients who, if possible, should not return to their former occupation" (presumably an unhealthy one), "but should be employed as agricultural labourers or gardeners." Bodington furnished a suitable house for the reception of patients, engaged a medical superintendent to give them "almost hourly watchfulness," and made all necessary arrangements, but he was before his age. His views were ridiculed, and his sanatorium was soon emptied of patients and converted into a lunatic asylum! He lived long enough to see the establishment and spread of sanatoriums, at least in Germany, where it had been whispered that the need for fresh air was the sorest, and he prophesied that when he was dead and buried perhaps the medical profession would be more disposed to do him some justice than when he lived. Now, as a kind of posthumous justice to Bodington's memory, the City of Birmingham has erected the first municipal sanatorium for consumption in England a few miles from the pioneer's original institution, and Birmingham is now proud of her once neglected son.

SANATORIUMS IN GERMANY.

On German soil the sanatorium idea, after weathering opposition, slowly developed; the first example being Brehmer's at Görbersdorf in Silesia, in which methodical hill-climbing up graduated ascents was specially enjoined with the object of furthering the development of the heart—a small heart, according to Brehmer, being one of the greatest predisposing causes of phthisis. This sanatorium grew and prospered, and at present there are no less than four at Görbersdorf.

Dettweiler, a patient, and afterwards an assistant, of Brehmer, established at Falkenstein, in the Taunus mountains, a sanatorium, where for Brehmer's graduated ascents, he substituted the Liegehalle system, in which patients lie for several hours together in open shelters, and this system continues in general use in German sanatoriums.[11] Dettweiler fed his patients largely, proclaiming the kitchen to be the true pharmacy of the sanatorium, and he established a high ideal for the medical superintendent of such an institution, for he contends that it must be "all in all to him, his Religion, his Politics, his Despair, and his Delight." Dettweiler held for a long time a foremost position as the head of Falkenstein, which was a leading German sanatorium.

Dr. Walther of Nordrach strongly opposed the Liegehalle, which he nicknamed "quarrelling halls"—I presume in consequence of what he observed among the occupants, and he advocated instead a species of solitary confinement during the rest hours, but enjoined out-door walks in all weathers with a stuffing dietary, and his example has been followed in several of the British sanatoriums.

STATISTICS OF GERMAN SANATORIUMS.

Many of these institutions were established in North and South Germany, some for the poor from charitable funds, some for the well-to-do classes as private speculations, and some to supply the requirements of the German Insurance Society, the present result being a total of 137 with 16,548 beds for the working classes alone.

Whatever difference of opinion may exist as to the need for sanatoriums in this country, there is in Germany no doubt about their success, not only for the insured and for workers but for all classes of society. Dettweiler was, I believe, the first to start a sanatorium for the poor at Ruppertshain in the Taunus, and was followed by von Leyden, B. Fraenkel, Pannwitz, and others, who organised Belzig, while Bielefeldt and Gebhart stimulated the insurance companies to erect sanatoriums for their consumptive members, of which at present there exist 38 with 3169 beds for men and 1314 for women. The records of these sanatoriums, kept for a number of years and classified for the Imperial Health Office by Dr. Hamel and Dr. Engelmann, show decidedly favourable results both as regards general and local conditions, but as the German authorities in their statistics make the capacity for work the standard of improvement rather than tabulating cases as arrested or cured, comparison with most of the English statistics is difficult. According to these German tables 44 per cent. male and 51 per cent. female consumptives were capable of work four or five years after leaving the sanatorium. The statistics of the Hanseatic Towns sanatoriums, where the proportion of early cases was apparently greater, give 47 per cent. of male and 57 per cent. of female, and the Prussian and Hessian Railway employees sanatoriums yield still better results, for they show 59·6 per cent. of patients at work five years after leaving the sanatorium. Naturally the results of sanatorium treatment greatly depend on the amount of disease present when the patient is admitted and the length of the consumptive history.

The statistics of the German sanatoriums are instructive and important, as they are based on thousands of cases of the working classes, but as they treat of the subject only from the point of view of capability for work and wage-earning they are incomplete. When a comparison was once attempted between these and my statistics, which are fairly complete, I was asked what proportion of my cases returned to work, and I had to explain that they belonged to a different class and few did manual work as wage-earners, so that a comparison was not possible; but what is really wanted is a whole-life comparison to see how long these patients lived.

ACUTE CASES.

As Sir R. Douglas Powell and Dr. P. Horton-Smith Hartley emphasise in their recent work,[12] every effort should be made to persuade those suffering from phthisis to apply for treatment in the early stage, and it will be noted that the result of treatment depends largely on the proportion of early cases, though we must not accept the popular statement that all cases of phthisis, if taken early, are curable. The dictum may be said to be true if applied to the ordinary types of chronic phthisis, but we must except acute cases, which all pass through an early stage to a fatal issue.

Acute miliary tuberculosis for instance, sometimes primary, sometimes secondary, often presents the signs and symptoms of an early case of consumption, but speedily develops and destroys the patient in a few weeks. Acute pneumonic phthisis, or galloping consumption, is another hopeless form, when the patient's power of resistance is feeble and the dose of bacillar poison overwhelming. In the early stages the symptoms are often obscure and mask the true nature of the disease, which declares itself gradually; the lungs become consolidated with tubercle and rapidly break down into suppurating cavities, whole lungs being

[10] Thirty-fifth Annual Report of the Local Government Board: Supplement on Sanatoria for Consumption and Certain other Aspects of the Tuberculosis Question.

[11] Sanatoria for Consumptives, by von Jaruntowsky. Translated by R. Clifford Beale.

[12] Diseases of Lungs, Powell and Hartley, fifth edition, 1911.

destroyed, and the victim perishing in a few weeks or months. It is true that in some of these cases the disintegrating process comes to a standstill and fibrosis sets in, the patient living on with a greatly diminished lung surface, though the disease is incapable of cure. Fortunately, acute tuberculosis and acute phthisis (galloping consumption) form only a very small percentage of the cases of consumption.

SANATORIUMS IN GREAT BRITAIN.

Though the open-air treatment has spread everywhere in Great Britain the number of public and private sanatorium beds is comparatively smaller than in Germany and, exclusive of Poor-law infirmaries, cannot exceed 3000, whereas Germany counts tens of thousands. This is chiefly due to the enormous increase of these institutions under the German Workmen's Insurance Act. We have some very good specimens in this country, as, for instance, King Edward VII. Sanatorium, founded by His late Majesty, an ideal establishment beautifully situated, and Frimley, the Brompton Hospital Sanatorium, well adapted for the working classes, to mention two among many others in the United Kingdom. These institutions are doing untold good, both in the way of treatment and instruction, and recent complaints against sanatoriums seem exaggerated and unreasonable, though they may partly be accounted for by the nature of the cases admitted, which are generally too advanced and fitter for consumption hospitals, and many more such hospitals are needed in this country.

A comparison has recently been made by Messrs. Elderton and Perry, under the auspices of Professor Karl Pearson, F.R.S., between the results from sanatorium treatment and those obtained in pre-sanatorium days by Dr. Pollock and myself. As far as I am concerned, I highly appreciate the care and attention which have been bestowed on my laborious figures, and I am pleased to note that Messrs. Elderton and Perry's conclusions agree so well with my facts; but I do not consider that sanatoriums have been long enough established in this country to furnish the information required for reliable statistics, and I hold that a fair and useful comparison is not yet possible. I would deprecate also comparison of America sanatoriums, such as the Adirondacks, with records of private patients in Great Britain, necessarily under different conditions.

I propose later to offer an opinion as to the needs of this country with regard to sanatoriums, hospitals, dispensaries, and labour colonies, but for the present will only say that the successes achieved at some of the working-class sanatoriums and the results of certain private sanatoriums justify a steady continuance of work which is first curative and secondly educational.

We note how the patient with a limited tubercular pulmonary lesion is removed to the thoroughly hygienic surroundings of a sanatorium and is compelled to live a healthy life, his food, his room, his exercise, his rests being all placed under minute direction. Here he slowly but gradually recovers, losing his symptoms, regaining his strength, until he is able to return home, where he presents himself not only fit to do work but to act as an apostle of fresh air and wholesome living.

GRADUATED LABOUR.

The introduction of a system of graduated labour into the treatment of consumption as a substitute for walking exercise has been an important addition and forms a prominent feature at Frimley, the Royal Victoria Hospital, Edinburgh, Maltings Farm Sanatorium, and at King Edward VII. Sanatorium.

Dr. M. S. Paterson,[13] who has introduced the system so successfully at Frimley, lays down as a condition of any work being undertaken that the patient's temperature shall not reach 99° F. in case of males, or 99·6° F. in case of females, and that if there be any rise of temperature after even the lowest grade of work the patient should be placed in a state of complete immobilisation until the register returns to the normal. It is found that after a few days the same grade is accomplished without rise of temperature, and in a week's time a higher grade is attempted with success, until by degrees the highest is reached and the patient is able to perform several hours of pick-axe, shovel, or wheelbarrow work without any unfavourable symptoms.

There are six grades of work besides walking, commencing with carrying small baskets of earth a certain distance and ending with pickaxe work, shovelling, hauling stones, and general heavy navvy work; while for the women patients the grades of exercise and work are similar, but the baskets and shovels are of smaller size and they are not allowed to work as hard as the men.

Dr. Paterson holds that in these working consumptives there occurs "an artificial inducement of auto-inoculations adjusted to the resisting power of the protective substances, and that it is possible to control the auto-inoculation by complete immobilisation." According to Sir Almroth Wright,[14] "it is by the agency of these auto-inoculations that the protective mechanism of the blood is set in motion, so that whenever bacterial products escape from localised foci and pass into the circulation, intoxication phenomena and immunising responses must necessarily supervene." Thus after inoculation from a tuberculous focus a large production of protective substance is calculated to take place. Whatever the theory may be to account for the change, it is most interesting to see patients become gradually accustomed to labour without any rise of temperature, and while the system does wonders for the bodies and especially for the muscles of our patients, it also has a most beneficial effect on their minds. Depression and gloom give way to cheerfulness and hope. The discovery that they can do honest work without suffering and that day by day their working powers increase has a most encouraging effect on their spirits, which rise proportionately with their returning strength.

TREATMENT AT HIGH ALTITUDES.

Probably one reason why sanatorium treatment was not more quickly taken up in this country was that, at the time, the attention of the medical profession was much occupied in considering the high altitude treatment of consumption, introduced to special notice by Sir Hermann Weber in his well-known paper read before the Royal Medical and Chirurgical Society on May 11th, 1869, which set us about investigating these climates and their effects. In the following summer I visited Davos, and through the kindness of the late Dr. Spengler and Dr. Unger I examined a number of German patients who had passed some months at an altitude of 5000 feet. At the time there were no English, though some had been there during the winter. What I saw of the patients and of the climate induced me to give a full trial to the high altitude treatment for consumption, and I have watched its effects on over 400 of my patients, sending them not only to the mountain resorts of Switzerland, such as Davos and St. Moritz, but also to North and South America and South Africa, and the statistics of most of these cases have been published in my Lumleian lectures delivered before this College on Aero-therapeutics. They confirm the results of Archibald Smith, Jourdannet, Guilbert, Lombard, and of Hermann Weber as regards mountain climate, of which the characteristic features are: (1) diminished barometric pressure and consequent rarefaction of the atmosphere; (2) diathermancy of the air, or the increased facility by which the sun's rays are transmitted; and (3) asepticity or freedom from pathogenic germs, as proved by the researches of Pasteur and others.

The effect of mountain air on the organs and functions of healthy and of sick persons has been ascertained by repeated careful observations to be as follows: the skin is tanned by the solar rays and, according to Dr. Bowles, principally by the ultra-violet rays, in the attenuated atmosphere. The circulation is at first quickened, the heart's impulse becomes more powerful, but the pulse-rate at the end of six or eight weeks falls to normal, or even below normal; the respiration is at first quickened, but after a similar interval it gradually slows and is reduced to normal or below normal. The breathing becomes deeper, the inspiration longer, and the expiration more complete, and thus is explained the slowing of the respiration. There is reduction in the blood pressure and in the amount of urea excreted by the kidneys, but more carbonic acid and water are eliminated by the lungs. When acclimatisation is complete the urea appears in full quantity in the urine, and the blood pressure again increases. Accompanying and exactly coinciding with the reduction in the pulse and respiration the thorax expands in several directions, causing an increase in circumference at various

[13] Auto-inoculation in Pulmonary Tuberculosis, by Marcus Paterson, M.D. 1911.

[14] Studies on Immunisation and their Application to the Diagnosis and Treatment of Bacterial Infections.

levels of from 1 to 3 inches and even more, also an augmentation of the spirometric record and increased mobility of the chest walls.

EFFECTS OF MOUNTAIN CLIMATES IN CHRONIC CASES.

The effect of mountain climates on selected cases of chronic tuberculosis is remarkable. Cough and expectoration vanish. There is considerable gain of weight, the general appearance is greatly changed for the better, and it is difficult to recognise in the bronzed and vigorous individuals the pallid invalids of a few months before. Muscular power is largely increased, and many of the patients walk 10, 15, or even 30 miles a day and climb mountains.

The local improvement is more striking. Tubercle bacilli are generally banished from the sputum. Respiration, at first increased in rate by the elevation, becomes deeper and easier. The physical signs show, in cases of consolidation, resonance over both lungs, the disappearance of all signs of dulness, bronchophony, and crepitation, and the substitution of harsh breathing, like the compensatory breath sound heard over the unaffected lung in pleuritic effusion.

In many of these earlier cases of consolidation the disappearance of the physical signs is so complete that the physician has to refer to his notes to discover which lung was originally attacked.

In softening and excavation cases the improvement takes the form of disappearance of moist râles and often of cavernous sounds, and hyper-resonance becomes evident owing to the large development of emphysema around the lesions.

Of all my statistics of consumptive patients the high altitude cases yielded the most favourable results and, what is most important, showed the fewest relapses.

The climate of high altitudes does most for the tubercular consolidation patients, for a large proportion of these become cases of arrest. Those with limited cavities do not derive the same amount of advantage as patients with only consolidations, though they also are much benefited.

I am glad to find that my favourable experience of the high altitudes is confirmed by the statistics of the Basel-Davos Sanatorium at Davos (5200 ft.). Comparison with the German sanatoriums before alluded to, the proportion of severe cases being much the same in both institutions, shows that the percentage of patients able to work five years after their discharge is to the advantage of the Swiss, the Swiss capables being almost double those from the German sanatoriums.

SERUM AND VACCINE TREATMENT.

I must now say a word on the treatment of consumption by anti-tuberculous serum and vaccines.

Many attempts have been made to produce an anti-tuberculous serum by inoculating with tuberculin animals believed to be immune from tubercle, and then using the serum of that immune animal for hypodermic injection into consumptive patients. This was done in France by Richet and Hericourt, by Bouchard, Daremberg and Bernheim, and by Marmorek, in Italy by Maragliano, and in the United States by Trudeau and Baldwin, Sternberg, and others, also by Dr. Horrocks and myself at the Brompton Hospital under the auspices of the Lister Institute, but though we all succeeded in obtaining a special serum and scored a certain amount of success this was never sufficient to warrant perseverance on a large scale on my part.

Vaccines, in the form of tuberculin, were started by Koch himself, as we know, in 1890, and the first form known as the old tuberculin had an extensive trial in most countries. This old tuberculin was pronounced to be a failure by the majority of observers and, according to the Brompton Hospital Report on the cases treated in the wards, the tuberculin caused breaking-down of the tubercular masses in the lungs and the formation of cavities, and even sometimes led to the extension of the disease; but it was noted later on that this appeared to be often followed by contractile changes due to increase of fibrosis. I was one of those who drew up this Report and I visited Professor Koch at Berlin to obtain his instructions as to the carrying out of the tuberculin treatment, so that the experiments should be fairly tried. My colleagues and I tested it both in hospital and in private practice, and came to the conclusion that it did more harm than good, and this was the general verdict, confirming that of Koch's own colleagues, Virchow, Gerhardt, von Leyden, Senator, and Ewald.

But it has since been suggested that Koch used too large a dose of tuberculin, producing a powerful reaction, which is better avoided, and that a smaller dosage is desirable. There are now several tuberculins, two of which, T.R. and B.E., have different effects from the old tuberculin of Koch, and these are generally employed in greatly reduced quantities. My colleague, Dr. Hector Mackenzie, who has a large experience on the subject, reports: "Whether one uses old tuberculin T.R. or B.E. for treatment the initial dose is about the same, 0·00001 c.c. This is given at intervals of two to eight days. If a local or general reaction occurs the interval should be increased and the dose diminished. The dose is gradually increased, avoiding reaction, until after some months, doses of 0·1 c.c. up to 1 c.c. can be given without local or general reaction." Bovine tuberculin is also used for cases of human tuberculosis.

There is still much conflicting evidence, and medical men are by no means unanimous as to the advantage of tuberculin treatment, yet the testimony of Trudeau, Bandelier, Moller, and Ritter indicates that carefully selected tubercular patients treated in a sanatorium with tuberculin make better progress than similar cases treated in sanatoriums without tuberculin.

It may be that tuberculin, which we know to possess a wonderful faculty for penetrating tubercular tissues, has also the power of exciting the anti-bodies in the neighbourhood, such as the opsonins and other protective substances and of stimulating their production, so that a system of defence is thereby organised. The fact that tubercle bacilli disappear earlier from the sputum during this treatment is very remarkable, and everything points to the necessity of further investigation in the matter. But such investigation ought to be carried on in a hospital or sanatorium rather than at a tuberculin dispensary, where there is no means of observing the effect of the tuberculin on the patient's system or of controlling the inoculations and their results.

EFFECTS OF IMPROVED HYGIENIC CONDITIONS.

To sum up, What are the prospects of the crusade against tuberculosis in this country, and how can we further them? We must bear in mind the blessed agencies of prevention which, when set in motion, go on pursuing their beneficent course independently of fashion and caprice. Such are improved drainage, more cubic space and less overcrowding, better food and more of it, more air and sunlight, cleanliness of house and person, and greater opportunities for play and exercise. It is probable that a large proportion of the two-thirds reduction in our phthisis mortality during the last 50 years is due to such agencies, and as the standard of public opinion is raised these ought to be more widely spread and to act more powerfully. What a splendid effect a good town-planning scheme ought to exercise on the public health! Then comes the education of all classes, including the children, by tuberculosis exhibitions and by popular lectures and tracts, which now permeate and enlighten the country, showing the people how they can help themselves. We may count on these hygienic, sanitary, and educational agencies to contribute effectively to the prevention of tuberculosis and to the further reduction of the phthisis death-rate.

MEANS FOR DEALING WITH CONSUMPTIVES.

And what is our means for dealing with the consumptive patient? The great difficulty, especially among the poor, is to detect and separate for treatment *early* cases of tubercular disease; and here, undoubtedly, the dispensary system introduced by Dr. R. W. Philip is of the greatest use, as home visitation of the consumptives and connecting them with philanthropic and other agencies is thus secured. Out-patient departments of consumption hospitals ought, if well organised, to fulfil the same functions, and it is possible in this way to classify the patients according to their requirements. For when we come to the consumptive patients themselves we most of us find that few are fit for admission into a sanatorium, and many require the care, treatment, and nursing of a hospital. The working classes, and especially those who have families to support, do not leave off work until compelled to do so from sheer inability or unless they have been early alarmed at the danger of persistence in their occupation. Consequently medical men when called in find they have to deal with cases of more or less active disease involving a considerable amount of lung surface and often in advanced stages. The consumption hospital is the proper place for such patients, where

they can be treated with all the approved methods of modern medicine and where they may in time improve sufficiently to be able to benefit by the sanatorium, or where if they deteriorate and sink, their last days can be passed in comfort. Another great advantage of the consumption hospital is that it isolates from the rest of the population those advanced and acute cases which are the most likely to become centres of infection.

England was the first country and London the first city to recognise the need for consumption hospitals, and our metropolis had established four special hospitals before other cities had done anything in the matter.

The sanatorium is intended to receive consumptives in early stages with limited lesions, free from pyrexia and able to take exercise. If such patients are submitted to the complete system of sanatorial treatment for at least six months, though often a longer period may be necessary, they frequently leave the institution with disease arrested, or greatly reduced, and are able to undertake work again. Where, as at Frimley, the mass of patients undergo, during their stay, training in various grades of labour, they generally return to their former occupation, if a healthy one, or change it, if unhealthy, for one more suitable.

Change of occupation is, however, one of the difficulties for the consumptive, for if he returns to an unhealthy calling he may have a relapse, and if he undertakes new and healthy work his earnings will probably be at first too small for his support. In the middle classes, which fill the King Edward VII. Sanatorium, the problem of providing healthy occupation has been largely overcome, and we get excellent reports from old patients who still carry out essential parts of their sanatorium *régime* in their different callings.

Besides home institutions we have now in the Queen Alexandra Sanatorium at Davos a high-altitude sanatorium where with sanatorium life the great advantage of mountain climate is combined.

I am convinced that any comprehensive scheme for dealing with consumption in this country should include the establishment of a large number of consumption hospitals scattered over the country in close connexion with dispensaries and sanatoriums and as a further link in the chain some form of labour colonies and exchanges should be available.

The task of further reducing and abolishing tuberculosis is not a hopeless one, but it does not lie wholly with the doctors. It lies also with those who have it in their power to remove or to lessen the principal causes of tuberculosis—viz., the overcrowding of our cities, the want of open spaces and ventilation, the insanitary houses, the lack of a good supply of water and of pure milk. If all these defects were remedied the number of phthisis cases would be comparatively small. The Government and the local authorities could insist, too, on the removal of advanced cases of consumption to a hospital or infirmary, and thus do away with one chief source of infection, and we should soon see a rapid fall in the number of contact cases and in the mortality tables.

BENEFACTORS DURING PAST YEAR.

And now at the close of my oration I must not forget to mention the benefactors to the College during the past year.

On Oct. 27th, 1910, the Medical Committee of Guy's Hospital, through Dr. Herbert French, presented to the College an excellent portrait of a former President and present Senior Fellow, Sir Samuel Wilks.

Among the books presented were seven valuable manuscripts and two printed books bequeathed to the College by the late Harveian Librarian, Dr. J. F. Payne. Dr. R. Crawfurd gave Prayer Books of Queen Anne and of George I., containing the Service for the Healing, two pamphlets on the King's Evil, and a silver touch-piece of James III., and other old and valuable books were presented by Dr. J. A. Ormerod, Dr. William Ogle, Sir Dyce Duckworth, Sir William Osler, and the present Harveian librarian.

Sir George Sutherland Mackenzie, K.C.M.G., C.B., bequeathed, contingent on a life interest of his two brothers, a legacy of £30,000, free of duty, to the Royal College of Physicians and the Royal College of Surgeons for enabling them to assist students in scientific medical research.

I take this opportunity of recording my obligations to the Harveian Librarian, Dr. Norman Moore, and to the Registrar for kind help in preparing this oration.

I would conclude by exhorting the Fellows and Members of this College to continue in that mutual love and affection which Harvey enjoins, and I would offer my sincere thanks to you, Mr. President, for the great honour you have conferred on me in appointing me Harveian Orator, and to the Fellows and Members for giving me so attentive a hearing.

ON THE RESULTS OF THE MANIPULATIVE TREATMENT OF CONGENITAL DISLOCATION OF THE HIP-JOINT.

BY GEORGE C. E. SIMPSON, B.A., M.B. CANTAB., F.R.C.S. ENG.,

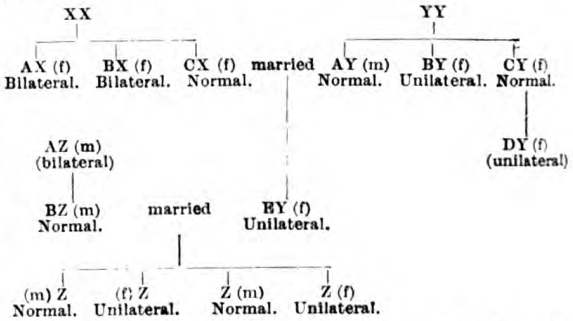
SURGICAL REGISTRAR AND TUTOR, ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

CONGENITAL dislocation of the hip is a condition frequently met with in orthopædic hospitals, but not often seen in general hospitals, and the following short account of the results obtained in the Royal Southern Hospital, Liverpool, may prove of value by emphasising the great advantage of early recognition and treatment of the condition.

The etiology and anatomy of the condition and the main principles of the Lorenz method of treatment are fully described in many of the larger text-books and so only a few points of interest will be alluded to.

According to Hoffa,[1] congenital dislocation of the hip-joint is ten times as common as all the other congenital dislocations together; the cases amounted to about 1 per cent. of all cases in an orthopædic clinic. The condition is far more common in the female sex (87 per cent.) and about one-third of the cases are bilateral, the remainder being equally divided between the two sides.

There are several theories as to the cause of the condition; maldevelopment of the acetabulum and of the femoral head undoubtedly plays a large part and this is aided by muscular action or malposition in utero. Heredity can be traced in some few cases. Dupuytren[2] records a specially notable instance which seems to bear out the Mendelian theories, and is so interesting that I have put it in the form of a table. In the three intermarried families the condition occurred in 8 out of 16 individuals.



In the present series of cases there were three in which mother and daughter were involved, and one where distant cousins both came under treatment. The greater frequency in females is possibly accounted for by some difference in the pelvic girdle of the sex already present in fœtal life.

Anatomy.

In infants the changes are but slight; the acetabulum is not so well formed as usual, and the ligaments of the joint are relaxed. Dissections and radiographs between the ages of two years and seven years show that the head and neck of the femur are smaller than usual, the neck shortened and altered in direction, usually varoid and rotated forward. The epiphysis of the head is imperfectly rounded and displaced (usually upwards), its cartilage is irregular and imperfect. The acetabulum is smaller and shallower than usual, and often has a somewhat triangular shape; it is occupied by fat and fibrous tissue. The posterior and upper parts of the rim are most deficient, and a more or less definite groove leads from here to the irregular smoothed area

[1] Orthopædic Surgery, Stuttgart, 1902.

[2] Quoted by Jones and Ridlon, Contributions to Orthopædic Surgery, p. 332.

which marks the portion of the ilium which is in relation with the femur. The capsule of the joint is thick and roomy, and often has an hour-glass form due to a constriction which separates the acetabular portion from that occupied by the head of the femur; it is usually intact and so intervenes between the head of the femur and the periosteum of the ilium and prevents the formation of a false joint. The posterior ligaments are lax, the ilio-femoral is contracted; the ligamentum teres is usually present and much elongated. The muscles and fasciæ are altered in length, direction, and relationship, to suit the new conditions; the shortening of the hamstrings and adductors is specially important from the resistance it offers to reduction.

Careful consideration of radiographs at this period shows several interesting facts. In cases of unilateral dislocation it may often be noted that the head and neck of the femur of the sound side show in some degree changes similar to those shown on the side of the dislocation. The neck appears to be altered in shape and the epiphysis to be faulty. Further, the ilium seems to form a larger portion than usual of the acetabulum. In other instances the development of the pelvic bones on the dislocated side is seen to be inferior to that on the sound side; this is often well seen in the pubic and ischial rami which may remain largely cartilaginous to the age of 4 or 5.

These appearances give support to the theory that faulty development during intra-uterine life of the bones entering into the articulation is the cause of the condition. Malposition of the limbs or other intra-uterine factors might lead to dislocation and so to maldevelopment of bones on the dislocated side, but could not account for the associated maldevelopment of the bones of the opposite side. On the whole, the fault would appear to be on the part of the femur, pubis, and ischium, rather than on that of the ilium.

In older patients the change in the position of the head of the femur and the associated conditions become more marked. Trauma may intervene and cause rupture of the joint capsule, and if this occur the head of the femur may come into direct relation with the periosteum of the ilium and so lead to the formation of a stable pseudarthrosis. As the head of the femur attains a more dorsal position the relation of the centre of gravity of the body to the inter-femoral plane becomes altered. This naturally applies more markedly to bilateral cases, but is also present to some extent in unilateral cases especially when the patient is standing on the dislocated leg. The centre of gravity falls in front of the plane of support, and to remedy this the lumbar spine is strongly dorsiflexed, so moving the line of gravity back to the plane of support. The new position of the head of the femur and the associated alterations of the muscles combine to rotate the axis of the pelvis forward and downwards, and so increase the lumbar convexity, and may lead to an extreme degree of lordosis. In unilateral cases again the shortening of the dislocated limb is partially compensated for by tilting of the pelvis and lateral curvature of the spine. These conditions affect the growth of the vertebræ and so ultimately become fixed.

Symptoms.

The attention of the parents is usually attracted by the gait at the time the child commences to walk (which may be later than usual). In unilateral cases the child limps on the affected side; in bilateral cases the child walks with a characteristic rolling or waddling gait; lordosis is usually obvious. Examination in unilateral cases shows a shortening of the affected limb, which may in older patients amount to two or three inches; the trochanter is displaced upwards and backwards, and appears prominent (measurement of Bryant's triangle shows this best). Movements, active and passive, are free except abduction which is much diminished, and extension which may be slightly limited. The line of the foot is usually normal. Careful examination reveals on one or both sides the absence of the head of the femur from its normal position and its presence on the dorsum ilii. The latter is best observed with the child lying on its back or on the sound side and the limb somewhat flexed, adducted, and inwardly rotated. Finally, alternate traction and relaxation of the limb with the pelvis fixed gives an up-and-down movement of the femur—the so-called "telescoping."

In most cases the history of deformity from birth, the gait, and lordosis at once suggest the diagnosis, which is confirmed on examination by the freely moveable joint, the telescoping and the abnormal position of the head of the bone.

A radiograph should be taken in every case with the foot and leg well inverted to show the neck of the femur plainly; this not only settles the diagnosis but is of some assistance in prognosis, as it reveals the degree of development of the involved bones.

Prognosis.

Without active treatment no improvement is to be expected; the condition progresses throughout childhood, especially at periods of rapid growth. The deformity usually reaches its maximum development at about the age of 12 or 13. The limp or rolling gait and the lordosis make the patient self-conscious, and handicap them both physically and mentally throughout school life. They are readily tired by walking, and are unable to take part in games with other children, and so not only suffer in their physical and constitutional development but become shut off from the companionship of children of their own age. In addition in some cases the joints become painful after even slight exercise and tuberculous trouble is apt to supervene. In bilateral cases the limbs may become much adducted, and render the walk very conspicuous and disagreeable, and a scissor leg condition may be attained. In adult life the patients are at a disadvantage in obtaining employment—a disadvantage made the more serious by the Workmen's Compensation Act. In other ways, too, their physical deformity becomes a serious matter to that large proportion who are of the female sex. Apart from this, the joint itself may become the seat of arthritic changes which render any movement or pressure on the joint painful and practically incapacitate the patient; this is frequently the case after the age of 30, and may be so severe as to lead the patients to submit to severe operations in order to obtain relief. Fortunately the changes in the pelvis are not such as to lead to trouble during childbirth.

Prognosis with Treatment.

For the conditions arising after the age of puberty various treatments may be necessary (e.g., fixation by apparatus, osteotomy of the femur or pseudarthrosis), but these are beyond the scope of the present paper. No patient in these days should be left to grow up without the condition being recognised and an attempt made to rectify it at the earliest possible age.

Various treatments have been brought forward at different times, but that which should be tried in every case is the manipulative method—bloodless reduction—perfected by Lorenz.[3] This may be supplemented in some of the older cases by preliminary traction by weight or other apparatus. In unsuccessful or recurrent cases it may be supplemented by exploratory operation to discover and remedy any condition which is opposing reduction or interfering with its stability. Thus, an hour-glass contraction of the capsule may be divided, a shallow acetabulum deepened, or a lax posterior ligament shortened.

In a large proportion of cases treated by simple manipulation before the age of nine, a true anatomical reduction with full restoration of function is to be expected. In most of the remainder the head of the femur is moved forward from its unstable position on the dorsum ilii to a position either close to and above, or anterior to, the site of the true acetabulum. In this position the head is fixed by strong ligaments and muscles which pass over it, and a stable and mobile articulation is obtained, so rectifying the limp. The new articulation is close to the normal plane of gravity and so eliminates the lordosis.

In a few of the apparent anatomical reductions there is a well-formed acetabulum and a good joint, but the radiographs show that the acetabulum lies a little above its usual position, and is formed chiefly by the ilium. Physical examination of the patient shows that the trochanter is slightly raised and the head of the femur lies at a higher position than usual and can more readily be detected from the groin. The functional result in these cases is exceedingly good, often giving a limb practically equal to a normal one. I incline to think that these cases should be classified as true repositions, in which the aberrant level of the acetabulum is developed to suit the malformed and malplaced head of the femur.

[3] Manipulation had been used for some time, but had fallen into disuse. Lorenz re-introduced it and improved it, following the main principles described by Paci.

CASE TABLE I.—*Unilateral Cases.*

No.	Sex; age at operation in years; date of operation; number and duration of plasters; calliper duration.	Hip affected.	Movements, &c., at exam., 1909.	Measurements, 1909. Side.	Ant. sup. sp. to int. mall.	Umbilicus to int. mall.	Bryant's triangle. Vertical: horizontal side.	Circumference of thighs at corresponding parts.	Shortening compared to sound limb.	Functional capacity.	Telescoping.	Lordosis.	Skiagram and remarks.	Classification. Anatomical.	Classification. Functional.
					Inches.	Inches.	Inches.	Inches.	Inches.						
A.*	F., aged 12. Untreated. 1909.	Rt.	Flexn and addn. good. Extn. 10° short of full. Abdn. 20° allowed. Out rotn. very restricted. Toe points forward.	L.	26¼	29	2 / 2¼	—	1¼	Limp marked; walks and runs as well as a girl of 10. Limb does not tire readily (can walk 5 miles).	Very slight.	Very marked, quite 30°; Scoliosis.	Reduced after traction.	?	?
				R.	25½	27	½ / 3	—							
1	F., aged 3. 1903. Plasters 3, 6 mos.; call. 2 mos.	Rt.	Full free movts. in all directions; toe points forward.	L.	23¼	25	2½ / 2	—	—	No trace of a limp. Limb never gives any trouble.	—	—	Very well formed acetab. and head of femur; angle of neck normal.	Anat. reduct.	Perfect.
				R.	23¼	25	2 / 2	—							
2	F., aged 6. 1908. Plasters 3, 8 mos.; call. 8 mos. (Fig. 4).	Rt.	Full free movts. in every direction; toe forwards.	L.	26	28¾	1¾ / 3½	13½	¼	Slight trace of limp; walks and runs as well as other girls; can walk over 6 miles. Says she jumps better than others.	—	—	Well-formed head and epiphysis; good acetab.; well-formed joint; marked coxa vara.	Anat. reduct.	Perfect.
				R.	25¾	28½	1½ / 3¼	13½							
3	F., aged 5. 1908. Plasters 5, 8 mos.; call. 4 mos., still on.	Rt.	Still wearing call.; full extn. and abdn.; 100° flexn.; slight addn.; toe rotated out 20°.	L.	22¼	24½	2 / 2¼	12½	¾	Very slight limp; walks very well in calliper.	—	—	—	Anat. reduct.	Perfect.
				R.	21½	24¼	1¼ / 3¼	11¼							
4	F., aged 2¾. 1903. Plasters 2, 9 mos.; call. 1 yr.	Rt.	All movts. equal in range and power in the two limbs; toe points forward.	L.	25	28	2¼ / 3¼	14¼	—	No trace of a limp; buttocks quite symmetrical; drags foot a little when walking; walks, runs, jumps as well as her comrades.	—	—	Perfect reduction; perfectly formed joint.	Anat. reduct.	Perfect.
				R.	25	28	2¼ / 3½	14							
5	F., aged 7. 1908. Plasters 7, 12 mos.; call. now on.	Rt.	At commenct. of call. trmt. fair movt. already present; still stiff from plasters.	L.	23	24¼	2 / 2½	—	¾	No record.	—	—	—	Ant. reposn.	Probably excellent.
				R.	22¼	24¼	1¼ / 3½	—							
6	F., aged 4. 1908. Plasters 5, 12 mos.; 2 mos. allowed without call.	Rt.	Full extn., abdn., and addn.; only 100° of flexn.; foot rotated out 30°.	L.	19	21	2½ / 2½	11½	1	Slight limp; walks very well; calliper ordered for fear of accidents.	—	—	Good head and neck; good acetab.; well-formed joint.	Anat. reduct.	Perfect.
				R.	18	20	1¼ / 2¼	11							
7	F., aged 3½. 1904. Plasters 2, 9 mos.; call. 0.	Rt.	Full free movts. except extn., which is not quite full.	L.	22½	24¼	2 / 3	14	1	Slight limp; runs and walks well; seldom gets tired.	—	Slight.	(Lost.)	Dorsal disloen.	Very good.
				R.	21	23¼	1 / 3	13							

	F., aged 9. 1903. Plasters 3, 1 yr.; call. 1 yr.	Rt.	Addn. rather limited; 10° fixed flexn.; other movts. free and full.	L.	30½	32	2/3½	18	2¼	Limp marked; runs and walks well; tires rather easily.	—	Considerable.	Good acetab. above and overlapping true plane; coxa vara; head of femur poorly formed.	Anat. reduct.	Good.
				R.	28	31	¾/4	15½							
9	F., aged 3½. 1904. Plasters 2, 9 mos.; call. 4 mos.	Rt.	Some fixed flexn.; other movts. free and full.	L.	24	25	1¾/2	13	1¾	Limps; does not run much; tires easily.	½ in.	Marked.	No trace of any new acetab.; well formed head of femur on dorsum ilii.	Dorsal.	Poor.
				R.	22¼	24	¾/3	11½							
10	F., aged 5. 2nd cousin of Case 3. 1903. Plasters 3, 1 yr.; call. 6 mos.	Rt.	Full free movts. in all directions.	L.	27½	29½	2½/2	—	½	Slight limp; walks well; leg aches only after long walk.	—	Very slight.	Head of femur well formed and lies in a well-defined acetab. formed rather largely by ilium.	Ant. reposn.	Excellent.
				R.	27	29½	2/3	—							
11	F., aged 12. 1905. Plasters durn. 9 mos.; call. 6 mos.	Rt.	Some fixed flexn.; only 45° flexn. possible; full addn. and abdn.	L.	33	34½	3/3	—	3½	Considerable limp; scoliosis very marked; walks very well.	—	Considerable.	Good level but poor articuln.; poor development of head of femur.	Dorsal dislocn.	Poor.
				R.	29½	34	1¾/3	—							
12	F., aged 8½. 1903. Plasters 3, 13 mos.; call. 0.	Rt.	Abdn. and addn. full; flexn. to 100°; 10° fixed flexn.; int. rotn. limited; toe points forward.	L.	32	34½	2½/4	16	½	Limp slight; walks well; leg does not tire; delicate girl.	—	Slight.	—	Ant. reposn.	Excellent.
				R.	31½	34½	1½/4	13							
13	F., aged 12. 1907. Plasters 2, 1 yr.; call. 0.	Rt.	All movts. limited; flexn. to 125°; abdn. 20°; addn. 15°; fixed flexn. 15°.	L.	29¾	41¾	2¼/3½	16½	2	Limp considerable; scoliosis marked; walks fairly well and far.	—	Marked.	False acetab. in high position; poor head to femur; coxa vara.	Dorsal dislocn.	Poor.
				R.	27¾	41	0/4	14							
14	F., aged 5. 1903. Plasters 4, 1 yr.; call. 1 yr.	Lt.	Full free movts. in all directions; equal to normal limb; toe points forward.	R.	21	23	1¾/2¼	11	¼	Practically no limp; walks and runs well; leg does not tire.	—	—	Acetab. well formed, but roughened in appearance; head of femur poor; coxa vara; good reduct.	Anat. reduct.	Perfect.
				L.	20¾	23	1½/2¼	10½							
15	M., aged 2½. 1909. Plasters 4, 9 mos.; call. 3 mos.	Lt.	Still in call. therefore stiff; good abdn. and addn.; full extn.; 100° flexn.; toe points forwards.	R.	16½	19½	1½/2	10½	—	Walks well in calliper.	—	—	—	Anat. reduct.	Perfect.
				L.	16½	19½	1½/2	10							
16	F., aged 4. 1903. Plaster 1, 12 mos.; call. 1 yr.	Lt.	Full free movts., except slight limitation of abdn.; toe points forwards.	R.	25½	28¼	2¼/2½	15	—	Very slight limp; gets some pain on walking or running far.	—	—	Perfect acetab.; perfect head and neck; well reduced.	Anat. reduct.	Perfect.
				L.	25½	28½	2½/3	13¼							
17	F., aged 7. 1908. Plasters 5, 1 yr.; call. 3 mos.	Lt.	Still in call.; extn. and abdn. full; flexn. 100°; addn. a little limited; foot rotated 15° out.	R.	22	25	1½/2½	—	—	Still in call.; some pain after long use; crepitus perceptible in joint.	—	—	Very little epiphysis of femur; acetab. and head of femur roughened; arthritis; well reduced.	Anat. reduct.	Good.
				L.	22	25	1½/2½	—							
18	F., aged 4. 1904. Plasters 3, 1 yr.; call. 18 mos.	Lt.	Perfect full movts. in all directions; quite equal to normal limb.	R.	24	—	2½/—	—	1	Slight limp; wears raised boot; walks and runs well; leg does not tire.	—	—	Good head and neck in well-formed acetab., but invading ilium more than normally; very late development of ischium and pubis.	Ant. reposn.	Excellent.
				L.	23	—	1½/—	—							

CASE TABLE I.—*Unilateral Cases—(Continued).*

No.	Sex; age at operation in years; date of operation; number and duration of plasters; calliper duration.	Hip affected.	Movements, &c., at exam., 1909.	Measurements, 1909. Side.	Ant. sup. sp. to int. mall.	Umbilicus to int. mall.	Bryant's triangle. Vertical: horizontal side.	Circumference of thighs at corresponding parts.	Shortening compared to sound limb.	Functional capacity.	Telescoping.	Lordosis.	Skiagram and remarks.	Classification. Anatomical.	Functional.
					Inches.	Inches.	Inches.	Inches.	Inches.						
19	M., aged 3. 1908. Plasters 3, 7 mos.; call. 9 mos.	Lt.	Still in call.; movts. practically full in all directions; toe points forward.	R.	16¾	—	3½ / —	13½	1	Walks excellently, and a good distance.	—	—	Good head and neck; well in; well-formed new acetab., which involves ilium more than normally.	Anat. reduct.	Excellent.
				L.	15¾	—	2½ / —	12¾							
20	F., aged 7. 1902. Thomas's frame 1 yr.; call. 18 mos.	Lt.	Full flexn. and extn.; abdn. and addn. 15–20°	R.	30¾	32	2 / 5	16	2¼	Slight limp with ½ in. raised boot; walks well and far; does not tire on walking.	—	—	A well-formed false acetab. above and anterior to normal; coxa vara.	Ant. reposn. (subspinous.)	Excellent.
				L.	28½	31	1 / 2½	14							
21	M., aged 3½. 1903. Plasters 3, 9 mos.; call. 9 mos.	Lt.	All movts. full and good; slight fixed flexn.	R.	24	25½	2 / 3	13	1¼	Slight limp with ¾ in. raised heel; runs and walks well; leg tires more easily than rt.	—	Very slight.	Good false acetab.; good head of femur.	Ant. reposn.	Very good.
				L.	22¾	24¼	1½ / 3¼	10½							
22	M., aged 2. 1903. Plasters 3, 9 mos.; call. 9 mos.	Lt.	Full free movts., except slight limitn. of abdn.; slight fixed flexn.	R.	24	30	2 / 3	13	1	Very slight limp; runs and walks well; does not tire.	—	Very slight.	Good acetab. above and a little dorsal; head formed and articulated.	False joint dorsal.	Very good.
				L.	23	29½	½ / 3½	11½							
23	F., aged 12. 1902. Frame. 1 yr.; plasters 2. 15 mos.; call. 0.	Lt.	Good abdn.; 10° addn.; 90° flexn. allowed; 10° fixed flexn. present.	R.	33½	35½	2½ / 2	—	4	Wears raised boot but marked limp; scoliosis marked; walks fairly well.	—	Slight.	Femur has a short distorted neck and head; well in acetab.; radiographs just after manip. show fract. of neck.	Anat. reduct.	Poor.
				L.	29½	33	1 / 1	—							
24	F., aged 12. 1904. Plasters 4 15 mos.; call, 9 mos.	Lt.	Full extn.; good abdn. and addn.; flex. only to 90°.	R.	32	33½	2¼ / 4	—	2½	Slight limp; boot raised ½ in.; can walk a long distance without tiring.	—	Very slight.	A well-formed dorsal acetab.; good head and neck to femur; head just below and behind ant. sup. sp.	Dorsal disloen.	Good.
				L.	30½	32½	0 / 4	—							
25	F., aged 4. 1903. Plasters 2, 9 mos.; call. 1 yr.	Lt.	Full free movts.; 20° fixed flexn.; toe points a little outwards.	R.	24½	26½	1½ / 3	14	1½	Very slight limp; compensatory scoliosis; runs well; has walked 10 miles; leg tires after a hard day.	¼ in.	Considerable.	Fair acetab. above and behind normal positn.; good head and neck to femur.	Dorsal disloen.	Fair.
				L.	23	25½	¼ / 4	12½							
26	F., aged 4. 1903. Frame 2 yrs.; plaster 1·6 mos.; call. 0. (Fig. 5.)	Lt.	Full free movts., except slight limitn. of abdn. and extn. Foot rotated outwards	R.	24½	27½	1½ / 3	13	1½	Slight limp; runs, climbs, plays games; tires after walking 2 miles.	—	Considerable.	Well formed but varoid head and neck; lying at excell. level opposite old acetab. which is pract. obliterated.	Dorsal disloen.	Fair.
				L.	23	26½	1 / 4½	12							

* Cases A and B (Case Table II.) are included for purposes of comparison—to show corresponding particulars of untreated unilateral and bilateral cases.

CASE TABLE II.—*Bilateral Cases.*

No.	Sex; age at operation in years; date of operation; number and duration of plasters.	Side.	Movements, &c., at exam., 1909.	Measurements, 1909.				Telescoping.	Lordosis.	Functional capacity.	Skiagram and remarks.	Anatomical result.	Functional result.
				Ant. sup. sp. to int. mall.	Umbilicus to int. mall.	Bryant's triangle. Vertical: horizontal side.	Circumference of thighs.						
				Inches.	Inches.	Inches.	Inches.	Inches.					
B	F., aged 13. 1909. Before treatment.	R. and L.	Full flexn. and addn.; 10° fixed flexn.; abdn. permitted to 30°; rotn. good.	32	29½	2/4½	—	½	Extreme, nearly 60°.	Rolling gait not marked; cannot walk far; cannot run.	Trochanters lie above the interspinous plane; X ray shows great displacement.	Ant. reposn. effected later on both sides.	— —
27	F., aged 6. 1904. Plasters 4, 2½ yrs.	R.	Flexn. 90°; abdn. and addn. 10°; 10° fixed flexn.	25¼	29½	1/2½	—	—	Not much when standing on this leg.	A very useful limb; walks well on it; does not tire; requires massage.	A good acetab. and head; well in; coxa vara.	Anat. reduct.	Excellent.
		L.	Full flexn.; 25° abdn.; 15° addn.; no fixed flexn.; good rotn.	24	27	0/3	—	1	Marked when on this leg.	Limps on left leg, which is fairly useful.	Dorsal; poor acetab.	Dorsal dislocn.	Fair.
28	F., aged 5. 1903. Plasters 4, 1 yr.	R.	Full flexn. and addn.; 15° abdn.; slight fixed flexn.	25	26¼	1/3¼	—	—	—	No limp; a very useful limb; does not tire.	Apparently ant. reposn.; excellent level.	Ant. reposn.	Excellent.
		L.	Full free movts. in all directions.	25½	27¼	1¾/3	—	—	—	A perfect limb; child runs and walks well.	Good head and neck; well in; good acetab.	Anat. reduct.	Perfect.
29	F., aged 7. 1907. Rt. leg; plasters 1 yr.	R.	Full free movts. in all directions.	24½	28	1/3	—	—	Not when on this leg.	A perfect limb.	Good head and neck; well in; good acetab.	Anat. reduct.	Perfect.
	1908-9. Lt. leg; plasters 4, 8 mos.	L.	Fairly free movts.; still stiff from plaster.	23	27	0/3	—	1	Marked when on this leg.	Stiff from recent plaster.	Dorsal posn.; no articuln.; head, neck, and acetab. appear good.	Dorsal dislocn.	Good.
30	F., aged 3¾. 1903. Plasters 4, 16 mos. (Figs. 1, 2, and 3)	R.	Perfect free movts. in all directions.	24¾	31	2/2¾	—	—	—	Walks and runs well; takes part in games; often walks 10 miles.	Perfect articuln.	Anat. reduct.	Perfect.
		L.	Perfect free movts. in all directions.	24¾	31¼	2/2¼	—	—	—	Slight limp on left leg.	True reduct. but not quite as good as rt.	Anat. reduct.	Perfect.
31	F., aged 4. 1908. Plasters 8, 18 mos.	R.	Movts. and position good; a little stiff from plaster.	19½	22½	1/3	—	—	—	Likely to prove a perfect limb.	Head and neck of femur well formed; true acetab., well formed but slightly higher than left.	Anat. reduct.	Perfect.
		L.	Full flexn. and extn.; limb is abdn. 30° and out. rotn. 15°.	19¾	22¾	1½/3	—	—	—	Leg manipulated under anæsthetic; should prove perfect after massage.	A well-formed head, neck, and acetab.; true reposn.	Anat. reduct.	? Perfect.
32	F., aged 3. 1909. Plasters 3, 9 mos.	R.	Full free movts.; toe forward.	17	20	1/3	10¼	—	—	Should be perfect. Walks well; still slight waddle.	Good head and neck; good acetab. and well reduced.	Anat. reduct.	Perfect.
		L.	Full free movts.; toe forward.	17	20	1/2½	10½	—	—	Should be perfect.	Acetab. involves ilium rather more than in a normal joint.	Anat. reduct.	Perfect.
33	F., aged 2. 1907. Plasters 6, 12 mos.	R.	Good flexn. and extn., but some limitation of other movts.	24	26	1/1½	13	—	Very slight.	No limp; can run. Walks fair distance without tiring. Should be excellent.	No X ray. Head felt under artery; feels rather superficial and high.	Ant. reposn.	Excellent.
		L.	As right; toes turn in.	23½	25½	½/1½	12½	—	Very slight.	As right.	As right.	Ant. reposn.	Excellent.

In the class of anterior repositions the head is placed more forward in the groin and held apparently by ligamentous structures, no definite acetabulum being usually formed. The results in these cases are functionally but little inferior to those of true repositions. In a very few cases there is a good false acetabulum formed in this position.

In the few remaining cases the dislocation remains of the dorsal type; a fresh attempt may be made, aided if need be by open operation; even, however, should this course not be taken the condition of the patient is generally improved. In some cases a true false joint is obtained close to, but behind, the true acetabulum, and if this be the case the results may be excellent; possibly this results from rupture of the capsule during treatment. In other cases there are, as a general rule, a more stable limb with less limp and less lordosis than in untreated patients.

Treatment at the Royal Southern Hospital, Liverpool.

The cases recorded were treated at this hospital between 1901–1909: some of the earliest by prolonged extension and abduction in a Thomas frame, others by this method followed by the Lorenz method. Since 1903, when Lorenz gave a demonstration at the hospital, his method of treatment has been followed with but slight modification. The details and steps of the Lorenz method are described so fully in the larger text-books of surgery and orthopædics that only a few minor points followed in this clinic will be alluded to. In bilateral cases both limbs are reduced at one operation unless prolonged manipulation is required by reason of age or other difficulty. The plasters are usually closely moulded over a tight-fitting woollen garment, with small pads of wool over the sacrum and iliac spines. If much padding be used the limb may get re-dislocated. The patients are allowed to leave hospital within a week of operation and the parents are told to encourage them to use their limbs. This is facilitated if a strong toy horse or a low chair mounted on wheels be provided on which they can sit astride and propel themselves while still in plaster. The functional use seems to aid in keeping the joint intact and also in moulding and deepening the acetabulum, as Lorenz has pointed out. Every six or eight weeks (longer intervals, three to six months, were used at first) the plaster is reapplied; the limb being—under anæsthetic if necessary—brought down to a more normal position and at the same time inverted, care being taken not to allow a re-dislocation. In from 7 to 12 months the fully extended normal position is attained and, after a further 6 to 8 weeks in plaster in this position, a Thomas calliper splint is fitted and the child wears this for about six months longer, to keep the joint firm while it is first used. Massage and passive movement at this time greatly improve the functional result. In applying the new plasters care is taken to overcome the torsion of the limb and so bring the foot into good position and line; by this means some of the advantages of Lovett's inverted position seem to be gained. In none of the present cases, however, has that method been used, though it is now being tried in some cases.

Dangers of the Operation.

The patients suffer somewhat from shock, but so far there have been no deaths at this hospital from this cause. Bruising and swelling of the ruptured muscles may be troublesome. In older children fracture of the neck of the femur and separation of the epiphysis may occur, as happened in Case 23. This is avoided by care in manipulation and by carrying out the reduction if necessary in two or more stages, extension by apparatus being used in the interval. Plaster sores rarely give rise to trouble.

Note on Royal Southern Hospital Cases.

All patients treated from 1902 to 1909 were communicated with and asked to come up for examination in 1909. Many from change of address could not be traced and others lived at too great a distance to come. Of the 70 cases found in the register whose treatment was completed, 33 reported, and the condition is recorded in the tables. Particular attention was paid to the amount of shortening, the limits of mobility, the axis of the limb, to the gait and attitude, and to the functional value of the limb. Radiographs were taken of nearly all the cases, and a few typical ones are reproduced.

Of 90 cases in all seen from 1902 to March, 1910, 75 (83·3 per cent.) were girls and 15 (16 6 per cent.) boys. Of 60 cases in which it could be determined from the registers, 23 (39 per cent.) were bilateral, 19 (31 per cent.) right, and 18 (30 per cent.) left cases. (See Case Tables I. and II.)

Analysis of Cases and Results.

The 33 cases reported include 40 joints; treatment was commenced at ages from 2 to 12 years; a few are still wearing their callipers, others have been free from treatment for five or six years. The following table shows the anatomical and functional results:—

TABLE I.—*Anatomical and Functional Results.*

Functional result.	Anatomical results.			Total.	Per cent.
	Perfect anatomical reduction.	Stable anterior reposition.	Dorsal dislocation.		
Excellent.	18	9	—	27	67·5
Very good.	—	—	2	2	5·0
Good.	2	—	2	4	10·0
Fair.	—	—	3	3	7·5
Poor.	1	—	3	4	10·0
Total	21	9	10	40	—
Percentage...	52·5	22·5	25·0	—	100·0

In five cases, however, the patients were over 9 years old at the time reduction was attempted, and if these be excluded the figures read:—

TABLE II.—*Anatomical and Functional Results, excluding Five Cases in which the Patients were over 9 years of age.*

Functional result.	Anatomical results.			Total.	Per cent.
	Perfect anatomical reduction.	Stable anterior reposition.	Dorsal dislocation.		
Excellent.	18	9	—	27	77·2
Very good.	—	—	2	2	11·4
Good.	1	—	1	2	
Fair.	—	—	3	3	11·4
Poor.	—	—	1	1	
Total	19	9	7	35	—
Percentage...	54·0	26·0	20 0	—	100·0

For comparison the following results from other clinics are given, only cases without open operation being included.

TABLE III.—*Results from Other Clinics—Cases without Open Operation.*

Clinic.	Number of cases.	Anatomical reduction.	Anterior trans-position.	Unsuccessful.
Children's Hospital, Boston, 1896–1903	47	25	7	15
Lorenz	364	182	—	—
Lorenz in America, collected by Ridlon	22 (26 joints)	3	16	7
Hoffa Unilateral ...	250	75	160	15
Hoffa Bilateral ...	65	20	64	36
Jackson Clarke[4] ...	46	25	14	7
This series	40	21	9	10
Total	838	351	270	90

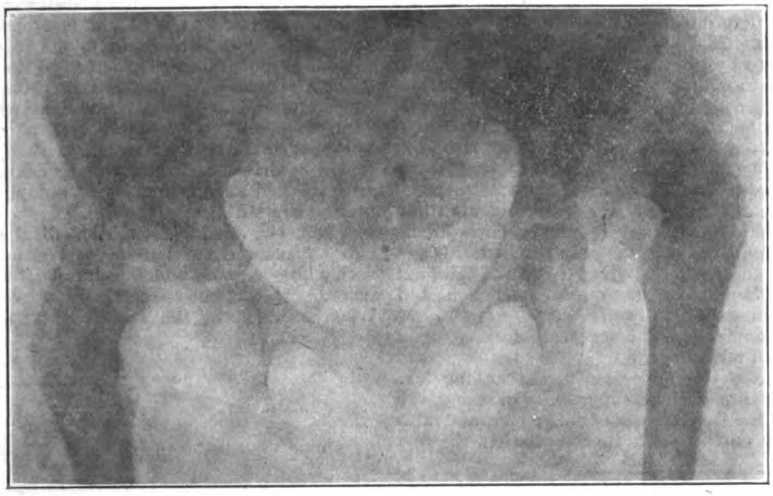
Conclusions.

1. Congenital dislocation of the hip is a condition which progressively gets worse till puberty and may cause severe deformity. In adult life further trouble may arise and completely incapacitate the patient.

2. Treatment by manipulation at the earliest possible time after infancy may be expected to yield a stable articulation with perfect function in 60–70 per cent. of cases. A slight

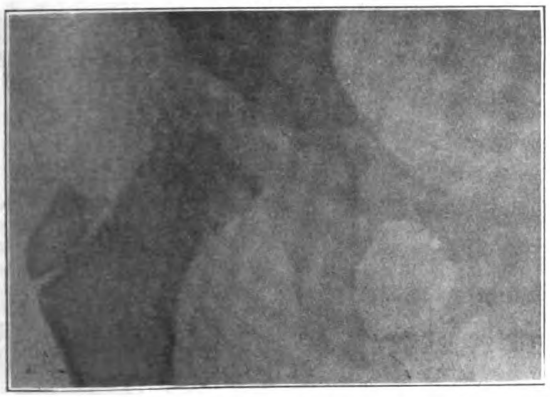
[4] Congenital Dislocation of Hip-joint, London, 1910.

FIG. 1.



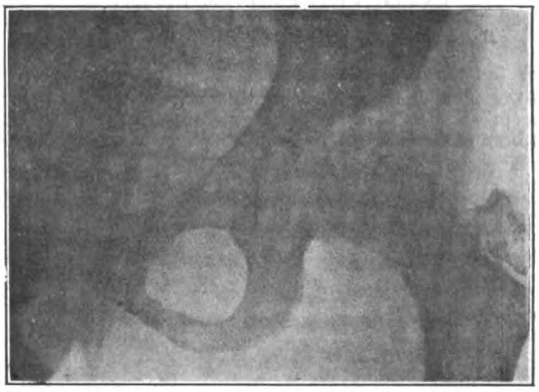
Skiagram from Case 30 showing condition before treatment.—1903.

FIG. 2.



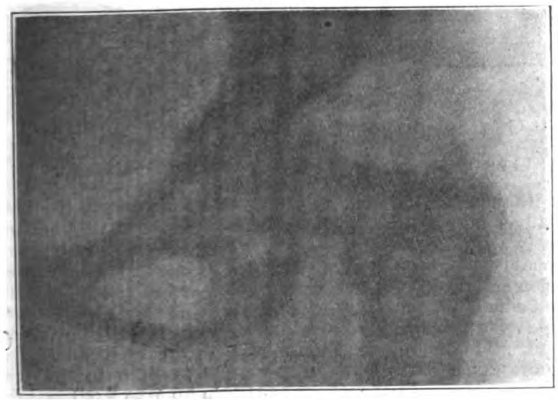
Skiagram from Case 30 showing left hip-joint.—1909.

FIG. 3.



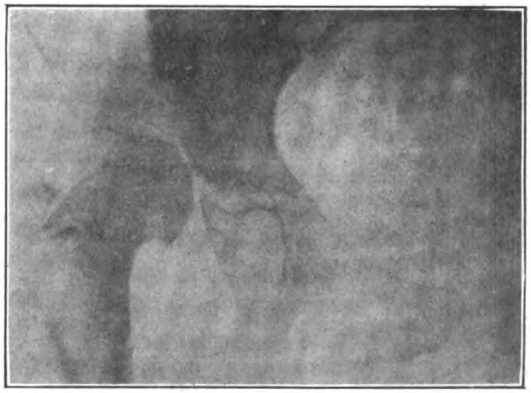
Skiagram from Case 30 showing right hip-joint.—1909.

FIG. 4.



Skiagram from Case 2 showing varoid reduced hip.—1909.

FIG. 5.



Skiagram from Case 26, showing a good result, but persistent dorsal position.—1909.

Notes to illustrate method of classification.—CASE 30 (Figs. 1, 2, and 3).—Girl, aged 3 years and 9 months. Double dislocation. Treatment, 903; plasters 16 months. The legs are equal in length and there is full normal movement in all directions. The child limps slightly on the left leg, walks and runs well and takes her part in games. There is no telescoping or lordosis and the case is classed as a perfect anatomical and functional cure. CASE 2 (Fig. 4).—Girl, aged 6 years. Right dislocation. Treatment 1908; plaster 8 months; calliper 8 months. There is one-quarter inch of shortening, but no wasting of the limb. There is full normal movement in every direction and the toe points forward. The child limps slightly, walks and runs as well as girls of her own age, and says she jumps better. The joint is well formed but there is definite coxa vara. Perfect anatomical and functional cure. CASE 26 (Fig. 5).—Girl, aged 4 years. Left dislocation. Treatment 1902; reduction effected by prolonged extension and abduction in a Thomas's frame; plaster 6 months. There is 1½ in. of shortening, largely compensated by scoliosis. The movements of the joint are practically perfect, but the toe points outward. The limb is an inch less in circumference than the sound side; there is no telescoping but considerable lordosis. The child limps slightly, walks and runs well, but the left leg tires more readily than the right. The head and neck of the femur are well formed; the head lies in the horizontal plane of the acetabulum but slightly behind it. Persistent dorsal dislocation with fair functional result.

limp (due to imperfect growth of the bones) and some slight limitation of movement may remain, but the children are cured of any obvious deformity or incapacity.

3. Of the remaining 35–40 per cent. the condition is usually much improved by treatment.

4. The treatment in children below 8 years of age is attended by little or no danger and by few unfavourable accidents. The trouble caused to the parents is slight and the loss of school attendance in early childhood is of but small importance.

5. In children between 9 and 12 years of age treatment by manipulation has greater dangers and inconveniences and gives much less favourable results. It should, however, be tried in all cases which have unfortunately reached this age with the condition unremedied; great care and gradual reduction avoid the dangers of shock and laceration and considerable improvement is usually effected.

6. In unsuccessful and relapsed cases some form of open operation may prove of advantage.

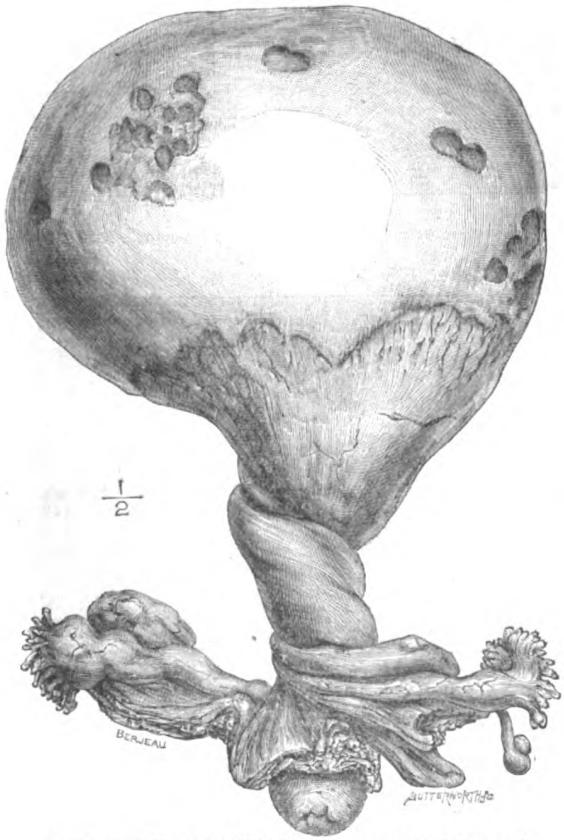
Finally, I wish to take this opportunity of thanking Mr. Robert Jones for allowing me the opportunity of using the material of his clinic for the purposes of this paper, and also for his kind assistance and advice in its compilation.

ON A CASE OF AXIAL ROTATION OF A FIBROID IN WHICH THE UTERUS WAS INVOLVED IN THE TWIST.

BY JOHN BLAND-SUTTON, F.R.C.S. ENG.,
SURGEON TO THE MIDDLESEX HOSPITAL.

ALTHOUGH it is well known that any abdominal viscus (except the liver) may undergo axial rotation, this accident has been chiefly studied in connexion with ovarian tumours.

FIG. 1.

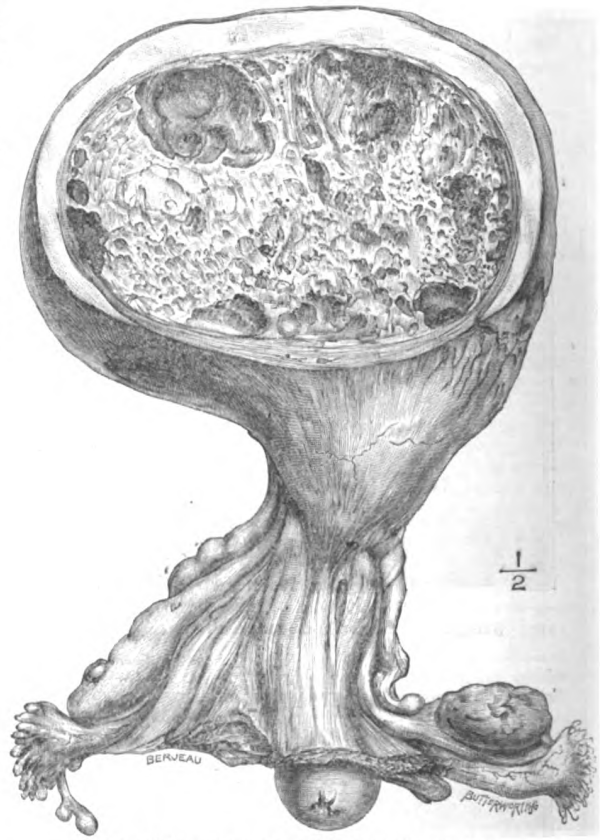


A subserous fibroid which had undergone axial rotation and involved the uterus in the twist.

The symptoms produced by this abnormal movement are often so clear and pronounced that the condition is occasionally diagnosed with absolute certainty. Uterine fibroids are liable to rotate, but few cases have been recorded, and very few specimens with twisted stalks have been preserved. Such an accident to a fibroid is probably rare because the conditions most favourable to its occurrence—namely, a tumour of moderate size attached to the uterus by a long and slender pedicle—are uncommon. Fibroids, however, sometimes rotate when their connexions with the uterus would seem absolutely to preclude such a movement, as when a fibroid is sessile on the uterus; in such a circumstance the uterus becomes the pedicle and undergoes torsion. I have recently had an opportunity of studying a specimen of this kind at the Middlesex Hospital.

A spinster, aged 67, sought medical advice on account of pain, discomfort, and frequency of micturition, associated with a large tumour which could be felt in the hypogastric region. It had the clinical features of a uterine fibroid. When exposed in the course of the operation performed

FIG. 2.



The fibroid shown in section with the parts untwisted.

for its removal, the tumour proved to be as big as the head of a new-born child. The anterior surface of the fibroid was pearly white in consequence of a deposit of fibrous tissue, probably produced by the friction of the tumour against the abdominal wall. On withdrawing the tumour from the belly the pedicle was found to be twisted like a rope; on untwisting it the ovaries, Fallopian tubes, and uterus were recognised. Subtotal hysterectomy was performed, and after removing the parts I re-torsioned the pedicle to the same degree as before removal. The specimen was fixed to a flat cork and hardened in a solution of formalin for preservation. The fibroid had undergone degenerative changes coincident with age, I think, and in no way a consequence of the torsion of the pedicle. The thickness of the tissue forming the "milk white patch" on the surface of the fibroid proves it to be an old tumour.

The specimen with the pedicle twisted is preserved in the Museum of the Royal College of Surgeons of England. In the drawings the parts are represented twisted and untwisted. It is conceivable that the involvement of the uterus was due to, if, indeed, the whole movement was not facilitated by, its atrophic condition, and it is probable that the paucity of the

symptoms depended on the senile condition of the uterus. I know that torsion of the pedicle of a stalked fibroid will lead to very acute symptoms, for I exhibited and described such a specimen [1] (which is also preserved in the Museum of the Royal College of Surgeons of England) in which they were as severe as any I have noticed in association with ovarian cysts and tumours, and in spite of the fact that the fibroid was partially calcified.

Cases have been reported in which an ovarian cyst with a short broad pedicle has rotated and involved the uterus in the twist. In such a case the conditions would be almost parallel to those prevailing in the patient the subject of this communication. All in all, I am sure that the axial rotation of a uterine fibroid above the size of a walnut is a rare accident.

Brook-street, W.

ACUTE RHEUMATISM AMONG CHILDREN:

AN INQUIRY INTO THE PREVALENCE OF ACUTE RHEUMATISM AND ITS CONSEQUENCES AMONG CHILDREN OF SCHOOL AGE.

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IT is uttering a platitude to say that acute rheumatism is one of the commonest diseases of children which the medical man is called upon to treat. Yet the incidence among the community at large of a particular affection is often erroneously estimated by those who see only sick patients in hospital or elsewhere. The proportion of rheumatic children attending hospital to those suffering from other diseases is, without doubt, an index of the gravity of the infection, but it gives no guide to the amount of detectable rheumatism, or to the frequency of defects consequent on rheumatism, which may be present in those considered at the time to be in good health. A good example of the discrepancy between conclusions based on hospital figures and those obtained by the examination of school children is found in the case of tuberculosis, for this disease, though very prevalent among hospital children, is rarely detected in the examination of children at school; so rarely, indeed, that out of 1670 unselected school children examined by Dr. J. E. Squire and Dr. Annie Gowdey only 4·4 per 1000 were found to be definitely tuberculous. Remembering this and similar discrepancies, I have endeavoured to temper my views gleaned from hospital experience by an inquiry into the amount of detectable rheumatism among children attending the ordinary elementary schools of the London County Council.

Altogether 2556 children have been examined in four schools. These were in no sense selected. In three of the schools every child was examined; in the other, children who had arrived at certain periods of their school life were examined in accordance with the requirements of the education service. Of the total 2556, 844 were boys and 838 girls in the senior departments—i.e., from 6½ to 14 years old; and 874 were attending the infants' department, and consisted of nearly equal numbers of boys and girls from 3 to 6½ years old.

Method of procedure.—Each child was stripped to the waist, and the heart was carefully examined by the usual methods, any deviation from the normal either in size or action being noted. Other evidences of rheumatism were looked for. The size of the tonsils was recorded in figures, +1 implying slight enlargement, +2 considerable enlargement, and +3 very great enlargement. If adenoids were present in the absence of enlarged tonsils and were sufficient to cause signs of obstructed breathing, this observation was also noted down. An inquiry was made of the child, and of the mother when she was in attendance, for previous rheumatic manifestations in the child or for rheumatism in the family. When from the examination it seemed probable that the child was the subject of rheumatism, if the mother was not present, a nurse afterwards called at the home to make the same inquiries. This article is based on the data so obtained.

[1] Transactions of the Obstetrical Society, 1904, vol. xlvi., p. 149.

Number of Definitely Rheumatic Children.

Fifty-nine boys and 74 girls could be classified as definitely rheumatic, a total of 133. This is equivalent to a percentage incidence of 5·20 for children of all ages attending school, or of 6·83 for children in the senior departments only, those attending the infants' department being excluded from the estimation. The number affected at the different ages, and the percentage of rheumatic children at each age, are best shown in the accompanying table:—

Age in years.	3	4	5	6	7	8	9	10	11	12	13	14
Number of rheumatic children	1	1	4	9	16	11	11	21	13	23	22	1
Number of children examined	54	164	290	297	281	231	241	217	247	222	246	29
Percentage of rheumatic children... ...	*	0·60	1·37	3·03	5·68	4·76	4·56	9·67	5·26	10·60	8·94	*

* The number of children at the ages of 3 and 14 was too small to work out a percentage incidence of rheumatism which would be even approximately correct.

In the majority of cases attention was drawn to the rheumatic child by the condition of the heart—sometimes by definite valvular disease, at others by dilatation accompanied by such alteration in sounds and rhythm as one is accustomed to hear in rheumatic children. I need scarcely say that dilatation, weak cardiac sounds, or arrhythmia, by themselves were not accepted as sufficient evidence of active or past rheumatism; but children showing such manifestations were only accounted rheumatic if there was strong enough collateral evidence to remove all reasonable doubt. For example, a little boy aged 7½ years was found to have a deep cardiac dulness reaching nearly 2 inches outside the left nipple line, and weak cardiac sounds unaccompanied by a bruit; he was only considered rheumatic because it was elicited that he had been subject to growing pains, his brother had had rheumatic fever twice, chorea, and tonsillitis, and his mother chorea. Another patient, a girl aged 9½ years, who had fainted frequently and whose heart missed one beat in about every four, was included among the rheumatic cases, because she had had frequent tonsillitis and both her mother and brother had had rheumatic fever.

By requiring such definite evidence as this it is clear that one is likely to include too few rather than too many cases. Again, there are some rheumatic manifestations which, although very common, cannot be ascribed with certainty to rheumatism, in the absence of other data. Anæmia, for example, although an important and common consequence of rheumatism, and probably often occurring alone as the result of that disease, would not under those circumstances be recognised as rheumatic in origin. The same may be said of tonsillitis. Growing pains also, although undoubtedly rheumatic, make so little impression on the parents and are so readily forgotten or confused with the vague pains which herald or follow other acute febrile disturbances, that a history of their occurrence cannot be accepted as adequate evidence of rheumatism. Yet it is probable that growing pains not infrequently form the only manifestation of rheumatism in childhood. For these reasons it is almost certain that the percentage I have given above is well within the mark.

The table shows, broadly speaking, that more and more children become rheumatic as they grow older. There is, however, an apparent accession of rheumatism at the age of 10 which is not shown in the figures in subsequent years. I can give no explanation for this, and regard it as an inaccuracy which would have disappeared if a large enough number of children had been examined.

Incidence of Rheumatic Heart Affections.

I found that out of 133 children whom I had been able to classify as rheumatic, all except 18 showed some evidence of cardiac disorder at the time of examination. Thus rheumatic heart affection occurred in 4·49 per cent. of the children of all ages attending school, or in 5·94 per cent. of those in the senior departments only. Obvious valvular disease was found in 2·93 per cent. of children at all ages, or 3·92 per cent. of those in the senior departments.

An analysis of the 115 cases of heart affection showed that they were constituted as follows:—

Mitral regurgitation	44
Mitral stenosis	15
Double mitral disease	9
Probably double mitral disease, but one lesion doubtful	6
Aortic regurgitation and mitral stenosis	1
Dilatation with a systolic bruit at the apex, possibly mitral regurgitation	12
Dilatation with a short presystolic rumble, or so-called reduplicated second sound (mid-diastolic bruit), possibly early mitral stenosis	8
Dilatation without bruits	20

The comparative rarity of aortic regurgitation in children is emphasised by the fact that only one case was discovered among the 2556 children examined.

It will be observed that I have hesitated to group those children whose hearts were dilated and in whom only slight bruits—systolic, presystolic, or mid-diastolic—were heard. Each of these murmurs may be so transitory in rheumatic children that it is often quite impossible to say which are endocardial and which myocardial in origin. Moreover, it is a moot point how often early valvular disease is recovered from, and the discovery in rheumatic children of a murmur which afterwards goes does not necessarily mean that it was due to dilatation merely. Time may prove that a very slight systolic bruit at the apex in a child apparently in good health was a sign of the beginning of a slowly acquired mitral regurgitation; whilst a distinct presystolic bruit which used to be considered definite evidence of mitral stenosis may completely disappear, but whether it was produced by a temporary partial occlusion of the mitral orifice or was myocardial is debateable.

It has more and more been borne in upon me during the collection of these data, how frequently what appears to be a case of simple dilatation or cardiac weakness proves on investigation to be rheumatic. In fact, nearly every child with a dilated or weakly acting heart who was able to attend school, unless the condition was merely transitory, was a rheumatic subject.

Other Rheumatic Manifestations.

Chorea did not appear among the children or in the histories of their previous illnesses as often as might have been expected. There were 18 cases only, which amounted to 0·70 per cent. of the children of all school ages or 1·06 per cent. of the children in the senior departments. The comparative incidence in boys and girls followed the usual rule, there being twice as many girls affected as boys. Thus 0·71 per cent. of the boys were at some time choreic, and 1·43 per cent of the girls.

Relative Frequency of Rheumatic Manifestations.—The relative frequency of such rheumatic manifestations as could be investigated appeared to be as follows:—

Manifestation.	Number of cases.	Percentage of children.	Percentage of rheumatic cases.
Polysynovitis	42	1·64	31·57
Heart affections	115	4·51	86·46
Growing pains	35	1·37	26·31
Tonsillitis	32	1·25	24·06
Chorea	18	0·70	13·54

No reliable data were obtained in 10 cases.

As has been stated above, the percentage of the fleeting and consequently easily forgotten forms of rheumatism is probably far below the true average, whilst no data of value could be obtained of certain rheumatic manifestations like anæmia.

Enlarged tonsils and adenoids.—The relation of enlarged tonsils and adenoid vegetations to rheumatism in childhood is well illustrated by the figures obtained. Taking the 133 rheumatic cases, in 75 there were no signs of abnormality in the throat, in 21 the tonsils were slightly enlarged, in 11 considerably enlarged, in 16 greatly enlarged, and in 3 tonsillotomy had been performed before the patients were examined. Adenoids were responsible for producing signs of post-nasal obstruction and mouth-breathing in 7. In other words, there was an abnormality of the tonsils or pharyngeal mucosa or both in 58 cases, or in 43·6 per cent. of the rheumatic cases. This was sufficient to warrant operative interference in 37 cases, or 27·8 per cent. of the rheumatic cases.

It is interesting to compare these figures with those indicating the average frequency of tonsils and adenoids in school children generally. According to Macleod Yearsley, 7 per cent. of all school children require operation for this condition, whilst the medical officer of the Board of Education, from the results of the examination of 5,000,000 children, found that the percentage came out at 8. Therefore the incidence of tonsils and adenoids large enough to require operation is nearly four times as great in rheumatic children as in school children generally. Whether the abnormal tonsils permit the ingress of the rheumatic micro-organism, or whether they are the result of rheumatic tonsillitis, is a question which cannot be answered at present.

Remarks.

From this inquiry it is clear that there is a large amount of disregarded rheumatism among the children of school age in London. With the knowledge that about 1 in every 15 children from the age of 7 onwards attending the elementary schools is rheumatic, and that about 87 per cent. of these have some consequent affection of the heart, we may well consider what may be done to remedy this serious condition of affairs.

It must be remembered that nearly all the cases recorded in this article were of children who were considered to be in ordinary health, those ill enough to be removed from school or sent to a physically defective centre not being included. In very few instances did the parents or teachers know that the child was rheumatic or that the heart was affected, and no sort of precaution was being taken either to safeguard the heart or to prevent a recurrence of attacks.

The rheumatic children of the poor cannot get adequate treatment at present. For them, during the active stage of the disease, complete rest is essential, extending over a much longer period than they can be allowed to stay in hospital. They are not suitable for convalescent home treatment, since if once out of bed they are usually just as well at home. The result is that many of these children are discharged, with the disease no longer acute yet still smouldering on, to leave behind ultimately a damaged and crippled heart with all its attendant consequences. In many other instances the disease is so insidious in its onset and undemonstrative in its progress that the children do not obtain medical advice or treatment until permanent injury has been effected.

The routine medical examination of school children will enable the school medical officer to bring these rheumatic children to the notice of their parents and teachers, and so help to obtain for them, when necessary, such remedial treatment as is possible. When, moreover, the time for curative treatment has passed we may so influence their school life and choice of occupation on leaving school as to make the defect of as little moment as possible to its possessor.

Queen Anne-street, W.

ACUTE ENDOCARDITIS CAUSED BY A MICRO-ORGANISM HITHERTO UNDESCRIBED.

BY A. T. NANKIVELL, M.D., B.S. LOND., L.R.C.P. LOND., M.R.C.S. ENG., D.P.H. CAMB.,

ASSISTANT MEDICAL OFFICER, CROYDON BOROUGH HOSPITAL; AND DEMONSTRATOR IN PUBLIC HEALTH LABORATORIES, KING'S COLLEGE, UNIVERSITY OF LONDON.

A LITTLE girl, 3½ years old, was admitted to the Croydon Borough Hospital on Feb. 1st of this year. She was suffering from a mild attack of scarlet fever without severe throat symptoms. Her illness ran a normal course towards convalescence. But three weeks after admission she began to have rises of temperature in the evenings. At first the heart sounds were natural; later she developed a slight but definite double mitral murmur; the heart was appreciably enlarged. During the first week in March the temperature oscillated between 99° and 101° F. There was no splenic enlargement nor any sign of infarction elsewhere; the patient had no joint pains, nor were there any rheumatic

nodules present. The temperature chart was typical of an acute endocarditis. On March 7th I performed a venipuncture into the left median basilic vein, and obtained 5 c.c. of blood. The blood was inoculated into two broth tubes, and from one of these the diplococcus of which I shall speak presently was obtained. The after-history of the patient requires little comment; gradually the temperature subsided, and a fortnight later it had regained the normal level. The heart sounds remained unaltered, and there were none of the later lesions associated sometimes with endocarditis. The patient was removed from the hospital by her relations on March 25th.

The diplococcus which I obtained from the patient's blood stream showed no evidence of having a capsule. In shape each coccus was round, the size being about 0·7μ by 0·7μ. There was no tendency to chain formation, either in broth or on solid media. The organism showed no evidence of a hilum. It was non-motile. It had neither spores nor flagella. Its thermal death-point was 58° C. This diplococcus does not retain the stain by Gram's method—it is Gram-negative. It stains well with dilute carbol-fuchsin and eosin, less brilliantly with the blue dyes. It is not acid-fast.

On nutrient agar the diplococcus grows well at 37° C. and fairly well at 20–22° C. At 42° C. on agar the growth is only slight. The growth on agar has a ground-glass appearance, with small translucent separate colonies at the edges of the streak. The organism does not readily die, and will survive on agar for at least 12 weeks without subculturing. The diplococcus will grow both anaerobically and aerobically. It liquefies gelatin. It grows well in broth and peptone water, forming a precipitate; in peptone water it produces indol at the end of a week's growth. On Conradi-Drigalski medium and on Rebipelagar the diplococcus grows feebly, forming white, pin-point, translucent colonies. Litmus milk is clotted and turned acid by the diplococcus in 48 hours; the clot is firm and not honey-combed, and the supernatant whey is clear. The organism ferments glucose, with the production of acid, but no gas. Lactose, sucrose, maltose, galactose, raffinose, arabinose, mannite, dulcite, inulin, salicin, and dextrin are not affected. The diplococcus is not hæmolytic. The acidity and alkalinity of the culture media do not influence greatly the growth of this micro-organism. It grows well on agar between + 45 and − 60 (Eyre's scale). Outside these extremes the growth is more feeble. The organism is inhibited by 1 in 40,000 malachite green.

This diplococcus does not seem to be very pathogenic. The little girl from whose blood it was obtained was at no time very ill, nor did it produce any ill-effects when injected into guinea-pigs. I have to thank Professor R. T. Hewlett, who conducted the inoculation experiments for me.

At the time of the discovery of the diplococcus I had some thought that it might be the causative organism of scarlet fever, but I may say at once that this is, in all probability, not the case. I undertook a long series of agglutination and complement fixation reactions, using this organism with the blood from many scarlet fever patients, but in all these tests the results were negative. The micro-organism grows fairly well on agar to which has been added 1 in 4000 methylene blue, a medium which inhibits most other cocci. I plated many throat swabs from scarlet fever patients on to this medium, but never once succeeded in isolating this diplococcus from such cases.

Diplococci have been obtained from the blood and joints of patients suffering from rheumatic fever and acute endocarditis by Poynton and Paine,[1] Ainley Walker,[2] Triboulet,[3] Beattie,[4] and Wassermann.[5] Most of the diplococci described by these writers seem to have been Gram-positive, and differed in other ways from the organism I have isolated. W. v. Lingelsheim,[6] in a long paper, describes many varieties of rare Gram-negative diplococci; but no one of these appears to agree in all respects with the diplococcus which is the subject of this article.

My thanks are due to Mr. G. N. A. Hall, who has kindly examined many of the properties of this diplococcus, and helped to verify my observations on it.

[1] Poynton and Paine: THE LANCET, 1900, vol. ii., pp. 861, 932.
[2] Ainley Walker: Practitioner, 1903, vol. lxx., p. 185.
[3] Triboulet: Comptes Rendus de la Société de Biologie, 1897, p. 1000.
[4] Beattie: Journal of Pathology and Bacteriology, vol. ix., p. 272.
[5] Wassermann: Berliner Klinische Wochenschritt, 1899, p. 736.
[6] W. v. Lingelsheim: Klinisches Jahrbuch, 1906, vol. xv., p. 373.

SPINAL ANÆSTHESIA IN EGYPT.

BY H. E. S. STIVEN, M.A., M.B., B.C. CANTAB.,
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SOME extracts from the Kasr-el-Aïni Hospital Report for the year 1910 may be of interest to surgeons and anæsthetists. This hospital is a Government native hospital of about 500 beds. Here is also the Egyptian School of Medicine. The number of in-patients treated in 1910 was 8725. The total number of operations performed was 3205.

The most notable feature with regard to operations in 1910 is the great advance which stovaine has made as a routine anæsthetic. In the general theatres the operations under stovaine exceed those under general anæsthesia. The figures are: stovaine, 662; general, 599. No untoward results are recorded, and the chief danger seems to be a lowering of the general blood pressure during the operation. In the majority of cases this can be remedied by the administration of adrenalin. Stovaine did not produce its customary effect in at least 16 cases, which, therefore, had to be done under a general anæsthetic. Operations were finished off under chloroform in at least four cases. A successful administration of "high stovaine" was accomplished in 17 cases.

In the gynæcological theatre only 19 cases were given a general anæsthetic out of a total of 201 patients operated upon. Details were carefully kept in this theatre, and 175 cases were successfully operated on under stovaine. In 8 cases a general anæsthetic had to be administered after the injection of stovaine, either because of the insufficient anæsthesia produced or to check vomiting when the peritoneum was pulled upon. Eleven cases had a general anæsthetic from the commencement. Seven cases, which I have not counted as having a general anæsthetic, required a little chloroform towards the end of the operation, as the effect of the stovaine was beginning to wear off. The longest time a patient was under stovaine in this theatre without any chloroform being necessary was two hours and a quarter: this was a patient with malignant disease on whom a Wertheim's operation was being performed: stovaine (0·08 gm.) was given at the commencement and repeated half-way through the operation. The average length of time the anæsthesia lasts is about one hour and a quarter, but patients vary considerably.

The total statistics for anæsthetics in all the operating theatres shows: general anæsthetics, 1604; stovaine, 867; local anæsthetics, 633; somnoform, 126. The large majority of general anæsthetics is accounted for by the fact that 384 eye operations and 502 operations in the Cushaks (the minor operating theatres attached to the wards) were done under general anæsthesia.

I understand that two members of our staff are compiling a paper giving their detailed observations and conclusions. We look forward with interest to its publication.

I have to thank Dr. H. P. Keatinge, the director of the Hospital and Medical School, for his permission to publish these notes.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—At Port Isaac (Cornwall) on Sept. 30th, Mr. Richard Julyan George, M.D., C.M. Edin., D.P.H. Irel., was presented with a silver table centrepiece and vases, together with an album containing the names of the subscribers, which numbered over 300, on the occasion of his leaving Port Isaac after practising for over 20 years in the district.—At Clovelly (Devon) on Sept. 30th, the members of the Clovelly Mariners' Union Society presented Mr. Robert Walker, F.R.C.S. Edin., L.R.C.P. Edin., with a substantial cheque on the occasion of his retiring from active work and leaving Clovelly. The members of the Rechabite Friendly Society gave Mrs. Walker a handsome dressing-case.—At the Parish Room, Wotton-under-Edge, Gloucestershire, on Sept. 28th, Mr. James George Boyce, L.R.C.P. & S. Irel., was presented with a cheque for £32, and an illuminated album containing the names of 170 subscribers, on the occasion of his leaving the town, after 20 years' residence, for British Columbia. Mrs. Boyce was presented with a handsome box of gloves.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF ACUTE GLAUCOMA SUCCESSFULLY TREATED BY THE OPERATION OF TREPHINING THE SCLERA.

BY SYDNEY STEPHENSON, D.O. OXON.,
OPHTHALMIC SURGEON, QUEEN'S HOSPITAL FOR CHILDREN, ETC.

THE suggestion of employing a small trephine to drill a hole in the coats of the eyeball in cases of glaucoma is by no means new, although it has never been widely adopted. Dr. Argyll Robertson[1] 35 years ago recommended such an operation when iridectomy could not be performed or when it had failed; and much more recently the operation has been advocated by Blanco,[2] Fröhlich,[3] Freeland Fergus,[4] and R. H. Elliot.[5] Major R. H. Elliot's suggestion was that after a flap of conjunctiva had been reflected from the neighbourhood of the limbus, a hole should be made with a small trephine through the sclera into the anterior chamber. The operation might or might not be combined with a small peripheral iridectomy. The underlying idea was that by these means a permanent filtering cicatrix might be established between the anterior chamber, on the one hand, and the subconjunctival space, on the other.

In the following case of acute glaucoma, referred to me by Dr. S. H. Craig, the Fergus-Elliot operation had a happy result.

The patient, aged 67 years, was first seen by me on Nov. 30th, 1909. The history was to the effect that on the night of Oct. 22nd-23rd she was seized by "biliousness," characterised by vomiting, severe headache, and by some, but not by much, pain in the eyes. On the fourth day of the illness (Oct. 26th) the sight was found to have failed seriously in both eyes. The patient was seen by Dr. Craig on the following day. Recognising the glaucomatous nature of the attack he prescribed physostigmine, which had been applied to the eyes ever since. As a child the patient's left eye had squinted, and the sight of that eye had always been defective as compared with its fellow.

When I saw the patient on Nov. 30th she looked ill, and her face bore traces of considerable suffering. The sight of the right eye, which was as hard as a stone, was reduced to perception of light. The pupil was widely dilated and motionless. The eyeball was congested in a dusky sort of way. No view of the fundus could be obtained. The eye was convergent. As regards the left eye, sight was equal to 5/60. The pupil was semi-dilated and motionless. Tension was plus 2. There was no definite redness of the eyeball. The disc was cupped, but not in a glaucomatous sense. Physostigmine, applied freely to both eyes, reduced the tension of the left eye perceptibly.

On Dec. 1st, under the influence of ether followed by chloroform, given by Dr. Craig, Elliot's operation was performed upon each eye, the upper margin of the sclero-corneal junction being selected for the trephine hole, made by means of a Bowman's corneal trephine 2 mm. in diameter. As regards the right eye, the iris presented in the hole and a piece was therefore excised. No iris was removed from the left eye. The conjunctival flaps were retained in place by sutures, physostigmine was instilled, and both eyes were bandaged. The eyes were dressed on Dec. 4th, but nothing was dropped into them. Later in the day the patient developed delusions, believing that the nurses were going to give her chloroform, and so forth. On Dec. 7th there was no pain, the eyes showed little reaction, and tension was normal. As the delusions still continued the patient was got out of bed and a double shade was substituted for the binocular bandage. These steps had the happiest result, for on the following day she was almost herself again. From this time the progress of the case was uneventful.

The patient was last seen on Jan. 20th, 1910—that is, 50 days after the operation—when her condition was as follows. Right eye: Vision 6/9 and No. 6 Jaeger. With presbyopia corrected with a +4 D. spherical lens she read words in No. 2 Jaeger. The eye was white, except where the conjunctival flap was raised. A bleb-like filtering cicatrix lay above the cornea. The pupil was oval, with the small end upwards. The edge of the iris was free from adhesions. A small coloboma, the result of the iridectomy, could be made out above the normal pupil. Left eye: Vision 6/24 and No. 6 Jaeger. With presbyopia corrected with a +4 D. spherical lens she read No. 4 Jaeger. The eye was white except as regards the place where the flap of conjunctiva was resected. A tiny prolapse of the iris was to be made out at the outer end of the wound. Tension was normal in both eyes. The fundus of each eye could be plainly seen. The optic discs were deeply cupped, but only partially so. The left eye was slightly convergent, with some tendency to an upward deviation.

Welbeck-street, W.

[1] Argyll Robertson: Royal London Ophthalmic Hospital Reports, May, 1876.
[2] Blanco: Klinische Monatsblätter für Augenheilkunde, xli., Band ii., p. 150, 1903.
[3] Fröhlich: Ibid., May, 1904.
[4] Freeland Fergus: Brit. Med. Jour., Oct. 2nd, 1909, and The Ophthalmoscope, February, 1910.
[5] R. H. Elliot: The Ophthalmoscope, December, 1909.

NOTES ON A CASE OF INTRA-UTERINE HÆMORRHAGE WITH A NERVOUS ORIGIN.

BY D. FENTON, M.B., CH.B. EDIN., D.P.H.

THE patient, a young married woman aged 26 years, was attended by me in her first confinement. On making a vaginal examination, when called to the case about 2 A.M., I found the os sufficiently dilated to admit two fingers. I waited an hour to ascertain whether it would be worth while going home again, and on my second examination concluded, in consequence of the rapid progress of the case, that it would be highly unsafe for the patient to be left. A fine healthy male child was born about 4 A.M. without the aid of any anæsthetic or instrumental interference, but there was a small rupture of the perineum. The placenta was delivered spontaneously about ten minutes after the birth of the child, and the perineum was then repaired.

The puerperium was normal in every respect up to the end of the second week. On the morning of the fifteenth day I received an urgent summons to the patient as she was "very bad." At the time of my visit I found her blanched, with a pulse-rate of 96, normal temperature, and absolute freedom from pain. The patient's mother informed me that her daughter had had a severe flooding which had come on, without the slightest warning, that morning. Although I had examined the placenta and had satisfied myself that nothing had been left in the uterus at the time of the confinement, I carefully examined the blood clots to ascertain if by any chance there had been a succenturiate placenta, and if an "island" of placenta which had been inadvertently left behind had come away, but my examination was negative. I then examined the patient carefully for any evident cause of the hæmorrhage, but this examination also was negative.

It struck me that the hæmorrhage was of nervous origin, and, on inquiry, I learned that the previous evening the patient's brother-in-law had gone to the house in a state of intoxication, had made himself a general nuisance, and had, in consequence, very much upset her. During the night the patient, who is inclined to be somewhat superstitious, was awakened by the barking of the house-dog, and this was construed by her into a "death-warning," and she concluded that either she herself or some of her near relatives were approaching dissolution. The result was that she passed the rest of the night in a state of restless wakefulness, tossing about in the bed. I gave a favourable prognosis, ordered light diet, and prescribed a sedative mixture, with eminently satisfactory results.

It is generally admitted that diarrhœa and polyuria may be caused by nervous excitement, and Dr. G. A. Sutherland, speaking of gastrostaxis, says: "Sometimes an attack is traced to hard work, or worry, or anxiety," obviously suggesting a nervous element. Therefore I see no reason why an intra-uterine hæmorrhage, probably from the placental site, in a woman recently confined, may not also be of nervous origin, and to my mind the above case seems to bear out this contention.

Blackburn.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on Oct. 13th, with Sir ALFRED PEARCE GOULD in the chair.

Sir FREDERIC EVE showed a case of Myeloid Sarcoma of the Tibia in a girl aged 18, who was admitted to hospital with a large endosteal sarcoma of the head of the left tibia of six months' duration. After the diagnosis of myeloid sarcoma had been confirmed at operation, the upper third of the tibia containing the tumour was resected and the articular cartilage of the femur was removed. The fibula was exposed and about 6 inches of it were sawn off, the periosteum being carefully preserved. A hole was bored in a vertical direction in the ends of the femur and tibia respectively, and into these holes the portion of fibula was bolted in such a manner that the ends of the two bones were separated about 1¾ in., the limb being correspondingly lengthened. Primary union took place and the junction between the bones had gradually become firmer. Radiographs taken from time to time showed that the transplanted fibula had increased in circumference by new formation of subperiosteal bone, and the interval between the femur and tibia had become narrower owing to growth of bone from their periosteum and cut surfaces. Recently some interesting observations had been made by Axhausen and Lobenhoffer on the changes which take place after implantation of living bone. They showed that when bone covered with periosteum was transplanted the bone substance itself died and only the periosteum and endosteum lived. The new bone formation proceeded, therefore, mainly from the periosteum, and ultimately led to the reparation of the entire bone. In transplantation operations the periosteum must be preserved if the growth and permanent fixation of the graft were required. It was well established that myeloid sarcomata did not recur after local removal. Sir Frederic Eve had that week seen two of his cases illustrating this point. One a man, aged 35, had a large myeloid sarcoma of the fibula. It had broken through its capsule, and the microscope showed an infiltration of myeloid and round cells in the muscles surrounding the growth. The upper half of the fibula was removed with the adjoining tissues. Eight years subsequently there was no recurrence. In the second case a myeloid sarcoma of the size of a tennis ball was removed by scraping from the head of the tibia of a man, aged 22. Four and half years later the limb remained healthy. In erasing these tumours the hæmorrhage was very free and had to be guarded against by applying a tourniquet.

Dr. JAMES GALLOWAY showed a case of Severe Facial Neuralgia Associated with Myoma Cutis, and the advisability of injecting alcohol into the main branches of the left fifth nerve was discussed.

Dr. WILFRED HARRIS showed a case of Acute Encephalitis in a girl aged 13, who on May 21st was seized with a shivering attack, followed by severe headache and vomiting, with pyrexia. She became delirious and unconscious on the following evening, and did not speak again for 13 weeks. She was at first considered to be suffering from "heat apoplexy." Her recent condition pointed to the cerebellum as being particularly involved, but the past history of the case indicated a much wider area of cerebral inflammation, though the pyramidal system seem to have escaped.

Dr. H. D. ROLLESTON and Mr. W. P. TINDAL-ATKINSON showed a case of Spondylose Rhizomélique in a man aged 49. Fourteen years ago pain and restriction of movement began in his hips; pain in the spine began 11 years ago. The disease had progressed until the spine had become immoveably fixed five years ago; since then he had been subject to sudden attacks of pain beginning in the heels, extending to the neck and head, and making his bed feel like a "bag of spikes." All the bones were unduly translucent, probably from disuse.

Mr. R. C. ELMSLIE showed a case of General Thyroid Malignancy in a woman aged 61. In April, 1911, she began to feel pain in the right wrist, which was treated as rheumatism until July 1st, when a swelling appeared. At that time there were pain and swelling on the radial side of the right forearm, a short distance above the wrist. All the movements of the wrist, as well as pronation and supination, were limited. A skiagram showed an endosteal swelling of the lower part of the shaft of the radius. The swelling was thought to be a sarcoma, and in July a portion of the affected part of the radius was excised. Microscopic examination of the growth showed that it consisted of thyroid tissue, not evidently carcinomatous, but resembling rather an adenoma mostly of the fœtal type of thyroid, but some of the alveoli contained colloid. In September the patient had a severe attack of dyspnœa lasting several days and resembling severe asthma; this, she stated, had been a frequent occurrence with her in the autumn and winter. On that occasion, however, although she had improved, the dyspnœa, stridor, and hoarseness persisted. The thyroid enlargement had increased a little in the last two months, and the veins of the root of the neck on the left side had become distended. The movements of the vocal cords were at present natural.

Cases were also shown by Mr. P. LOCKHART MUMMERY, Mr. C. WARD, Dr. H. BATTY SHAW, Mr. P. S. MARTIN, and Mr. H. MORRISTON DAVIES.

The meeting concluded with a paper on an Epidemic of Acute Anterior Poliomyelitis in Cornwall, by Dr. A. GREGOR and Mr. L. B. HOPPER.

UNITED SERVICES MEDICAL SOCIETY.—A meeting of this society was held on Oct. 11th, at the Royal Army Medical College, the President, Major E. B. Waggett, R.A.M.C. (T.), being in the chair.—The President, in his opening address, said that the election of a Territorial officer to the presidency of the society was in part due to the desire felt by the council and members to emphasise the fact that the society was intended for the benefit of all the medical services, and was not confined to the Royal Army Medical Corps, an erroneous impression due to the fact that the meetings were held in the Royal Army Medical College. He hoped that his brother territorial officers and those *à la suite* officers who only undertook to do military work in time of war, would accept the fraternal offer held out to them by their brethren in the regular services of the army and navy, and would join the society in greater numbers than they had done hitherto. They would have the very great advantage of hearing military medical matters discussed by those who had had practical experience of such things in war and in peace. An instance of the necessity for such discussion occurred in the paper which was to be read that evening, and which, if he was not mistaken, would show that the recent alterations in the shape of the bullets used by the principal Powers were destined to modify very considerably the conceptions of military surgery which were formed from experiences in South Africa.—Major E. M. Pilcher, D.S.O., R.A.M.C., read a paper on "The New Bullets." He pointed out that all the alterations in the form of the bullet from the time of the old round bullet were primarily made with the object of getting better ballistic properties. Secondary aims were reduction in weight of ammunition, lessened recoil on firing, and effective wounding power. This last question had been so much put on one side that in 1892 serious complaints arose as to the inefficacy of the small-bore bullet of the time in stopping men and in putting them definitely *hors de combat*. War experience showed that the ·303 bullet gave more explosive effects when bone was touched than its predecessors, but that in soft tissues the track was usually narrow, not readily infected, and healed rapidly. Latterly many of the chief Powers had adopted bullets which agreed in being lighter and in having a sharply pointed nose. These met with less resistance when passing through air, and the following eddy was reduced. This reduction in the following eddy was accompanied by a greater tendency of the bullet to wobble, and this tendency was increased by the fact that, owing to the pointing of the nose, the centre of gravity of the bullet was thrown much further back. Experiments with bullets of this type showed that the entrance wound was always small, but that there was an explosive exit wound in 30 per cent. of cases. In two-thirds of all wounds there was evidence that the bullet had turned over in its course through the tissues. Only 17 per cent. of the wounds could be classed with the simple flesh wound typical of the ogival bullet; in the remainder the wounds were more severe, especially in the soft parts, where the track was surrounded by an area, greater or less in extent, of torn tissue. The

wounds in bone, on the other hand, were very similar to those produced by the ·303 bullet. Experiment showed that the increased severity, which was in future to be expected in wounds of the soft parts, was due chiefly to the great tendency shown by the newer patterns of bullets to turn over on meeting with any resistance. As to the degree of increased severity of the wounds, the lecturer thought that one might expect a return to the conditions present in the days of the Snider bullet, with, at short ranges, an added increase due to the much greater velocity of the new bullets. — Lieutenant-Colonel J. B. Wilson, R.A.M.C., Fleet-Surgeon W. E. Home, R.N., Major H. A. Bray, R.A.M.C., and the President took part in the discussion.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of this society was held on Oct. 13th, when Professor A. Bostock Hill was formally introduced as the President for the ensuing session by the retiring President, Dr. W. G. Willoughby.—In his presidential address, which dealt with the Evolution of the Medical Officer of Health, Dr. Hill said that it was difficult to conceive a period of civilisation when there was no elementary sanitary service. Probably the earliest real sanitary work was that undertaken for the prevention of floods; and when men began to collect into communities it became necessary to arrange for the removal of waste products which hindered access to their dwellings and reduced the comfort of existence. The earliest records of a preventive service were those of Rome, where officers, termed ædiles, were appointed who were established as *curatores urbi* in 495 B.C. The medical service of Rome undoubtedly included a Poor-law service. The officers not only had to attend the poor, but they were allowed to take fees from the rich so long as the legitimate Poor-law work was not interfered with. From the point of view of civilisation and of municipal government probably no greater disaster befell the world than the fall of Rome. Then much of the carefully elaborated municipal work perished and succeeding generations had slowly to endeavour to reconstruct a system of public health administration. After referrring to spasmodic efforts to enforce sanitary measures in the City of London which were made by Edward III., Henry VIII., and Queen Elizabeth, Dr. Hill said that the nineteenth century must ever be memorable as that in which modern hygiene was born and in which the medical sanitary officer came into existence. In the first decades of the last century the most important sanitary work accomplished was the passing of the Registration Acts. This enabled the statistician for the first time to collect statistics in a scientific form on which could afterwards be based the present administrative system of public health. The Public Health Act of 1848 was the result of the report of the Royal Commission on the Health of Towns. It did not, however, provide for the appointment of medical officers of health. During the next 20 years the main work in the evolution of the medical officer of health was educational. Facts accumulated, based on statistics and the progress of medical science, and the Public Health Act of 1872 permitted the appointment of medical officers of health, while the Act of 1875 made those appointments compulsory. In the early days their chief work was the advising of the removal of those great nuisances which had been shown to be hostile to a reasonable degree of public health. In many of the minor districts the appointments were made by councils which did not understand the necessity of public health work. In a large number of instances the officers were discouraged from doing more than was absolutely necessary. One of the most important points in connexion with the work of a medical officer of health at the present day was the education of the public as to what was the meaning of modern hygiene, and this could only be done by a medical man who was a specialist, and therefore a medical officer of health.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.——A meeting of this society was held on Oct. 6th, Dr. A. Freeland Fergus, the President, being in the chair. Dr. Fergus opened the new session by delivering a presidential address on the Rise and Progress of the Glasgow School of Medicine: from Maister Peter Lowe to Sir William T. Gairdner. After speaking of the early workers in medicine in Glasgow he pointed out that many men of the first rank in medical science, who had attained their distinction for the most part in the south country, were connected with the west of Scotland, and he instanced as Lanarkshire men William Hunter, John Hunter, Matthew Baillie, and Smellie. He pointed out that the medical school of Glasgow in great part owed its origin to the influence and work of Cullen, who was perhaps the first to give systematic instruction in medicine in Glasgow. An interesting line of succession was pointed out in so far as Cullen taught Joseph Black, Black taught Thomas Thomson, Thomas Thomson taught Graham, afterwards master of the Mint and professor of chemistry at University College, and Graham taught Joseph Lister. All these men were connected with Glasgow, and the name of each is to be found on the list of the Royal Faculty of Physicians and Surgeons. It was during his term of office in Glasgow that Lister revolutionised surgery, and practically introduced to the world the modern biological pathology which has not only been useful in surgery, but has also markedly influenced work in the departments of public health and medicine. The Glasgow Royal Infirmary was the institution in which modern surgery was actually called into being. The influence of Sir William Tennant Gairdner, Dr. Fergus said, had been of the greatest importance. He characterised him as a man of great simplicity of character, of profound and wide scholarship. If it were important to young students to be brought into contact with a man who invariably took a philosophic view of a subject, who was profoundly learned in the matters under discussion, and who was most painstaking about the minutest details, then Gairdner was without comparison the best teacher of his time. Fortunately for the city of Glasgow, Gairdner was not only professor but was for a time also medical officer of health, being the first to hold that appointment. The Public Health Department of Glasgow was practically organised by him, and was carried on after his retirement with conspicuous ability by Dr. J. B. Russell. Amongst other Glasgow practitioners and professors the lecturer mentioned Dr. Andrew Buchanan, who was the first to give any succinct account of the phenomena of the coagulation of the blood; Allen Thomson, who was one of the earliest workers in the domain of microscopic embryology; William MacKenzie, who in his day was one of the leading ophthalmic surgeons of the world; and Robert Perry, who while a physician in the fever wards of the Glasgow Infirmary clearly differentiated between typhus and enteric fevers.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Oct. 5th, Mr. H. H. Taylor, Vice-President, being in the chair.—Mr. A. G. Bate showed a man with Severe Spasmodic Torticollis, in whom palliative measures having been tried with no success the spinal accessory nerve was resected for about an inch, but the result was almost *nil*. The posterior divisions of the upper cervical nerves were then divided, and as two years had now passed and a complete cure of the spasms had been obtained Mr. Bate thought he was justified in hoping that the result was permanent.—Mr. Bate also showed a case of Tabes with Gastric Crises of 11 Years' Standing Treated by Förster's Operation. Laminectomy of the fifth to the eighth dorsal vertebræ was first performed, the dura was opened, and the posterior divisions of the seventh to the tenth dorsal nerves were divided. Three months had now passed and the gastric crises had quite disappeared.—Dr. W. Broadbent showed a case of Hypertrophic Pulmonary Osteo-arthropathy. The man had well-marked enlargement of the lower ends of the forearms and wrists, clubbing of the fingers, swelling above and around the knee-joints, which contained fluid, and enlargement of the ankles. He had had a cough from boyhood. The sputum was fœtid. There was dulness over the lower lobe of the left lung with distinct cavernous signs. The heart was pulled over till the apex was in the left axillary line. No tubercle bacilli were found. Probably there was an old empyema which had ruptured into a bronchus.—Dr. E. Weatherhead showed a specimen, removed post mortem, of a fœtus which had been retained in utero for 40 years. The patient had been shown at the society 39 years ago with a large abdominal tumour. One member then thought it was a fœtus encysted in the abdominal cavity, probably with a fibroid tumour of the uterus, but no other member agreed with this diagnosis, most of them regarding the swelling as a fibroid. At the necropsy, made nearly 40 years later, the tumour was found to consist of the fœtus lying in a bag of membranes, more or less completely calcified. It lay in the

breech position. All the parts were easily distinguishable. The substance of the fœtus had a curious waxy consistency, suggesting that it might be partly converted into adipocere. It had probably reached about the eighth month and weighed about 4 lb. The record cases of long retention of a fœtus reported in the Transactions of the Obstetrical Society were one by Cheston of a lithopædion, which had remained for 52 years, and another by Barnes of 42 years' standing.—Dr. F. W. Price read a paper on Newer Conceptions of Cardiac Disease.

BATH CLINICAL SOCIETY.—A meeting of this society was held on Oct. 6th, Dr. Preston King, the President, being in the chair.—Among the cases and specimens shown were: A man, aged 39, with Double Inguinal and Double Femoral Herniæ, and a child, aged 2, with Cavernous Sinus Thrombosis following an injury 14 days previously, by Dr. A. J. Bruce Leckie; a child, aged 11, with a loud Systolic Murmur heard all over the præcordial region, most marked over the pulmonary area, who otherwise showed no signs of congenital heart disease, by Dr. G. H.-H. Almond; bismuth X ray photographs, showing Gastroptosis before and after operation, and cases of Rodent Ulcer treated by zinc ionisation, by Dr. G. E. Bowker; a Thymus weighing 22½ grammes removed from a girl, aged 23, who died under chloroform during an operation for the removal of a nasal polyp, other signs of acute lymphatism being enlargement of the superior mediastinal glands and some enlargement of the spleen, by Dr. F. G. Thomson.

HARVEIAN SOCIETY OF LONDON.—This society held a clinical evening at St. Mary's Hospital on Oct. 12th, Mr. J. Ernest Lane, the President, being in the chair.—The following members showed cases: Sir John Broadbent, Bart.: Jaundice.—Captain S. R. Douglas, I.M.S., and Dr. Graham Little: Gonococcal Keratodermia Blennorrhagica.—Dr. W. H. Willcox: (1) Abdominal Tumour in a child; (2) Syphilitic Intracranial Tumour; and (3) Aortic Regurgitation.—Mr. D. C. L. Fitzwilliams: (1) Skiagrams of Renal Lithiasis; and (2) Ulcerated Non-malignant Tumour of the Tongue.—Mr. C. W. M. Hope (for Dr. William Hill): Two cases of Stricture of Œsophagus.—Dr. Graham Little: Artificial Dermatitis.—Mr. V. Z. Cope: Actinomycotic Abscess of the Cheek.—The cases were discussed by various members.

Reviews and Notices of Books.

England's Recent Progress. By THOS. A. WELTON, F.S.S., F.C.A. London: Chapman and Hall. 1911. Pp. lxiv.–742. Price 10*s.* 6*d.* net.

IN this interesting treatise Mr. Welton gives an account of his investigations respecting the movement of the English population in the course of the 20 years 1881–1901, and contrasts the first ten years with the second. The objects the author had in view when projecting this work may be briefly stated as follows: 1. To study the progress, or want of progress, of different communities, as indicated by the balance of migration in two consecutive decennial periods. 2. To consider the relative mortality in these communities at several stages of life; the effect thereon of migration; the various disturbing influences; and the extent to which local mortality has been reduced in recent years. Mr. Welton is by no means a novice in researches of this kind, as witness, among other things, his instructive essay on the growth and distribution of the population in the 90 years 1801–91.[1]

Whatever tends to the instruction of the public respecting sanitation is deserving of encouragement, as a matter of national concern. Mr. Welton's book must be welcomed as likely to promote such instruction. Based, as it is, on researches extending over two decennia, it should prove valuable as a means of gauging the amount of migration in individual populations as well as of accurately measuring their mortality. In the process of investigating local movements of population much light is incidentally thrown on questions of comparative mortality, as well as of birth and marriage ratios, all of which powerfully affect the growth of populations. In the text an account is given of the places that attract the largest numbers of immigrants, specifying those showing the greatest changes in the second decennium as compared with the first. Believing that accretions of inhabitants at ages from 15 to 40 give a better notion of the progress of a place than could be derived from study of the total movement of the population, the author limits his remarks mainly to this period of life. The movement of population at ages below 15 forms the subject of a separate chapter; it is influenced largely by the attraction of residential places for those leaving home in quest of education or of health. At ages exceeding 40 years the movement is almost confined to large towns and residential places where immigrants at this age are economically important as employers of labour.

In this country the migrations of the sexes are so dissimilar as to require separate treatment. The well-known tendency towards round numbers, which vitiates many returns, has been allowed for in the present work; as also has the tendency to misstatement of age by women who, between the ages of 25 and 40, are not unnaturally prone to understate their years. On the other hand, working-class boys as well as girls add something to their ages in order the sooner to attain the wages of adults. Moreover, old men as well as old women reaching 65 years frequently exaggerate their ages. Since 1851 the inhabitants of English towns have acquired the habit of distributing themselves over wider areas than previously. Accordingly, Mr. Welton has endeavoured so to group the parishes as to give every place an ample boundary. This is the more necessary because of the prevailing tendency for whole families to migrate from the centre to the circumference of a great city; one result of which is that the statistics of the whole area cannot be regarded as complete unless the parishes receiving such migratory families fall within the boundary chosen. It is found that the districts on the fringe of a large town are affected, not only by the usual loss of population resulting from the inability of our rural areas to retain their native-born, but by the influx of families coming from the town centre.

In the two decennial periods under notice a marked stability exists in the conditions generally prevailing. At ages 15–25 there has occurred universally a loss of rural population which affects the numbers who, at the end of a decennium, are aged 15–35. In the chief colliery districts there are gains of youths and of women somewhat older—boys, in fact, for the pits, and brides for the older men. But the high birth-rates there influence the growth of population more powerfully than do the migrations. Some of the industrial districts are adjacent to collieries and show very similar peculiarities. In cotton and woollen districts there is a tendency to lose male inhabitants and to attract females. The local birth-rates are specially low. Residential districts, for the most part, lose young men; all of them attract young women and persons of both sexes after 35. Old towns generally lose young men, and women a little older tend to leave them. These places commonly show moderate gains of both sexes after the age of 50.

In discussing the statistical methods adopted for ascertaining the tendency towards marriage in particular localities, the author dismisses as without value the simple ratio of marriages to population because of the extreme variability of the proportion of unmarried men at ages 20–35 to population at all ages. The proportion of unmarried young women also varies considerably, and so little do the statistics for the

[1] Statistical Journal, 1900, pp. 527–589.

sexes correspond that even within the limits of the County of London alone the ratio of unmarried women to unmarried men at 20–35 is sometimes as low as 60 per cent. and at others as high as 249 per cent. The author regards the proportion of men found to be in the married state at the age 45–55 as a fair measure of the general tendency to marry. The national figures indicate some falling off in the proportion of persons married, while the proportion of the unmarried seems to have increased in the last vicennium by about one-twelfth. From the figures adduced there appears to be a stronger tendency to marry in the eastern and western counties than in the busy counties of the north, whilst in the rural parts of the north of England there is also a comparative indisposition to marry. With reference to the depressed birth-rate, the author remarks that, inasmuch as the proportion of married women at ages under 45 varies considerably in the several districts, it is unsafe to compare the births with the total female population, or even with the number of married women aged 20–45. The better course seems to be that recently adopted by the Registrar-General, which consists of comparing births with the married women living under 45 years of age. Mr. Welton's figures give support to the official statement that since 1881 there has been everywhere a progressive decline in the birth-rate, particularly in the textile manufacturing places and in the residential towns.

In a work like the present statistics of mortality naturally bulk somewhat largely. From the data here presented we learn that during the prime of life the rural death-rates are considerably modified by the migration of healthy young men to towns in quest of higher wages. After years of town dwelling many of these *quondam* rustics return to their country homes seriously damaged in health by their encounter with urban conditions of life. As an instrument of comparison, Mr. Welton has devised a "scale of mortality for healthy places," which approximately fits the case of the best rural districts as existing in 1881–90, and which represents the percentage loss by death in that decennium. In the several tables appended, these rates are taken as 100, and the actually recorded rates are shown as more or less than this, according to circumstances. In justification of the use of this standard, it is contended that the rates of mortality thus indicated are not materially below a level which is easily attainable in a healthy rural district. In a series of tables the national average loss of life is worked out for each of the specified decennial periods. In the first 15 years after birth there appears to have been no change as between the first period and the second. At later ages a considerable reduction of mortality is recorded. The figures show that the scale of death-rates at ages 25 to 40, arrived at on the basis of the experiences of the earlier decennium, as representing *female mortality* in healthy districts, exceeds in the later decennium the average mortality in all districts whether healthy or otherwise. This is a surprising improvement. On the other hand, the figures indicate a relative aggravation of *male mortality* between the ages of 20–25 and 40–45, proving that unhealthy conditions affect the male sex most severely. The textile and other manufacturing towns and the colliery districts experience heavy loss of infant life. This has been aggravated in the last-named districts, and up to the close of last century had not been greatly reduced anywhere else, except in the rural parts of the South and East of England. Since 1901, however, much improvement has taken place, especially in the colliery districts.

In this connexion attention must be directed to two important sets of graphs which appear in the preface of this book—one set relating to migration at several ages, the other to the percentage losses experienced by successive generations in either of the decennial periods ended respectively with 1890 and 1900. The labour involved in the calculation of the curves necessary for the graphs—140 in number—must have been enormous. The whole work bears eloquent testimony to the energy and public spirit of the author. Considerations of space forbid the attempt even to summarise the teaching deducible from these graphs and their accompanying tables, for which reference must be made to the book itself.

After a careful perusal of this work the reader must be impressed, as we have been, with the abundance and variety of instruction it contains on subjects which are not readily accessible, and which will be found invaluable to students of vital statistics. In its present compendious form we believe that nothing of the kind has previously been published in a single volume. The book deserves a wide circulation.

A Handbook of Practical Treatment. By Many Writers. Edited by JOHN H. MUSSER, M.D., LL.D., Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia; and A. O. J. KELLY, A.M., M.D., Assistant Professor of Medicine in the University of Pennsylvania. Volume I. London and Philadelphia: W. B. Saunders Company. 1911. Pp. 909. Price £3 15*s.* net the set (three volumes).

THIS important work is a systematic treatise on treatment, regarded as an art based upon scientific principles. While its object is essentially practical, the presentation of the evidence upon which the various recommendations are made is by no means neglected. As a consequence, it will extend to three large volumes. The editors have arranged their subjects conveniently and chosen their collaborators with discrimination, since the individual articles are generally of a high order. In the first volume for the most part general methods of treatment are reviewed, and questions of mechanical, electrical, climatic, and other special forms of treatment are considered.

Dr. J. H. Musser, the senior editor, contributes an introductory article on the fundamental principles of therapeutics, in which the expressions of disease and the methods of treating them are discussed. The subject of preventive treatment is dealt with in an article by Dr. C. H. Harrington, which has been revised by Dr. A. C. Abbott. In connexion with Governmental prophylaxis, the public health services of England, France, Germany, and the United States are described. Individual prophylaxis, protective inoculation, and disinfection are successively dealt with. A thoughtful and rational analysis of the general principles of dietetics is contributed by Dr. David L. Edsall, who discusses the questions of protein, carbohydrate, and fat intake, and arrives at rational and moderate conclusions, which would probably be acceptable to all except dietetic faddists and extremists. Dr. Maynard Ladd treats of the dietetics of infancy. He gives useful and full instructions in regard to breast-feeding, and describes in detail the percentage modification of cow's milk which is so strongly recommended by American pædiatrists. He gives a useful table of instructions for the carrying out of this method, which, in spite of its explicit nature, is still somewhat complicated for ordinary use.

Sir Lauder Brunton writes on the general principles of drug treatment, and reviews the main lines of treatment of the different systems of the body. Dr. Ludwig Hektoen, in an interesting article on the general principles of serum-therapy, outlines the cardinal facts known in regard to immunity, and describes the chief specific forms of treatment of infective disease. He includes vaccine treatment within this survey. Dr. Warren Coleman deals with the general principles of organotherapy, and indicates the chief practical applications of this form of treatment. Dr. Charles W. Burr contributes an article entitled "The Rest Cure, the Work Cure

and Psychotherapy," and Dr. R. Tait McKenzie, a comprehensive and instructive study of exercise, massage, and mechanotherapy. This last article is abundantly illustrated and contains some useful schemes for the application of these forms of treatment to various deformities, diseases of the circulatory system, and nutritional and nervous disorders, rendering it one of the most valuable parts of the book. Dr. Guy Hinsdale writes on hydrotherapy and balneotherapy, and Dr. Henry Sewall on climatotherapy and health resorts and on artificial aerotherapy. Electrotherapy is described by Dr. J. Montgomery Mosher, and radiotherapy by Dr. Henry K. Pancoast. The therapeutic applications of the X rays and of radium are discussed, but less attention is given to their use in malignant disease than we should have expected.

Under the heading of miscellaneous therapeutic measures Dr. George P. Müller describes the technique and uses of procedures such as venesection, leeching, passive hyperæmia by Bier's method, various forms of puncture and paracentesis, saline irrigations and infusions, and gastric lavage. This article is a specially practical and helpful one. Dr. M. Howard Fussell deals with the general care and management of the sick and the treatment of slight ailments, Dr. George Blumer with food intoxication and poisoning by reptiles and insects, and Dr. Horatio C. Wood, jun., with drug poisonings and drug habits. Dr. James Tyson contributes a short article on the treatment of sunstroke.

The remainder of the book contains an account of the treatment of diseases of the blood and of the lymphatic system and the ductless glands, the former by Dr. Richard C. Cabot, the latter by Dr. George Dock. The directions given for the management and treatment of some of the obscure and intractable conditions included under these headings are explicit and practical. A short article on the surgical treatment of diseases of the thyroid and parathyroid glands, by Dr. J. C. Bloodgood, gives a description of the operative procedures now employed in the treatment of exophthalmic goitre, and also contains reference to the parathyroid glands and their relation to tetany in connexion with operations on the thyroid gland.

Principles of Anatomy: The Abdomen Proper Described and Illustrated by Text and Plates. By WILLIAM CUTHBERT MORTON, M.A., M.D. Edin. London: Rebman, Limited. 1911. 174 pages of text, illustrated by 19 figures; and 14 plates, with special frame for same. Price complete, 42*s.* net.

THE work consists of 14 outline drawings of the abdomen, constructed in such a manner that the outlines all coincide, and when held up to the light in the special frame provided, may be superimposed and viewed as transparencies for the study of the relations of organs at different levels within the abdomen. The idea is an ingenious one, for different combinations may be made of the plates, so that various organs may be studied in their relation to each other and to the surface of the body. The text is noteworthy for the strange variety of type employed, some of the pages being irresistibly suggestive of Snellen's test types. Of the purpose of the work the author says: "It is intended not to rival, but to stimulate, practical study, to be used before dissection for a preliminary survey, during dissection for comparison and contrast, after dissection for revision, and at all times for reference." It is obvious that it cannot take the place of any of the three essentials of anatomical study—the dissecting-room subject, the dissecting-room manual, and the text-book of anatomy, though it might be a useful supplement. The author has reverted to the fashion of a former generation of anatomists in introducing his work by means of a poem of apology. The fashion was by no means a bad one, and the author owes a debt to John Bunyan, from whose "Apology" for the Pilgrim's Progress he has culled his lines. One is tempted to wish that he had quoted more fully from the Apology of the "wonderful tinker," and added the lines—

> "If that thou wilt not read, let it alone;
> Some love the meat, some love to pick the bone."

Nouveau Traité de Chirurgie. (*New Treatise on Surgery.*) Publié sous la direction de A. LE DENTU, Professeur Honoraire de Clinique Chirurgicale à la Faculté de Médecine, et PIERRE DELBET, Professeur de Clinique Chirurgicale à la Faculté de Médecine. *Affections Chirurgicales de la Poitrine.* (*The Surgery of the Chest.*) Par CHARLES SOULIGOUX, Chirurgien des Hôpitaux. Avec 48 figures. Paris: J. B. Baillière et Fils. 1911. Pp. 282. Price, paper, 6 francs; bound, 7.50 francs.

WITHIN the last few years the surgery of the chest has made great progress, and the space devoted to this subject in treatises on surgery is very much greater than it was even a decade ago. While progress has been made in many parts of thoracic surgery, it has been especially great in the surgery of the heart and of the mediastinum. In this volume we find these portions of the subject more fully dealt with. Most of the various incisions for operation on the heart are described. The author prefers the method of Delorme and Mignon. The surgery of the lung is adequately presented for a general treatise on surgery, and we are glad to see that the methods of Sauerbruch and others, which permit the pleuræ to be opened without interfering with the expansion of the lungs, are given; but the author does not express any very definite opinion on the relative value of these methods. This section is worthy to form part of the "Nouveau Traité de Chirurgie."

An Introduction to Therapeutic Inoculation. By D. W. CARMALT-JONES, M.A., M.D. Oxon., M.R.C.P. Lond., Assistant Physician and Director of the Department of Bacterio-Therapeutics, Westminster Hospital. London: Macmillan and Co. 1911. Pp. 171. Price 3*s.* 6*d.* net.

THERAPEUTIC inoculation, or vaccine-therapy, has already become established as an important means of treating many infections, and is certainly one of the most striking practical results of the study of bacteriology. Although comparatively simple in practice, it is based upon the highly complex phenomena of immunity, and its rational application demands at least a general knowledge of the mechanisms of infection and of the protective reactions of the body in response to bacterial invasion. It should be clearly recognised that the method is still in the experimental stage and that the empirical or haphazard use of vaccines is liable to lead to disappointment and to bring discredit upon a useful method of treatment. Vaccine-therapy should, as a rule, be employed only in cases in which a definite bacteriological diagnosis has been established.

Dr. Carmalt-Jones, in the book before us, has supplied a useful and practical exposition of the principles upon which therapeutic inoculation is founded, together with a review of the methods of inoculation and their results. The book is divided into two parts, of which the first deals with principles. The process of spontaneous recovery from bacterial infections is discussed, and the nature of the various antibodies is explained in simple terms. The artificial stimulation of the natural powers of recovery by means of vaccines is then described and illustrated by examples and by charts. The importance of bacteriological diagnosis is insisted upon, and the methods in use for this purpose are considered, as well as the preparation of vaccines, their sterilisation and standardisation. The difficult question of dosage is dealt with. The general nature of the results obtained and the possible causes of failure are next reviewed. The first part concludes with a brief account of

the history of therapeutic inoculation and a critical discussion of the opsonic index and its value.

The second part deals with the practice of therapeutic inoculation. Various hints are given in regard to the method of administering vaccines, and an analysis is presented of the results of treatment by this method in a variety of different conditions. The cases reviewed have either been seen by Dr. Carmalt-Jones personally or have been treated under conditions with which he is familiar, or are cases about which he has been able to obtain first-hand information. In connexion with each group of cases the minimum and maximum doses are given, and the duration of treatment and the question of relapse are also considered. Dr. Carmalt-Jones states the results dispassionately, and makes no exaggerated claims in regard to the efficacy of this form of treatment. The doses given are in many cases smaller than are used by some vaccine-therapists, and the treatment has been prolonged in not a few of the cases included in the analysis.

Dr. Carmalt-Jones's book deals in a simple, practical, and intelligent fashion with a difficult subject, and in virtue of its convenient size and freedom from technicalities it should serve a useful purpose by enabling the practitioner to apply vaccine treatment upon sound and rational lines.

A Pocket Atlas and Text-book of the Fundus Oculi, with Note and Drawing Book. Text by G. LINDSAY JOHNSON, M.A., M.D. Cantab., F.R.C.S. Eng., with Drawings from Life by ARTHUR W. HEAD, F.Z.S. With 54 figures. London: Adlard and Son. 1911. Pp. 205. Price 10*s.* 6*d.* net.

THIS book is well worth buying for the 27 excellent plates which it contains, the selection of subjects being very good. The actual drawings have been made by one of the foremost ophthalmoscopic artists of the day, and have been reproduced by the three-colour process under the supervision of Dr. G. Lindsay Johnson, who is well known as a highly expert photographer. We think that the student would hardly suffer serious loss if the atlas were enlarged at the expense of the letter-press. The latter has two faults—it is too scanty to replace efficiently the ordinary text-book, and it contains many views and suggestions personal to Dr. Lindsay Johnson and not yet generally accepted, which, though they are of considerable interest to the mature ophthalmologist, are wholly unsuitable for the student. The ophthalmic note and drawing book, which forms a detachable appendix, adds to the unwieldiness of the volume as a "pocket" atlas. Students may be urged to draw what they see, but those who have sufficient artistic skill are few.

Twice the number of plates, all equally well reproduced, shorn of the letter-press and drawing-book, would form an invaluable atlas, quite portable as a pocket companion; it might become an indispensable accessory to the text-book of ophthalmology.

The Emergencies of General Practice. By PERCY SARGENT, M.B., B.C. Cantab., F.R.C.S. Eng., Surgeon to Out-patients, St. Thomas's Hospital; Surgeon to the National Hospital for the Paralysed and Epileptic, Queen-square; and ALFRED E. RUSSELL, M.D., B.S. Lond., F.R.C.P. Lond., Physician to Out-patients, St. Thomas's Hospital. Second edition. London: Henry Frowde and Hodder and Stoughton. 1911. Pp. 454. Price 15*s.* net.

THE general practitioner frequently encounters emergencies. In large towns he can easily call in assistance, perhaps of the sort specially equipped to help him, but in the country, and especially in the more remote parts, he is often compelled to act without the benefit of the advice or assistance of anyone more experienced than himself. For men in these circumstances this book has been written, though it will also prove useful to many dwelling in towns who for great emergencies have to depend on themselves. There will very naturally be a difference of opinion as to the subjects which should be included in a work like this, and the only criticism we would offer on this point is that it was hardly advisable to include a description of wiring the patella. The risks attending opening the joint by those not specially practised in such operations are vastly greater than the benefit to be derived from an immediate suture. In this edition the authors have made many alterations, and some chapters have been re-written. A chapter on the emergencies of insanity, written by Dr. Percy Smith, has been added. This is often a very difficult subject for those in general practice, and the addition of this chapter is of special value. This second edition should achieve the marked success of its predecessor.

Handbuch der Vergleichenden Physiologie. Herausgegeben von HANS WINTERSTEIN. 15 Lieferung. Band I.: Physiologie der Körpersäfte. Bogen 1–10. Jena: Gustav Fischer. 1911. Pp. 160. Price M.5.

THE name of Bottazzi of Naples is already well known in relation to chemical physiology, and his selection as the author of the monograph "On Cytoplasm and the Juices of the Body" is a guarantee of the careful execution of the work. A very full account is given of the distribution of water and of the part it plays in vertebrate, invertebrate, and in vegetal forms of life, and the theme of no life without water is the problem discussed through many pages. There is a large number of tables, and the distribution of the chemical elements present in the body is similarly treated. The chemical composition of the constituents of cells is discussed, and while doing so the constitution, distribution, and uses of proteins, fats, and carbohydrates are set forth, particular attention being given to lipoids and their biological importance. Next the physico-chemical properties of cytoplasm are dealt with, and full consideration is given to the colloidal constitution of protoplasm. The nomenclature of Graham—sol and gel and their derivates—is introduced, while an elaborate account is given of such subjects as solutions, suspensions, emulsions, adsorption, electrolytes, imbibition, precipitation and coagulation of proteins, osmotic pressure, viscosity, and artificial and normal colloidal solutions. The study of colloids naturally leads on to the "ultra-microscope," its use, and how it has extended our knowledge of the visible constitution of so-called liquids. This "Heft," or part, breaks off at the beginning of a chapter on Definition of Colloidal Systems. Briefly, protoplasm is considered fully in its chemical and physical aspects, but the details are so numerous and technical that we can but mention the chief subjects discussed and commend Dr. Bottazzi's effort to all biologists, using that term in its widest sense.

LIBRARY TABLE.

The Life-history, Function, and Inflammation of the Appendix. An Address delivered to the Clinical Society of Manchester, January, 1911. By EDRED M. CORNER, M.A., M.C. Cantab, F.R.C.S. Eng., Surgeon to the Surgical Isolation Wards and Out-patients, St. Thomas's Hospital; Surgeon to In-patients, Children's Hospital, Great Ormond-street, &c. London: John Bale, Sons, and Danielsson, Limited. 1911. Pp. 23. Price 1*s.*—Mr. Corner gives reasons for the large number of micro-organisms in the cæcal region, and he expresses the opinion that the appendix is a storehouse of lymphoid tissue placed where it is in order to combat the micro-organisms of the cæcum. Several very striking histories are related to show that it is not at all rare to find cases of appendicitis in which no clinical evidence of any disease has been

present, and yet at the operation the presence of old inflammation and old adhesions has shown that many previous attacks of appendicitis must have occurred. Mr. Corner holds that carcinoma of the appendix is not at all rare, and that it is being found with increasing frequency when the diagnosis is made, not by the naked eye, but by the microscope. The book gives a very readable account of some of the aspects of appendicitis.

Technique de Stérilisation. Par le Dr. ERN. GÉRARD, Professeur de Pharmacie et de Pharmacologie à la Faculté de Médecine et de Pharmacie de Lille. Deuxième édition, augmentée avec 72 figures dans le texte. Paris: Vigot Frères. 1911. Pp. 352. Price 6 francs.—During the four years which have elapsed since the first issue of this book the methods of sterilisation as employed in medicine and pharmacy have increased in number, and this second edition therefore contains much more than its predecessor. The methods of sterilising instruments and dressings, the sterilisation of water, of pharmaceutical preparations, and of ligatures are described, and the methods of testing the results are also given. The sterilisation of milk has a long chapter to itself, and the disinfection of contaminated rooms is also described. Lastly, the author gives an account of the sterilisation of drinking water by means of the ultra-violet rays. The book is convenient and complete.

The Educational Treatment of Stammering Children. By T. J. T. MCHATTIE, M.D. Edin. Issued by the Medical Officers of Schools Association. London: J. and A. Churchill. 1911. Pp. 18. Price 1*s.* net.—The author considers that the cause of stammering lies in a generalised weakness in the nerve mechanism of speech, not attended in most cases by any gross physical defect. He would combat the condition in two ways: by indirectly affecting the higher centres through the muscles of respiration and speech, and by suggestive therapeutics. By the latter he does not mean hypnotism, but the getting the patient to realise that his speech organs are in perfect condition, and that there is no reason why he should not talk like other people. Enlarged tonsils and adenoids are often present, and should be removed. A report follows of the discussion on this paper when read at the association's meeting. Dr. Hulbert advocated taking the various component parts of the mechanism of speech separately, teaching them individually, and then coördinating them. Mr. Cortlandt Macmahon would, before everything else, make the patient practise "whole lung breathing," particular attention being paid to inferior lateral costal breathing; then the various vowel and consonant sounds should be taught separately and in combination. Dr. C. E. Shelly, who presided, referred to the greater incidence of stammering in boys than in girls, and suggested that in the early ages, when men were engaged in hunting, speaking was for them a disadvantage, while women at home had little else to do. He considered speech traits in the female were more stable and less easily perturbed.

An Oberland Chalet. By EDITH ELINER WOOD. London: T. Werner Laurie. 1911. Pp. 285. Price 16*s.* net.—There are some people who can attune themselves to the emotional conditions of others in whose company they are or whose words they are reading. They can thus get much enjoyment out of life, as it were, by proxy. Any such who have the *Wanderlust* will probably enjoy this record of a summer spent in Switzerland by two American ladies and the children of one of them, with later her brother and a college class-mate from Cornell. The book is breezily written, not without humour, and with glimpses of a sane philosophy. "After all, the simple life is not hard to live if you get the right setting for it," explains much that is puzzling in life; for incongruity, an appreciation of which, when others are its victims, is a great source of humour, often becomes a weariness when it affects ourselves. Save for two little trips over Latin expressions, which are as inaccurate as their introduction was unnecessary, we have enjoyed an agreeable Swiss excursion with a clever and sensible woman. There are 12 admirable pictures.

Reports and Analytical Records FROM THE LANCET LABORATORY.

MERGENTHEIM TABLETS.

(A. SIEBERT AND CO., 6, FANN-STREET, ALDERSGATE, LONDON, E.C.)

THESE tablets are convenient for use, presenting the therapeutic properties of the Karl spring at Bad Mergentheim, South Germany. Some evidence that the salts are derived from the spring itself and are not artificial is seen in the fact that, according to our analysis, the important salts present occur in the same ratio in the tablet as is in the natural water. We found that one tablet weighing just 2 grammes contained 0·219 gramme magnesium sulphate, 0·322 gramme sodium sulphate, and 1·26 grammes sodium chloride. The sodium chloride present serves to render the bitterness of the sulphates less marked.

(1) HEGONON; (2) ARTHIGON; (3) ATOPHAN; AND (4) HORMONAL.

(A. AND M. ZIMMERMANN, 3, LLOYD'S-AVENUE, LONDON, E.C.)

1. Hegonon is an elegant organic silver compound prepared by the action of ammonia silver nitrate solution on albumose. It is reported to have a remarkably favourable action in the treatment of urinary diseases, and particularly in gonorrhœa. Hegonon is easily soluble in water and shows an alkaline reaction. The solution does not coagulate albumin and is stable with salt solution. The amount of silver in this albuminous metallic compound is 7 per cent. 2. Arthigon is a gonococcus vaccine representing an aqueous emulsion of dead gonococci. It is regarded as an active immuniser on the gonorrhœic process. It is reported to have given excellent results in German clinical practice. 3. Atophan is said to facilitate the elimination of uric acid from the organism. It is a chemical compound containing two parts of phenylchinolin and four of carbolic acid. 4. The preparation of hormonal is based upon the view that normal intestinal peristalsis is caused by a specific cell product which appears to be chiefly stored in the spleen. To this cell product the name hormonal has been given. It is injected in equal quantities in the right and left gluteal muscles. In a few seconds a strong peristaltic wave is produced resulting in evacuation. A single injection is said to have a lasting effect.

KACEPE BALSAM.

(REITMEYER AND CO., 63, CRUTCHED FRIARS, LONDON, E.C.)

This balsam appears to be an advance on better-known preparations which have generally as their active constituent oil of winter-green. The active principle is the menthol ester of acetyl salicylic acid, in combination with the same salicylic group and ethyl ester, and lanoline ointment is used as a basis. It has been employed to relieve pain in rheumatism, gout, and sciatica.

(1) MALT EXTRACT; AND (2) MALT EXTRACT WITH COD-LIVER OIL.

(JAMES CALDER AND CO., LTD., BO'NESS DISTILLERY, BO'NESS, N.B.)

1. The malt extract showed an excellent degree of concentration, the total malt extractives amounting to 83·33 per cent. Its digestive power on starch according to our experiments is marked, the extract converting double its weight of starch in an hour at body temperature. At higher temperatures the digestivity increased considerably. The mineral matter amounted to 1·29 per cent. and contained a normal amount of phosphates. The flavour was excellent, showing that care is taken in concentrating the extract. 2. The malt extract

and cod-liver oil proved to be a uniform preparation, yielding 12 per cent. of oil on treatment with ether. The protein amounted to 4·40 per cent. and the mineral matter to 1·12 per cent. It showed the same degree of concentration as the plain extract and a similar digestive activity. We could trace no malt substitutes.

EXTRA STOUT.

(WHITBREAD AND CO., BRITANNIA-STREET, KING'S CROSS, LONDON, W.C.)

We had occasion some years ago to comment upon this stout as an example of a malt liquor which had not been artificially carbonated. We are of opinion that artificially carbonated beer is not so satisfactory dietetically as beer containing the natural gas from fermentation. We have re-examined this stout and the results show that its quality is maintained. It possesses the same alcoholic strength, exactly the same amount of proteins, the same amount of phosphates, but a slightly diminished amount of malt extractives. It is in sound ripe condition and free from excess of acidity and possesses a mild soft flavour.

MEDICINE AND THE LAW.

New Regulations affecting the Sale of Some Poisons.

IN THE LANCET of Oct. 7th, p. 1034, reference was made to the inquest upon a young man who had apparently committed suicide by drinking hydrochloric acid. It may have been noticed that in some of the accounts of the inquest given in the newspapers a witness was reported to have said that a new Act of Paliament, coming into force on Oct. 1st, would put a stop to poisons of the character indicated being freely sold by oilmen. In the evidence referred to the allusion was probably not to an Act of Parliament, but to regulations of the Privy Council recently made which came into force at the beginning of the present month and were briefly referred to on p. 1049 of the same issue of THE LANCET. These regulations are such as can be made at any time by the Privy Council under the fifth section of the Poisons and Pharmacy Act of 1908, which, among other things, forbids the sale by retail of any substance to which the section applies, unless the "box, bottle, vessel, wrapper, or cover in which the substance is contained is distinctly labelled with the name of the substance and the word 'poisonous' and with the name and address of the seller of the substance, and unless such other regulations as may be prescribed under this section by Order in Council are complied with." Two new regulations now affect the sale of the poisonous substances referred to, the first of which, it will be observed, applies to any such substance, whether liquid or not, and the other to liquid substances only. Firstly, in the retail sale of "any substance" to which the section applies the label referred to in the section cited above is to bear the additional words, "not to be taken," which are to be "distinctly printed" thereon. Secondly, in selling retail any "liquid substance" to which the section applies, "such substance shall not be delivered or sent out except in bottles or containers rendered distinguishable by touch from ordinary bottles and containers." These provisions are not difficult to comply with, but care will have to be taken that they are observed strictly. We do not go so far as to say that if the word "poison"—more usually used than "poisonous" in such a connexion—be printed upon the label a serious offence is committed against the section, but at the same time a fine not exceeding £5 may be imposed for any infraction, and according to the section "poisonous" is the word which ought to be used and not "poison." The word "printed" is not employed in the section with regard to the label, perhaps because many vendors find it convenient to keep labels bearing the words "poisonous" and their name and address printed on them, and are in the habit of adding in writing the name of the substance sold. We do not say that this is desirable, but only point out that the section says the substance must be "distinctly labelled," whereas under the regulation the words "not to be taken" must be "printed." In the second regulation "rendered distinguishable by touch" is not very explicit, but at all events the use of the fluted bottle long associated with the sale of poisons by druggists is an obvious compliance with the rule, and an ordinary "container" of any kind such as is commonly used for holding non-poisonous liquids will be illegal. Another Order in Council under the same section will come into force on Feb. 1st of next year enlarging the scope of the section by adding to the substances to which it applies "liquid preparations containing more than 5 per cent. by weight of free ammonia." The section originally affected the sale of sulphuric acid, nitric acid, hydrochloric acid, and soluble salts of oxalic acid, provision being made for addition to the list by Order in Council. The regulations described above seem to render accidents with poisonous substances less likely to occur, but the use of them by persons determined to commit suicide is not affected.

The Carrying of Pistols.

The necessity for stringent legislation against the easy purchase and promiscuous carrying of pistols is emphasised by the following cases, all reported in a single copy of a weekly newspaper published on Oct. 14th: 1. The murder of a stationmaster at Lintz Green, a village near Newcastle, apparently shot with a pistol by a man whose motive was robbery. 2. The suicide of a foreign woman who shot herself with a revolver in a hotel, a verdict of suicide being returned by a jury in the Westminster coroner's court. 3. The wounding of a constable in Oxford-street by a man who had attempted to rob a shop, the window of which he had broken with a brick. The person who fired the shot escaped, but a man arrested on another day and charged with the offence was remanded at the police court after evidence had been given that when arrested he had upon him a magazine pistol loaded, a spare magazine also loaded, and 28 loose cartridges. 4. A man summoned and fined £4, with 4*s*. costs, for being found in possession of loaded firearms and also for discharging a revolver. He appears to have made some threat about shooting when hiring a taxi-cab, and after arriving at his destination to have entered a house and discharged his weapon from an upper window. Before being sentenced he was remanded for a week in order that he might be medically examined, but eventually evidence was given to the effect that he was sane, and the penalty mentioned was imposed. A case in which serious allegations of assault and intimidation are made against a number of men is not included in this list, but is one which, whatever its issue may be, is instructive as to the familiarity of youths of the rougher classes with dangerous weapons. Law-abiding citizens and the police are alike entitled to better protection than they now have.

Death from Drinking Carbolic Acid.

The accidental drinking of carbolic acid is a not infrequent cause of death or injury, but the facts shown at the inquest upon a young stockbroker, Mr. Hubert A. R. Burrough, at Barking recently were of an unusual description. He appears to have gone on board a French vessel, the *Bougainville*, lying in the Thames, with four other persons not connected with the ship and to have inspected her, after which all were invited by the captain into his cabin, and glasses were brought. The captain finding that a bottle containing port which had already been opened had not sufficient wine in it, went to his sleeping cabin and took what he believed to be a fresh bottle from a cupboard. It has been a regulation on board French ships that carbolic acid should be carried for purposes of disinfection, and that it should be in bottles having a red label with a statement of the contents of the bottle and of their dangerous character. According to his evidence the captain took from the cupboard a bottle of the shape of a port bottle and having a black seal, and from it filled the glasses. All present simultaneously raised their glasses in response to a toast, and had swallowed enough to render five of them seriously ill and to cause the death of Mr. Burrough before they discovered that instead of wine they were drinking carbolic acid. That its characteristic odour was not detected by any of them before drinking was partly accounted for by the statement that the vessel was laden with chemical manure, and no doubt the fact of a toast being proposed and an effort made to drink simultaneously contributed. At the same time it is remarkable that accidents should so often occur through the drinking of liquids containing carbolic acid, ammonia, and other drugs the odour of which might be expected to compel the consumer's attention. At the inquest on Mr. Burrough it was stated that another form of disinfectant has recently been substituted for carbolic acid on board French vessels. The verdict of the coroner's jury was one of accidental death.

THE LANCET.

LONDON: SATURDAY, OCTOBER 21, 1911.

The One-Portal System.

IT is an open secret that evidence has been given recently before the Royal Commission sitting to inquire into the affairs of the University of London, the effect of which has been to bring to the notice of the Commissioners the advantages which might be reaped by the University if some scheme of fusion between that body and the Royal College of Physicians of London and the Royal College of Surgeons of England with regard to their respective medical curricula could be brought about. It is obvious that in London (and for the moment we are considering London only) the same representatives of medicine, surgery, and midwifery, and other subjects teach and examine at the University and the Royal Colleges, while the organisation of medical education in London is largely—and admirably, it should be added—controlled by the same individuals. Yet there are separate boards of examiners appointed by the University and the Royal Colleges in all branches of study, as well as separate examinations. This obviously expensive position, leading alike to an unnecessary multiplicity of examinations for the hardly-pressed students, as well as to a great waste of time for all concerned, has been seriously considered by both the English Royal Colleges, while the Chancellor of the University of London has been for the past two years in possession of the views of the governing bodies of the Colleges. These views, as readers of THE LANCET know, indicate the desirability of a certain coöperation between the Colleges and the University, if a joint scheme can be arrived at under which neither the prestige of the University would be endangered nor the corporate privileges of the Colleges sacrificed. Whether anything will definitely result from such communications as have yet passed between the Colleges and the University is doubtful, but what is not in doubt at all is that the liberal attitude of the Colleges makes that favourite conception of all medical reformers, the one-portal system, a genuine possibility again.

There was a time not long ago when we were forced to class the one-portal system as a dream, having regard to the imminent creation of new universities and the probable opposition of the Royal Colleges. But circumstances have combined to cause many of those who have the best interests of medicine at heart to estimate the one-portal system as the solution of the more difficult of the problems that now vex sorely medical education; and those who see in the one-portal system merely a desire for something new, a wild attempt to attain an unnecessary form of symmetry in affairs essentially unsymmetrical, are exactly the opponents of the one-portal system who should recognise the force of precedent. For their sakes we point out that a little over 30 years ago the one-portal system of medical education was nearly established after years of negotiation by representative officials appointed by the English universities and medical corporations. In 1878, when these negotiations were practically complete, the following distinguished men were representing the contracting bodies: Sir HENRY ACLAND and Sir GEORGE ROLLESTON, the University of Oxford; Sir GEORGE PAGET and Sir GEORGE HUMPHRY, the University of Cambridge; Dr. G. H. PHILIPSON (the present Sir GEORGE PHILIPSON) and Dr. GEORGE Y. HEATH, the University of Durham; Sir RICHARD QUAIN and Dr. W. B. CARPENTER, the University of London; Sir J. RISDON BENNETT and Sir HENRY PITMAN, the Royal College of Physicians of London; Sir JAMES PAGET and Mr. JOHN MARSHALL, the Royal College of Surgeons of England; and Mr. EDWARD BRADFORD and Dr. GEORGE CORFE, the Society of Apothecaries of London. The scheme went through many vicissitudes, partly due to difficulties connected with the charters of various bodies and partly due to jealousies arising through the proposed appointments of representatives on the governing body and on the Board of Examiners. At last, however, all was settled harmoniously and the General Medical Council agreed to recognise a conjoint scheme which as far as England went would have been a one-portal system. Alas, by the withdrawal of one of the bodies, this prospect was ruined. How much simpler and better would the method of qualification be now but for the withdrawal of that one body! For if the one-portal system had been established then there is little doubt that the creation of new universities would have only added to its strength. And this scheme, moreover, was not for England only, although it is true that in England alone were the details complete. In Scotland and in Ireland systems were in the course of creation on identical principles. The scheme was this. The universities, of which there were then but four, were to appoint representatives on a body called the Committee of Reference formed by the Royal Colleges of Physicians and Surgeons and by the Society of Apothecaries. These three bodies were to conduct a one-portal examination with the sympathy and advisory influence of the universities, and the universities agreed not to grant their degrees in Medicine and Surgery to anyone who had not passed this one-portal examination. At the same time the universities reserved to themselves the right to exact such further conditions for their degrees as they thought fit, and the corporations reserved the same right in regard to their diplomas. The degrees of the universities were therefore to be not qualifications to practise, but academic distinctions—clearly what they ought to be.

We bring the consideration of the one-portal system before our readers, then, as a policy which after all may be the practical one. No one denies that the multiplicity of educational bodies able to give students the right to practise medicine is an undesirable thing; it leads to complications in professional life as well as to a plethora of examinations and a mass of useless labour and routine, while it entails upon the General Medical Council very delicate work in standardisation. The General Medical Council has statutory power to recognise any combination of bodies for conducting a qualifying examination in medicine, surgery, and

midwifery. A former scheme for a one-portal system has so nearly succeeded that careful followers of precedent need not feel that in supporting a movement towards a general combination they are doing anything dangerously experimental. The Universities of Oxford and Cambridge may be trusted to uphold the principle that their medical degrees are academic acquirements and not licences to practise. Our belief is that if the University of London and the English Colleges can arrive at a basis of agreement, the one-portal system with its many advantages might be found by all the other qualifying bodies to be the remedy for admitted difficulties in medical education.

The Harveian Oration.

IN delivering the Harveian oration for this year before the Royal College of Physicians of London Dr. C. THEODORE WILLIAMS chose as his subject one that fully carries out HARVEY'S injunctions to exhort "all Fellows and Members of the said College to search and study out the secrets of Nature by way of experiment." There is probably no one condition that has been more carefully studied in all its aspects than pulmonary tuberculosis—its etiology, pathology, and treatment, both curative and prophylactic, have received attention from physicians and scientists for generations. In a masterly and scholarly manner Dr. WILLIAMS considers the progress of knowledge in regard to pulmonary tuberculosis since the time of HARVEY, dwelling more particularly on treatment. If we take a general survey of the therapeutics of the disease since that time, we can conveniently review the principal measures which have been introduced in three periods, the first being reckoned from the earliest date until 1882, when KOCH'S classical experiments determined the causation of the disease by the tubercle bacillus; the second period extending from then until 1890, when tuberculin was introduced; and the third from that time to the present.

Before the discovery of the tubercle bacillus the treatment was necessarily empirical in character, the true etiology of the disease not having been determined. Nevertheless, occasionally there was an interesting rehearsal of future methods. Noteworthy is an "Essay on the Treatment and Cure of Pulmonary Consumption," by GEORGE BODINGTON of Sutton Coldfield, published in 1840. In THE LANCET of July 11th, 1840, we published a review on the work in which we remarked: "The modest and rational preface with which the author introduces his pamphlet on pulmonary consumption has so far influenced us that we shall merely give an outline of his principles without expending any portion of our critical wrath on his very crude ideas and unsupported assertions ..... The measures, then, which Mr. BODINGTON assures us have been 'uniformly and completely successful in the treatment of several cases of tuberculous consumption' are detailed in the following passages. ..... More agreeable or seductive medicaments could not certainly be found in any pharmacopœia: fresh morning air to make the patient breathe; good wine to bring down his pulse, a good dinner to make him fat, and an opium pill to make him sleep." This was truly prophetical of the future "sanatorium treatment" combined with measures likely to prevent auto-inoculations. Dr. WILLIAMS also draws attention to the remarks of SYDENHAM, "the great physician of gout and fevers," who, after giving a rather striking sketch of an advanced case of pulmonary tuberculosis, describes a less acute case, and considers that the treatment "which would suffice would be to abstain from meat and wine for a few days and to take a balsam of sulphur and anise with sugar in the form of tablets and then a cough mixture of oil of sweet almonds, syrup of maidenhair, and syrup of violets, this to be taken off a stick of liquorice." SYDENHAM likewise forecasts the use of active exercise, for he says: "Of all the remedies for phthisis, long and continued journeys on horseback bear the bell. ..... Bark is no surer a cure for ague than riding for phthisis." Dr. WILLIAMS then dwells rather fully on the treatment of consumption at the time of LAENNEC, LOUIS, JAMES CLARK, and others, in order to show that the short duration of life in their cases was closely connected with the depressing measures—e.g., bleeding and emetics—then in vogue, and that the disease was not, as has been urged, of an utterly different type from that which now prevails when the duration of life is much greater. Dr. WILLIAMS also refers to the introduction of cod-liver oil, which, he asserts, has exercised a wonderful effect in the outlook of the disease. After the discovery of the tubercle bacillus efforts were made to kill the germ directly by means of bactericidal drugs taken by the mouth, inhaled, introduced directly into the air passages, and injected into the veins or subcutaneous tissues. Very many substances were employed, and although success has been claimed by some observers, in the hands of others satisfactory results were not obtained. Indirect measures were then adopted which were supposed to act by rendering the soil unsuitable for the growth of the bacillus, or, in other words, by "increasing the resistance of the patient"; this is a vague term which has received various explanations. Foremost amongst these measures was the open-air or sanatorium treatment. Dr. WILLIAMS gives a brief history of the movement, which was at first elaborated at German institutions. The various phases through which the sanatorium method has passed are well known. BREHMER and DETTWEILER were amongst the earliest pioneers, the latter in particular laying stress on the importance of rest. He established the "Liegehalle system." WALTHER of Nordrach took an opposite view and enjoined outdoor walks, whilst M. S. PATERSON, medical superintendent of the Brompton Hospital Sanatorium at Frimley, has evolved a system of graduated labour which has been attended by encouraging results. Dr. WILLIAMS also comments on the favourable effect of mountain climate in suitable cases. The introduction of tuberculin by KOCH once again raised hopes that a specific remedy against tuberculosis had been found. The earlier results, however, were disappointing, but within recent years numerous modifications of the original substance have been made and tried, and at the present time in one form or another tuberculin is being extensively employed. The modern view of treatment by this method

differs considerably from that formulated by KOCH. As originally used, tuberculin occasionally produced a stormy reaction, giving rise to dangerous destruction of tuberculous tissue and even setting free tubercle bacilli. It is now found, however, that an immunising response can be obtained without causing a reaction, namely, by using very minute doses, which produce the desired effects—toxic immunity and local hyperæmia. The exact technique employed by different physicians varies, as also does the composition of the remedy. Dr. WILLIAMS urges further investigation, but expresses the opinion that such observation should be carried out in a hospital or sanatorium rather than at a tuberculin dispensary. He also refers to the theory of auto-inoculation which has been advanced by A. C. INMAN and M. S. PATERSON to account for the benefit produced in those patients undergoing treatment by graduated labour.

In conclusion, Dr. WILLIAMS discusses the prophylactic measures which have been adopted in the crusade against tuberculosis. That the decrease in the incidence of the disease has been in large measure due to improved drainage, more cubic space, and less overcrowding there can be no doubt. The problem of the housing of the working-classes is one of the chief elements in the prevention of tuberculosis. The education of the masses in the principles of cleanliness and ventilation is essential, for if the population as a whole is aware that these principles are necessary for the prevention of the disease a powerful factor for good will have been established. In order to combat tuberculosis two principal achievements are required: the first, to establish immunity against the disease (this must be done by collaboration of the physician and the worker in the laboratory); the second to improve sanitary conditions, not only in large cities but also in villages. The remarks of Dr. WILLIAMS in this year's Harveian Oration will be an incentive to further labours on the part of all those who are genuinely anxious to assist in the conquest of what is still one of the most fatal of maladies.

The National Insurance Bill.

OUR admirable contemporary, the *St. Bartholomew's Hospital Journal*, publishes this month three articles and a prefatory editorial note, which together amount to a symposium on the National Insurance Bill. Dr. CHRISTOPHER ADDISON, who speaks with the fullest knowledge of the Chancellor's intentions as well as of his actions, contributes an article in support of the Bill, and incidentally explains his own attitude towards the vexed question of the income limit. Mr. T. J. VERRALL, who has recently come forward as a candidate for the vacant post of Direct Representative for England on the General Medical Council, and who may be taken as speaking for the leaders of the British Medical Association, writes of the present state of the Bill in terms of qualified approval. Mr. VERRALL makes the very good point that Mr. LLOYD GEORGE and the public must be told that the profession "not having sought this modification of its mode of practice is even less disposed to bind on itself fetters of inadequate pay." Lastly, there is a breezy unsigned article entitled, "The £2 per week Income Limit," which claims to speak from inside knowledge. This sharply criticises the alleged action of a committee meeting of the Representatives at Birmingham under the chairmanship of Mr. VERRALL, and accuses the British Medical Association of giving way on the essential point of the demand for an income limit. The anonymous writer, indeed, suggests that the withdrawal of Sir PHILIP MAGNUS'S amendment and the passing of Dr. ADDISON'S amendment would never have happened unless the Chancellor of the Exchequer had been given to understand that the medical profession had "climbed down" on the question of the income limit. The circumstances narrated for the first time in the third article and the inferences drawn from them would certainly not pass unchallenged if the article were supported by a signature. According to the editor of the *St. Bartholomew's Hospital Journal*, the writer suggests that "the bulk of the profession has been kept ignorant of a want of firmness on the essential of an income limit in the Bill." We believe, however, that according to Mr. LLOYD GEORGE there was never any intention on his part to agree to an income limit.

These three articles seem to us to reveal only more clearly the position of deadlock which we have indicated in our recent surveys of the progress of the National Insurance scheme. On the one hand, the British Medical Association has stated more than once, and now most explicitly,[1] that it will not modify in any way the policy which has been formulated by it and approved by the profession. This is the more necessary because one of the original and most vital of the six cardinal points of the Association's policy has already been set aside by the vote of the House of Commons: we refer, of course, to the demand for a £2 per week wage limit for all insured persons. On the other hand, evidence is daily accumulating that the leaders of the Friendly Societies have no intention of relaxing their demands for the control of the administration of medical benefits. Thus, at the annual meeting of the National Conference of Friendly Societies, which was held last week at Edinburgh, the delegates, "representing over 4,000,000 benefit members of Friendly Societies in the United Kingdom," passed resolutions to this effect, and further resolved that in the event of Parliament not conceding their minimum demands they would recommend the whole of the societies throughout the country strenuously to oppose the passing of the Bill. It seems clear, therefore, that the Chancellor is faced by two ultimatums. Without the support of the medical profession he cannot work his scheme. He has not yet won this support by granting all their demands. Nevertheless, what he has already done to reconcile the medical profession has raised a storm of angry protest among the members of the Friendly Societies, which grows fiercer and more menacing as the Autumn Session approaches. Whatever may be the political results of their insistence, the medical profession at least will not give way.

[1] Brit. Med. Jour. Supplement, Oct. 14th, 1911, p. 394.

Annotations.

"Ne quid nimis."

THE BRUSSELS SURGICAL CONGRESS.

THE Third Triennial Congress of the International Society of Surgery, which was held at Brussels from Sept. 26th to 30th, proved to be quite as successful as those which had preceded it and fully maintained the high standard reached by previous sessions. Indeed, in one respect at least it was more satisfactory. At the second Congress the wide range of subjects chosen for discussion and the large number of speakers rendered the completion of the programme somewhat difficult. On this occasion, however, the arrangements obviated any such difficulties and provided ample time for the due consideration of the various papers and reports. The formal opening of the Congress was performed on Sept. 26th by M. Berryer, the Belgian Minister of the Interior, and the scientific proceedings were inaugurated by a presidential address from Professor Lucas-Championnière. The President referred briefly to the great advances made by surgery during the past century and the opening years of the twentieth century, and indicated the marked changes that have come about even in the short space of time which has elapsed since the last Congress. The President paid a particularly warm tribute of affection and admiration to Lord Lister. A large number of valuable papers on surgical and allied subjects were read during the sessions of the Congress, and they were followed in many cases by interesting discussions. The reports on the treatment of chronic colitis were entrusted to Professor Paul Segond of Paris, to Professor C. L. Gibson of New York, and to Mr. D'Arcy Power, the British representative on the International Committee. We hope to publish in an early issue an account of this and other features of the Congress. British visitors to the Congress were especially struck by the generous hospitality which was freely offered by the inhabitants of Brussels to the members, and they cannot speak too highly of the warmth of their welcome and the excellence of the entertainments provided for them by their hosts. Professor A. Depage, who has up till now filled the onerous post of secretary, and to whom the success of the society is so largely due, was chosen as President of the next Congress. This is to be held in New York in 1914, when the subjects for discussion will be (1) Surgery of the Duodenum; (2) Plastic Surgery; and (3) the Technique of Amputations. Only one note of regret is to be sounded with regard to the Congress of 1911, and that is that there was not a much larger attendance in the British section. Seventeen members attended the meeting in 1908; 24 in 1911.

MEDICAL EQUIPMENT FOR MERCHANT SHIPS.

THE committee appointed by the Board of Trade, at the request of the General Shipowners' Society of London, to consider medical scales for merchant ships has gone carefully into the whole question, and has recommended four revised scales for adoption in place of those now in force. For ships which will have a medical officer on board, including emigrant ships, two separate scales are drawn up—one for those in the North Atlantic trade, where voyages are short and numbers of passengers and crew are large, the other for those ships which with smaller passenger lists go longer voyages abroad. For each of these classes the necessary instruments are detailed, including a steriliser large enough to take a pair of long midwifery forceps. It has not been thought necessary to recommend a microscope and bacteriological outfit such as are required in the larger steamers of some foreign Powers, but the equipment of instruments and appliances for clinical work has been modernised, and it is recommended that an endeavour be made to secure the appointment of a second medical officer to ships with a crew and passenger list of 1500. It is further noted that the professional care of these large numbers would be facilitated if a qualified dispenser also were employed. The other two scales are intended for merchant ships which do not carry a medical officer and for fishing boats. One scale applies to all merchant ships whose voyages ordinarily last more than five days, the quantities of the medicines they are to carry being based on the number of men in their crews. The other, named an emergency scale, for vessels never more than five days away from harbour, applies to all other sea-going ships; but coasting craft whose voyages last no more than 24 hours may either conform to the emergency scale or carry the ambulance hamper of the St. John Ambulance Association or something similar. Anti-diphtheritic serum, sealed and dated, is to be carried by all emigrant ships, and a germ-proof filter by all that go to sea for more than five days. An improved carron oil, antisepticised by eucalyptus or other essential oil, might have been recommended, but the selection of drugs and preparations has been well made and marks an advance. Attention is drawn to the dangers which arise from the indiscriminate sale on board ships of patent medicines, sea-sickness specifics, and the like. But the most important recommendation of the committee, apart from the scales, is that which draws attention to the need for separate and reserved accommodation in cargo vessels for men of the crew who have fallen ill or been injured. We trust that the Board of Trade will adopt this recommendation, which would involve the provision, adjacent to the officers' cabins in the after part of every ship, of a spare cabin of about 250 cubic feet definitely allocated as a hospital and so marked, to be examined by the sanitary inspector on his periodical visits and reported in good order, and kept ready for its special uses and in no other way employed.

INFANT MORTALITY IN AMERICA: AN URGENT CALL FOR ACTION.

AN Association for the Study and Prevention of Infant Mortality has been founded in the United States, and at its first meeting at Baltimore an address was delivered by Mr. Edward B. Phelps setting forth the present appalling waste of infant life in that country, and suggesting the establishment of day nurseries as the best known means of reducing it. In the treatment of this subject, so far as it concerns the United States, the writer labours under the disadvantage that the vital statistics of that country are by no means complete; and this is particularly true respecting the returns of birth and of mortality. That this is the case Mr. Phelps is constrained to admit. Very early in his address he propounds the question, "What is, or has been, the infant mortality of the United States as a whole?" and he answers the question by saying that "Nobody knows, and there is no means of finding out." Mr. Phelps quotes the opinions of several European authorities, including Sir George Newman in this country, and Dr. Cressy Wilbur and Dr. L. Emmett Holt of New York, from whom he gathers the conclusion that the present sacrifice of infant life all the world over amounts to not less than 13 in every 100 live births. He further emphasises, what is familiar knowledge, that this can only be an average figure, as amongst the less favoured sections of every community infant mortality is certainly much higher than this. The excessive waste of infant life in the United States, as in this country, is mainly

the result of three obvious conditions—poverty, ignorance, and neglect, the evil effects of which by no means terminate with the first year of life. Says Mr. Phelps: "The same conditions which cause the death of 13 out of every 100 born ..... leave more or less stamp on perhaps two or three times as many more babies who somehow manage to crawl over the infant dead line, many of whom will be the fathers and mothers of the next generation. The problem of infant mortality, therefore, is far more than one as to means of decreasing the number of infant deaths. Its scope is worldwide, and on its partial solution, at least, depends the welfare of posterity. The 'call for action' on such a problem may fairly be termed urgent." We quite agree with Mr. Phelps.

PRURITUS ANI.

PRURITUS ani is so distressing a complaint and the treatment of it has hitherto proved so unsatisfactory and uncertain, that any new light thrown upon its nature should be welcomed. Dr. Dwight Murray, of Syracuse, N.Y., read a paper on the subject before the recent meeting of the American Proctologic Association at Los Angeles, which gives food for reflection and further observation. In the first place, he took occasion to separate true pruritus ani, a most intractable condition of uncertain causation, from other anal complaints provocative of itching, such as fissure, ulcer, diseased crypts, pediculosis, and so forth, which are more amenable to treatment directed to the cause. The skin about the anus in all cases of true pruritus, he says, is always thickened, radiating in folds, in most cases macerated and lacking pigmentation, parchment-like, and fissured. There is a general tendency to nightly periodicity, the itching recurring with considerable regularity, and no relief is obtained by scratching. During 1910 Dr. Murray had cultures made of all the cases, 19 in number, that presented these characteristics, and found streptococci present externally on the skin in every case. A similar investigation of five other cases of rectal disease showed a very few streptococci in one case only, the other four being entirely free from this micro-organism. A blood test in each of the pruritus cases further showed that the patient's resistance against streptococci was low, while it remained high for other micro-organisms. Starting from these premises, Dr. Murray and his associate, Dr. F. M. Meader, bacteriologist to the Syracuse Medical College, treated eight of these cases with an autogenous vaccine, with the result that itching ceased, reaction to the injection was restored, and streptococci ceased to be found in smear and swab, after a period of treatment varying from the first to the eighth injection. In one case a lowered resistance to bacillus coli was also found, and in this case vaccines of both organisms were used. In several cases a change in the character of the itching was noticed first. Dr. Murray's series of cases all occurred in males; he has only two records of true pruritus in women, and concludes that women are less frequently affected with it than men. It is possible, he thinks, that the infection often penetrates the skin, in which case relapse would be liable to recur until the germs are entirely eliminated. It has occurred to him also that possibly other parts of the body may become infected from this source, and that to it may be traced some instances of puerperal fever, erysipelas, and other streptococcic diseases. He concludes, therefore, that pruritus ani may have streptococcic infection as its primary cause or as a secondary cause after the passing away of some other primary cause; that the streptococcic-infection theory seems at any rate to have a practical value for the patient and medical man; that other organisms, especially bacillus coli, may complicate the infection; and that an autogenous vaccine made from a culture of the offending germ, with or without auxiliary palliative measures, offers the best hope of cure. He is confirmed in these opinions by later observations to be presently published. The matter is one that lends itself to investigation, and there should be no difficulty in obtaining a sufficient body of evidence from various sources to establish the truth or otherwise of his deductions and the efficacy of the treatment that he proposes for more extended trial by the medical profession.

THE USE OF BAER'S MEMBRANE FOR THE MOBILISATION OF ANKYLOSED JOINTS.

IN the *Boston Medical and Surgical Journal* of July 20th, Dr. R. B. Osgood has reported from the orthopædic department of the Massachusetts General Hospital three cases which show the possibility by means of Baer's membrane of preventing reunion in joints that have been mobilised after bony ankylosis of several years' duration. Baer's membrane is obtained from the bladder of the pig, sterilised, and chromicised, like catgut. It is supposed to remain in the body for 30 days before it is absorbed, but Dr. Osgood has seen it still unabsorbed and strong 11 weeks after insertion. In the first case the patient was a single woman aged 26 years. At the age of 8 years she suffered from polyarthritis after typhoid fever and at 10 from "rheumatic fever," which was followed by chronic arthritis of most of the joints. This had remained persistent ever since. Physical examination revealed nothing except chronic arthritis, which seemed to be quiescent. She could open her mouth only a quarter of an inch, and the movement seemed to be wholly in the left articulation. On Nov. 17th, 1909, Dr. E. G. Brackett tried to break down the adhesions under ether, but they did not yield to as much force as he thought safe to apply. On Nov. 21st he made an incision, 1½ in. long, forward from the right auditory meatus, and a second incision, ¾ in. long, downwards from the same point. The subcutaneous tissues were dissected back, exposing the lower margin of the zygoma and upper portion of the ramus. With a narrow osteotome the condyle was excised and the end of the ramus was rounded and shaped. Baer's membrane was wrapped around the ramus and retained by catgut sutures, and the wound was closed. Two days later the patient could separate her jaw half an inch more than before operation and there was no severe pain. The wound healed by first intention, and she was discharged on the twenty-fourth day able to separate the jaws over an inch. On Jan. 27th, 1910, she was readmitted. The motion had increased slightly, but recently a swelling had appeared in the region of the wound and broken. Since this time there had been a slight sero-purulent discharge which was greater at night. On slight pressure bloody, creamy pus exuded. On Feb. 10th the sinus was enlarged by a small incision, and the membrane, still tough and intact, was removed. She was discharged, and a letter, dated March 21st, was received, stating that the wound had healed and motion remained good. In the second case the patient was a youth, aged 19 years, whose knees were ankylosed at 25°. He suffered from poliomyelitis in childhood, and a surgeon performed double excision of the knee and removed the patellæ. The ankylosis followed. It seemed best to straighten and stiffen one knee, since all power was lost in both quadriceps in consequence of old poliomyelitis, and to mobilise the other. This would enable him to rise more easily from the sitting posture, the hamstrings still showing some power of contraction on the side in question. On Feb. 4th, 1909, Dr. Brackett straightened the left knee by removal of a wedge of bone. Firm union resulted. On Feb. 18th a U-shaped incision, with convexity downwards, was made over the right knee, and the flap turned up by dissection from the bone. With a blunt dissector a small

opening was made posteriorly between the vessels and the bone just above the line of the old excision. Through this opening was pushed the flexible blade of an ordinary carpenter's coping saw, teeth upward. The femur was sawn through from behind forward, making a convex lower end. About a centimetre of bone was removed from the tibia, leaving the end concave and loosely fitting the end of the femur. The ends of the femur and tibia were each covered with Baer's membrane, which was secured with silk sutures. The wound was closed and a posterior wire splint was applied. After two weeks the splint was removed and the mobility was found to be free and attended with little pain. Healing had taken place by first intention. A split plaster splint was applied from the toes to the groin. Gentle passive motion was performed daily. After a month a slight serous discharge began and continued for a month. Passive movement to 90° was possible and almost painless. After two months a calliper splint with a knee-cap was applied and weight-bearing was begun. Daily passive movement with massage was continued. At the end of three months there were full passive flexion to nearly 90° and marked lateral mobility. As there was no quadriceps there was no voluntary extension, but voluntary flexion was possible. The patient was given a steel brace jointed at the ankle and knee, with a drop catch at the latter, ensuring rigidity in walking and allowing flexion in sitting. With this he got about by the aid of two canes. A second operation—implantation of silk ligaments—was performed to produce greater stability of the well-established flail joint. The final result was that he could get about with a brace and one cane and rise easily from the sitting posture. In the third case a man, aged 23 years, had bony ankylosis of the elbow in a straight position, with total loss of pronation and supination, the result of a compound fracture in childhood. A similar operation to those described was performed. Complete extension, voluntary flexion to 120°, and a few degrees of pronation and supination were restored, so that the arm was useful. In all the cases a serous or slightly purulent discharge occurred from some portion of the wound in from three days to four weeks after the operation.

PHYSICAL TRAINING IN SECONDARY SCHOOLS.

THE Welsh Department of the Board of Education has recently issued a circular on physical training in secondary schools for the information and guidance of school authorities in Wales.[1] The Board wisely recognises that physical training should always be at least as much a question of school hygiene and of medical science as of educational organisation in a more limited sense, and that this is especially true in the case of secondary schools. It is therefore anxious that due attention should be paid to the subject by school authorities in order that the organisation and technique of physical training may be based on sound principles. The object which the Board has in view is the careful and well-balanced cultivation of the physical powers of each individual child; and this, it believes, can only be attained, so far as physical exercises are concerned, by the appropriate application of a graded system of exercises, founded on physiological principles and adapted to the age, needs, and capacity of each pupil. The memorandum has been prepared by the medical department to the Board of Education and is signed by Sir George Newman, the chief medical officer. It opens with an admirable account of the interrelation between mental and physical training in the true education of the growing child. The mental and moral effects of physical training are clearly summarised, and a special point is made of the healthy public spirit which is encouraged by the combined efforts and coöperation of a number of children. The memorandum next refers in some detail to the effects of physical exercises on the growth and development of the brain, through the intimate connexion between the brain and the neuromuscular system. It also points out that the recreative effects of physical training are of great value, apart from their disciplinary effects, and that if a lesson, which is really a game, is not thoroughly enjoyed many of the desired results will be lost. Physical training in the strict sense of the term is defined as the application of methodical and formal exercises for the purpose of securing certain definite and controllable effects, and its importance as a supplement, as a preliminary, and as a corrective to general athletic sports is insisted upon. Of the various systems of physical exercises the Swedish is held to be the best for use during school life, since it develops all parts of the body harmoniously according to physiological principles. Having enumerated the advantages of the Swedish system the memorandum recommends that all secondary schools should adopt it. But a note is added that the value of Swedish exercises is greatly diminished if they are not applied in accordance with the principles of the system. Useful hints are given on the construction and arrangements of a suitable gymnasium and on the organisation of classes. The teacher should possess expert training and should be a member of the regular school staff. In this respect girls' schools have the advantage of boys' schools, for at present there are extremely few English male teachers possessing such qualifications, while there are many expertly trained women teachers who are thoroughly competent to interpret the principles of Swedish exercises and also to supervise the games. As is repeatedly pointed out in the memorandum, the teacher is everything in physical training; ignorantly applied the Swedish system can work mischief. Although rule-of-thumb methods in arranging the progression of exercises in individual cases are to be deprecated, the exercises themselves are given definite forms in order to obtain definite effects, and any departure from them by a non-expert instructor should be discouraged. The memorandum concludes with a few valuable and suggestive notes on the relation of school medical officers to physical training. Whenever there is a routine medical inspection it is considered desirable that the arrangements for physical training should be to some extent under the general supervision of the school doctor, and that there should be close coöperation between the medical officer and the gymnasium instructor. Thus, the former would do well to familiarise himself with the system of exercises and with the effects which they are likely to produce, so that he may decide on the fitness of pupils for particular exercises, and may be alert for the symptoms of over-strain or other harmful effects.

[1] Memorandum on Physical Training in Secondary Schools in Wales (with Monmouthshire), 1911. Published by His Majesty's Stationery Office. Price 2d.

TRAUMATIC RUPTURE OF THE RECTUS MUSCLE.

IN the *Journal of the American Medical Association* of Sept. 2nd Dr. M. A. Stern has reported an unusual injury—traumatic rupture of the rectus muscle. A man, aged 40 years, was pushing a heavily loaded truck from the platform of an elevator. The platform was several inches below the floor, so that when he pushed the truck on to the latter it rebounded and struck him in the abdomen. He felt pain at the time, but it passed off, and he worked for the rest of the afternoon. On the following morning he sought advice for intense pain over the seat of the injury. He walked in a stooping posture, which seemed to ease the pain. On examination he was found to be muscular and well nourished. There was moderate arterio-sclerosis. The pulse was of good volume and tension, and the temperature was 99·1° F.

The abdomen was exquisitely tender over a spot about 2 inches square, ½ inch below, and 1 inch to the left of the umbilicus. At this point there were swelling and rigidity. He was sent to hospital, where an ice-bag was applied. On the third day the pain had increased, rigidity and tenderness had become more localised, and the swelling had increased. At no time was there an abrasion or ecchymosis of the abdomen. Although there had been a good action of the bowels it was decided to perform exploratory laparotomy. An incision was made over the swelling. As soon as the rectus muscle was reached a considerable quantity of dark blood and clots welled up. The hæmatoma was wiped out and the left rectus muscle was found torn completely across and badly lacerated. Its sheath was intact. The peritoneum was opened, but no injury of any viscus was found. The muscle was sewn to the sheath and the bleeding points were ligatured. The abdomen was closed with drainage and good recovery ensued. Dr. Stern accounts for the rupture of the rectus without internal injuries by the fact that the man was struck when pushing a heavy load with both recti contracted to their full extent. The absence of any injury of the skin is also noteworthy.

THE DISTRIBUTION OF HOSPITAL COLLECTIONS.

AT the British Hospitals Association's recent meeting at Manchester the distribution of the Hospital Saturday and Sunday Funds formed the subject of an interesting paper by Mr. C. Hopkinson. He points out that those charged with the distributing of the sums collected for these funds in various localities have the choice of two theories upon which to proceed—viz., either to act on a presumption as to the wishes of the donors or to aim at such distribution as shall ensure the greatest possible relief to suffering. Obviously no direct evidence is available for aggregating and averaging the wishes of the respective donors, though assistance can be obtained from a consideration of the efficiency and economy in management, of the amount of work done by the respective institutions, of the individual hospital subscription lists, and of the poverty of particular institutions as measured by their annual deficit. The desire to get as much as possible for any expenditure, he says, is sufficiently general to suggest that the average donor will desire efficiency and economy of management to be taken into account in dividing contributions. The amount of work done by the institutions is an obvious factor, while the individual hospital subscription lists are a reliable measure of the importance of the several institutions in the public mind. The last factor he concedes to those who "might desire that the extravagance and consequent poverty of one hospital as compared with another, that the lethargy of one hospital as compared with another in collecting funds, should be favourable elements in considering distribution—the class, in fact, who would prefer to give a shilling to a beggar in rags on the way to the workhouse rather than to a decent workman to prevent him pawning his tools." To proceed on the second theory, Mr. Hopkinson says, it would be necessary to base conclusions on facts ascertainable from the statistics and accounts of the hospitals. The ideal method of carrying this out is that adopted by King Edward's Hospital Fund—viz., by competent lay and medical inspection. This method renders necessary the keeping of accounts on a recognised uniform system to facilitate comparison. It stimulates efficiency and economy of management, concentrates effort, and prevents overlapping. It is, however, hardly practicable in other towns than London. The writer recommends, with a view to the attainment of similar ends in smaller towns, the establishing by the Association of an annual standard cost per head (1) for a child in hospital; (2) for a convalescent in a convalescent home; (3) for medical and surgical in-patients, with an estimate of what would be a fair extra allowance per operation; (4) for each out-patient accident case; (5) for each ordinary out-patient case; and (6) for each home patient. He suggests the amount of work done as the basis of distribution, using the cost of that work at standard rates for calculating percentages so as not to put a premium on extravagance. A percentage, he thinks, should be deducted from all grants when the standard cost is exceeded, and in any case the grant should be limited to the amount of the true deficiency for the year. The method adopted in Manchester—viz., by taking the gross expenditure as a criterion, in place of the work done or of a standard expenditure based on the work done—he regards as highly unsatisfactory. The gross expenditure is taken of each hospital, and from that are deducted the aggregate receipts from invested funds, direct collections, profits from private nurses, payments for or by patients, and students' fees; and thus a nominal deficiency is arrived at in proportion to which the funds are distributed, the amount to be paid to any one hospital being limited to one-fourth of the Fund. On this system, as Mr. Hopkinson points out, it is quite conceivable that a hospital should be saving money and yet be receiving substantial grants, for no regard is paid to income from subscriptions or large donations. This, in fact, appears to have been the case in the past with the old infirmary, which at one time, while receiving grants, was annually investing money. At the present time, however, the new, enlarged, and entirely modern hospital shows, according to the Sunday Account Funds, a deficiency of more than one-third of the entire deficiency of the hospitals assisted, and yet it is allowed to receive only one-fourth of the fund collected. "Is it possible," asks Mr. Hopkinson, "to have a stronger condemnation of the method?"

SYPHILIS OF THE BLADDER AND OF THE UPPER URINARY PASSAGES.

IN the September number of the *Annales des Maladies Génito-urinaires* Professor M. N. A. Mikhailoff, of the Hélène Pavlovna Clinical Institute of St. Petersburg, has written on syphilis of the bladder. Until recently syphilis of the bladder and kidneys was never recognised except at a necropsy, but modern diagnostic methods have made it much less difficult to recognise during life syphilitic lesions in these organs. Professor Mikhailoff has described a case which was under the care of Professor Filling. The patient was a woman, 39 years old. She complained of a feeling of weight in the loins and of a periodic hæmaturia for the last five years. On examination she was very thin and anæmic. Thirteen years previously she had had a normal labour, and for 15 years the feeling of weight in the loins had been present. The hæmaturia already mentioned had become more abundant and frequent during the last two years, appearing every two or three weeks and lasting two or three days; it was not accompanied by any pain and the temperature remained normal. There was no tenderness of the abdomen. The specific gravity of the urine was 1090 and it was alkaline. Microscopically there were many urinary epithelial cells and a few pus cells. By means of the cystoscope the trigone was seen to be hyperæmic and the opening of the left ureter was dilated. Some groups of papules were also seen near the ureteral orifices, as well as on the upper and lateral walls of the bladder; each papule was covered by greyish-yellow scales. Wassermann's test was applied twice; on the first occasion the result was negative, but a week later it was positive. The patient was treated with mercurial pills and with iodide of potassium, and the bladder was washed out with a solution of boric acid. During the treatment the bladder was re-examined

by the cystoscope several times, and on each occasion improvement was seen in the condition of the mucous membrane. The quantity of urine also increased from 1000 c.c. to 1500 c.c. in the 24 hours. A month after the first cystoscopy the hæmaturia had ceased, and the mucous membrane of the bladder was almost normal. The positive Wassermann test and the results of treatment make the diagnosis certain.

ACTINOMYCOSIS IN NORWAY.

Professor Harbitz and Dr. Backer Gröndahl have recently published (*Norsk Magazin for Laegevidenskaben*, June) an account of the incidence of actinomycosis in Norway, where this disease has lately been carefully studied. The first case published in Norway dates from 1887, and for many years afterwards the disease attracted scant attention. More recently a number of cases have been reported from different parts of the country, and at the Pathological Institute in Christiania 87 cases have now been studied, with special reference to the source and course of the infection, as well as to the varieties of fungi found in different lesions. The seat of infection was the cervico-facial region in 39 cases, the lungs in 20, the abdomen in 26, and the skin in 2. The disease was twice as frequent in men as in women. Its incidence was not greater than usual in the months August to January. Many of the patients were town-dwellers, and most were recruited from the eastern and southern provinces, the west coast, including Bergen, being extraordinarily free from the disease. In the cervico-facial region the disease is chronic but benign and tends to spontaneous recovery. All the 39 patients so affected recovered. The primary focus in this class could seldom be found, but it was twice localised in the tongue, once in the submaxillary gland, and occasionally there was a history of aching gums early in the disease. In the lungs the disease was invariably fatal. The primary focus was in the pulmonary tissue: infection from the œsophagus to the lungs, as described by some writers, was never observed. Usually the first sign of the infection was a broncho-pneumonia. In the abdominal form 20 per cent. recovered. The primary focus existed in the appendix in nine patients, and this was also probably the case in five others. In these cases the appendix was usually scarred, or it presented a perforation leading directly to an abscess. The spread of infection may be intra- or extra-peritoneal. In the former case it often involves and perforates the bladder, when the fungi may be found early in the urine. In the latter case it may track up behind the diaphragm, and an empyema may be the first sign of an abdominal infection. Of the 2 cases of primary skin infection one occurred in a man who worked in a corn-field without stockings. He died in spite of radical treatment, including amputation at the thigh. Passage of the fungi by the blood-stream was occasionally observed in the later stages of the disease, when distant organs such as the brain and the lungs became involved, but spread of infection by the lymphatic system was never seen, and the authors emphasise the diagnostic value of this point. In 16 cases of actinomycosis hominis they succeeded in isolating one and the same facultative anaerobic fungus differing from that which most German writers have described as pathogenic (Boström's type). It also differed from every aerobic type cultivated from various plants. An identical growth was once cultivated from bovine actinomycosis, 7 cases of which were examined. Professor Harbitz and Dr. Gröndahl consider it probable, but not proved, that human and bovine actinomycosis are caused by the same or by closely allied fungi. Numerous attempts were made to isolate from corn, straw, hay, and the air the same anaerobic fungus; none but the familiar aerobic fungi could, however, be found, and these were not pathogenic to rabbits or guinea-pigs, nor could any progressive actinomycotic inflammation be induced. The writers locate the site of infection either in the lining of the respiratory tract or in the digestive tract which has been infected by swallowed matter. Less is known of the source of infection. Infection from cattle to man, or from man to man is not proved and is highly improbable. Probably the pathogenic fungi are derived from various plants; but how and where they live in nature is unknown. J. H. Wright has suggested that the fungus pathogenic to man and cattle does not exist elsewhere, and that it is often present in the mouth of man, becoming pathogenic with trauma. This theory is worthy of consideration, but it requires further support. The diagnosis of actinomycosis by complement fixation or agglutination was found by the writers to be impossible, and owing to the capriciousness of the disease and the variability of its course, it is difficult to estimate the value of the various remedies in use, including potassium iodide. Twice the writers used a vaccine made from sterilised cultures of the fungus; the treatment was quite negative in one case, and in the other case, which presented advanced abdominal disease, there was considerable improvement. The perusal of this interesting paper leaves the reader with the unsatisfactory impression that there are vast and numerous lacunæ in his knowledge of a disease which has commonly been treated by text-books as a cut-and-dried subject.

PLAGUE AND RATS AT SHANGHAI.

ONE of our Indian correspondents recently commented very fully on Dr. Arthur Stanley's report on the public health of Shanghai which has recently reached us. The details of the crusade against plague-rats which has been carried out in Shanghai deserves more detailed notice. In December, 1908, it was found that plague-infected rats were present in Shanghai; during 1909 and 1910 a complete plague survey of the settlement was carried out. The number of infected rats having been found to be increasing towards the end of 1910, a system of rat destruction was started, and over 18,000 houses were disinfected and made temporarily rat-proof. Owing to the vigorous action taken no outbreak resulted; six deaths only occurred. The number of cases is not stated; presumably it was six. Unfortunately there was considerable excitement among the Chinese population, leading almost to riot; in the end it was agreed that search for Chinese plague cases should be conducted by Chinese doctors from an independently instituted Chinese plague hospital, as is done in Hong-Kong. Dr. Stanley is quite clear as to the rat being the essential cause of plague epidemics, the flea (P. cheopis and C. fasciatus, especially the former) being the carrier; of the rats examined about 70 per cent. were M. rattus (in houses) and 30 per cent. M. decumanus (in sewers). Much work on the subject has been done in the public health laboratory, where over a thousand pathological specimens were examined, besides 19,000 plague cultures from rats.

A FURTHER Commission on Sleeping Sickness is about to be despatched to Nyasaland under the auspices of the Tropical Diseases Committee of the Royal Society. Colonel Sir David Bruce will be in charge of the Commission, and Lady Bruce will again accompany him to Central Africa. He will be assisted by Captain A. E. Hamerton, R.A.M.C., and Professor R. Newstead of the Liverpool School of Tropical Medicine, who are both already in Nyasaland. Sir David and Lady Bruce will sail from Marseilles on Nov. 10th. They will journey by the Zambesi and Shire rivers to Zomba,

the capital of Nyasaland. It is anticipated that the Commission will investigate sleeping sickness for three years.

Mr. J. Bland-Sutton has resigned the post of senior surgeon to the Chelsea Hospital for Women in order to devote himself more strenuously to his duties at the Middlesex Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF COUNCIL.

A QUARTERLY meeting of the Council was held on Oct. 12th, Sir HENRY T. BUTLIN, the President, being in the chair.

The best thanks of the Council were given to Mr. Alban Doran for his valuable services in revising the catalogue of gynæcological specimens in the Museum, and it was resolved that an illustrated guide to the gynæcological section of the Museum, prepared by Mr. Doran, be printed.

Sir FREDERIC S. EVE, on behalf of the Committee of the Annual Report of the Council, submitted a draft copy of the report to be presented to the Fellows and Members at the annual meeting on Nov. 16th, and the report was approved and adopted.

Sir W. Watson Cheyne was re-elected a member of the Committee of Management.

The PRESIDENT reported that he had reappointed Mr. C. W. Mansell Moullin the representative of the College on the Medical Board of the University of Wales for three years.

ANNUAL REPORT OF THE COUNCIL.

The Council have issued their annual report, which is to be presented at the meeting of Fellows and Members on Nov. 16th. With reference to the resolution which was passed at the last annual meeting regarding the admission of Members to direct representation on the Council, the report states that as the matter referred to in the resolution was fully considered by the Council during the year they were not prepared to reopen the discussion.

With regard to a letter from the Registrar-General asking the opinion of the College as to "whether a surgeon, in signing a death certificate, should mention the fact of an operation having been performed shortly before death," the following statement of their views has been made by the Council: (*a*) The Council are entirely in accord with the view of the Registrar-General that it is his duty to endeavour to secure the best possible certification of deaths; and they are of opinion that in every case in which an operation has been performed medical practitioners should be recommended to mention the operation in their certificates of the cause of death. (*b*) The Council are of opinion that, under the "Suggestions for Medical Practitioners" in the printed books of medical certificates forms, a general direction should be inserted to the effect that, in all cases where an operation is known to have been performed which has any reference direct, or only indirect, with the cause of death, the fact should be mentioned in the certificate of death. (*c*) The Council are of opinion that ample provision already exists for the protection of the public as regards coroners' inquests, and the Council do not consider that registrars should be instructed to inform the coroners of all cases in which an operation is mentioned in a death certificate.

The report states that the scales of medicines and medical stores issued by the Board of Trade for merchant ships are being revised, and that the revision has been entrusted by the Board to a committee consisting of members of their medical staff and representatives of the Royal Colleges of Physicians and Surgeons and Pharmaceutical Society of Great Britain, with the addition of a representative of the shipping interests concerned. Mr. C. T. Dent has been appointed to serve on the committee as the representative of the Royal College of Surgeons.

With reference to the suggested scheme for conjoint examinations with the University of London, it is stated that the Royal College of Physicians have notified the College that they were not prepared to take any further steps to promote the scheme. In consequence of this withdrawal by the Royal College of Physicians from the scheme prepared by the delegates of the two Colleges, and approved by the Council of the Royal College of Surgeons in March, 1910, it became necessary to abandon the idea of offering evidence jointly with the Royal College of Physicians to the Royal Commission on University Education in London, and to consider whether any, and, if so, what, evidence should be offered by the Royal College of Surgeons on its own account. After several suggestions had been made and considered the following resolution was finally adopted: "That, as it has been found to be impossible to proceed with the suggestion by this College for combined examinations for medical degrees by the Royal Colleges and the University, the Council do not lay any detailed proposals before the Royal Commission, but instruct their delegates, besides stating their individual views, to point out the disability under which London medical students are placed owing to the difficulty of obtaining degrees in the Medical Faculty of the University—a difficulty not experienced in other parts of the United Kingdom; the action taken by this College in the past with the object of removing this disability; and its continued willingness to coöperate in any scheme for making the degrees in the Faculty of Medicine more accessible to London medical students." The delegates appointed to give evidence on behalf of the College are Sir Henry T. Butlin, Bart. (President), Sir Henry Morris, Bart., and Sir Alfred Pearce Gould, K.C.V.O.

The National Insurance Bill, so far as its provisions concern the medical profession, has been considered by a committee of the Council appointed for the purpose, and at two special meetings of the Council; and a letter was transmitted to the Chancellor of the Exchequer by the Council directing his attention to certain matters which are regarded as of the utmost importance by members of the medical profession. The letter is contained in the report, together with the reply of the Chancellor.

Some alterations have been made in the regulations for candidates for the diplomas of M.R.C.S. and L.R.C.P., with a view to securing more thorough instruction in pathology. All candidates who pass the examination in anatomy and physiology after Jan. 1st next will be required to produce evidence of having attended at a recognised medical school a course of lectures on pathology during not less than six months, instead of during not less than three months, and of having received "practical instruction in pathological histology, including not less than eighteen classes," and "practical instruction in clinical pathology and bacteriology, including not less than eighteen classes."

For some time past classes for dissections have been held at several of the medical schools in the vacation months of April and September, and a modification has now been made in the regulations for the Fellowship to meet these conditions. The requirement that the candidate must produce evidence "of having dissected at a recognised medical school or schools for a period of not less than eighteen months during the ordinary sessions or terms" has been altered by the omission of the words "during the ordinary sessions or terms," and by the addition of the following note: "Dissections during the regular vacations will be accepted, provided the certificate shows that they have been performed under the superintendence of an authorised teacher in a medical school."

On the recommendation of the Board of Examiners in Dental Surgery an alteration has been made in the regulations for the licence to enable candidates, if they desire, to take separately mechanical dentistry and dental metallurgy, the two parts of the First Professional Examination. Acting in conjunction with the Royal College of Physicians, the Council have decided to institute a conjoint Diploma in Tropical Medicine, and regulations have been drawn up and approved by both Colleges. Examiners have been appointed, and the first examination will be held this month.

The income of the College for the past year amounts to £25,703—an increase of £150 on that of the previous year. The examination and diploma fees for the Membership, Fellowship, and Diploma in Public Health remain at nearly the same figure in each case, but there is an increase of £139 in the fees for the Licence in Dental Surgery. The expenditure in respect of revenue amounts to £23,481—a decrease of £251. Under general expenses of examinations a reduction of £891 is to be found in the case of the Membership, due mainly to the absence of any large expenditure for extraordinary purposes by the Conjoint Examining Board. The general working expenses of the College in Lincoln's Inn-fields show an increase of £106, the chief differences occurring under law expenses and furniture and fittings, the expenditure under the former being less and that under the latter more than in the previous year. The special expenses of the Museum aro £392 more than in the previous year. There are increases under the heads of salaries and wages, catalogues and reports, specimens and appliances, and furniture and fittings. The special expenses of the library remain at about the same figure. The extraordinary expenditure amounts to £1203, and includes sums of £405 for seven years' premium for fire insurance, of £120 for an epidiascope, and of £193 for the Hunterian Festival. There are also items for certain expenses in connexion with the building of the new Examination Hall in Queen-square which the committee have thought it desirable to write off under current expenditure.

The number of diplomas issued during the period with which the report deals is: Membership, 325; Fellowship, 59; Licence in Dental Surgery, 101; and Diploma in Public Health, 41.

The year has been one of much progress for the Museum, and the report contains many interesting details. Considerable progress has been made in revising and rearranging the specimens which illustrate the general principles of pathology. By the end of last year it became apparent that the space devoted to the display of the pathological collection was insufficient for its present needs and future growth, and that steps must be taken to provide room for the expansion of this part of the Museum. After careful consideration it was resolved to devote the floor space of Room III., at present occupied by a miscellaneous series of specimens, to the exhibition of the section of general pathology (estimated at 1100–1200 specimens), and thus set the lower gallery of that free for the growing sections of special pathology. The floor space of Room III. provides accommodation for displaying the specimens illustrating the general principles of pathology to great advantage—an advantage which may be realised in Rooms I. and II. where the floor space is occupied by the series of human anatomy. The section of general pathology, from the number and quality of its specimens, deserves the best space and the best setting that can be given it, for no other museum can show such a collection. This section includes many of Hunter's most valued preparations. By rearranging the tables in the floor space of Room I. it was possible to provide accommodation there for the four cases containing specimens showing the development of the human skeleton now in Room III., thus obtaining the double advantage of placing these specimens in their true position in the Museum and obtaining floor space for the extension of the pathological collection. To provide accommodation for the series of invertebrata it was found necessary to carry out alterations in a building at the eastern end of the Museum, usually known as the librarian's house, but which has been used for purposes of the Museum for over 30 years. In this building, which is entered from the staircase at the eastern end of Room V., there are two floors, an upper and lower, each of which is partitioned off into two small rooms. The upper was used for store purposes and the lower contained the ever-growing collection of surgical instruments and the stationary collection of vegetable specimens. Plans were prepared for the alteration of the building, and at considerable cost alterations have been made whereby the upper room will provide accommodation for the invertebrate and vegetable collections, while the lower will allow an extension of the space now available for the series of surgical instruments—a valuable and instructive collection—and also accommodation for the medico-legal collection which the Council in November, 1910, resolved to form. This scheme of alterations has been carried out during the months of July, August, and September of the present year. The need for a central and representative collection of

specimens required in medico-legal investigations has been felt by experts in England for many years. The obstetrical and gynæcological series of the pathological collection has been re-examined and re-described, and the series as now arranged contains 560 specimens, all of which have been studied and examined with great care and remounted when necessary. The collection of defective and malformed pelves has been greatly enriched by the addition of 28 specimens formerly in the possession of the Obstetrical Society of London and presented to the College during the present year by the Royal Society of Medicine. Specimens illustrating diseases and injuries of the ear are at the present time represented mainly by the historic Toynbee collection. Mr. Arthur Cheatle has generously presented his private collection of specimens illustrating this series—a most valuable gift—and the report adds, "it is hoped that Fellows and Members will present such specimens as will make this section of the Museum thoroughly representative of modern knowledge." Much progress has been made in the application of the card-form of catalogue, and descriptive cards of the preparations of human anatomy have been made and placed in the entrance hall cabinets. The number of visitors for the year was 13,342, rather more than half coming on Friday and Saturday, when the Museum is open to nurses and lady visitors. The number for the previous year was somewhat larger. Fifty-four women medical students have taken out tickets permitting them to study in the Museum on any week-day. The admission of special classes on Saturday afternoons has been continued, and altogether 75 classes were admitted, 22 being classes of teachers from the London County schools, 33 ambulance classes brought by their teachers from polytechnic, natural history, and other educational institutions. Regarding the College library, the supply of books and periodicals has been well kept up, and the work of cataloguing has made good progress. During the year the library has been open 272 days and the number of readers has been 10,627.

During the past year the death of one Honorary Fellow has been reported, together with 28 Fellows. The list of deceased Members shows a considerable increase on that of last year, but this is accounted for by the fact that in this year's list are included the names of several Members whose deaths took place in former years but have not been previously recorded in the College books.

Public Health.

REPORTS OF SCHOOL MEDICAL OFFICERS.

City of Bradford.—Dr. A. Lewis Williams's report contains plans of a school for cripple and deaf children of thoroughly modern plan. The more prominent features are the ample provision for ventilation, the amount of lighting area, and the facilities for teaching in the open air. The windows are sash windows and can be lowered into a recess at the bottom of the frame, thus giving the whole space for ventilation; diagrams of these windows are given in the report. A table gives a comparison of general conditions found at medical inspection for the three years 1908, 1909, and 1910, and in every case there has been a very decided improvement. A larger percentage of the children look healthier and fewer are described as anæmic. Good nutrition has risen from 24·4 per cent. in 1907 to about 70 per cent. in 1910. Probably this is to be ascribed to the provision of school meals, the Bradford scheme for which is so well known. Another interesting point about the table is that it shows that the parents are taking more interest in their families, the children being better clothed and shod. Improvement in cleanliness is ascribed to some extent to the facilities for bathing, but conditions of the heads must be placed to the credit of the parents. The number of cases of verminous heads found is now very small. Dr. Williams regrets that, owing to the time absorbed in inspection necessary to comply with the Board of Education's requirements, certain other work of the utmost value and importance has had to be curtailed, such work as that of the re-examination of children found to have some defect, examination of special cases referred by head teachers, visits to special schools for the mentally defective, blind, and deaf, occasional visits to secondary schools, examination of children who have been accidentally hurt, and examination of girls in secondary schools *re* gymnasium exercises. Dealing with nutrition, Dr. Williams classifies 1·5 per cent. boys and 2 per cent. girls as poor and very poor nutrition, but classifies 19 per cent. boys and 17 per cent. girls as anæmic and pale, this latter figure corresponding somewhat closely with the 22·5 per cent. boys and 22 per cent. girls responsible for the normal class in nutrition. The conditions treated in the School Clinic remain as in previous years—namely, defective vision, ringworm, running ears, chronic inflammation of the eyes and eyelids, scabies, impetigo, and verminous and sore heads. In October, 1910, a full-time dentist was appointed and will inspect and treat such cases as he considers suitable. Dental inspection will be carried out in the children aged from five to eight years, as during this time the permanent teeth are appearing, and by prompt attention may be saved if they are decayed. The children so inspected will be re-inspected once every subsequent year, and further treatment carried out if required. The whole group of children inspected this year and in subsequent years will therefore be made and kept dentally sound and leave school with good teeth. The treatment at the clinic consists of extracting septic teeth and scaling and preserving carious permanent teeth; urgent cases are dealt with at a special time; local anæsthetics will be given if needed. Another interesting addition to the clinic is the treatment of stammering children; 317 cases were discovered by a special inspection, of whom 239 were boys and 78 girls. 156 stammerers were treated at the clinic during the year, and an analysis of the conditions found ascribes 20 per cent. of all cases to imitation, 7 per cent. to shock due to fright, while diphtheria, scarlet fever, and pneumonia are responsible for 8 per cent. Treatment consists of breathing exercises and exercises to control the exit of air from the lungs and to strengthen the mouth and cheek muscles.

City of Manchester.—The medical officer's report is published as a section of the eighth annual report of the education committee, which is full of information of the greatest possible interest to school medical officers, and is also freely illustrated with photographs of schools, groups of children, and school buildings. Particularly interesting is the account of the Manchester country school, which is held ten miles from the town at Mobberley. The school was started in June, 1904, as an experiment, and has now been definitely taken over by the corporation. A special feature of the school is that a class of 40 children are transferred for a period of 14 days from the town school to the country school at Mobberley (regular school instructions on a modified scheme being given under the surroundings of rural life), half-time in school and half-days for walks, outdoor lessons in natural history, and organised games. The larger part of the cost in connexion with the school has been provided by voluntary subscription, more than half coming from the teachers of the day elementary schools in the city by means of jumble sales, concert parties, &c. The health of the children sent to the school has been excellent, and considerable improvement in weight has been noted. A plan is given showing the elevation of the school, and a photograph of the spray baths. The entire site covers 18 acres and the school gives accommodation for 320 children. The children are in residence during the fortnight and have to pay a sum calculated to cover the cost; with 4000 children a year it is estimated that the school will be self-supporting. Dr. A. Brown Ritchie refers to the requirements of the Board of Education, and points out that the attempt to do the inspection required has led to some of the other work getting behind. Special attention to ringworm was paid during the year, and many more cases than were suspected have been discovered, of which this report says that only about half are under control. Two interesting special reports are provided—one makes a comparison of the physique of Jewish children and other children, and one deals with the conditions associated with backwardness in children. It appears that while Jewish children have the advantage over other Manchester children as regards both height and weight (and at 13 years a Jewish boy is 5·56 lb. heavier than the others), in no case do they reach the anthropometric standard of 1883. Bad vision is very prevalent amongst Jewish boys; this probably may be put down to the fact that the Jewish boys spend on an average 2½ hours each day acquiring the Hebrew language at a private school in addition to ordinary school work. No Jewish children are returned as having bad nutrition, and only 0·4 per cent. as having rickets and deformities, as against 2·5 per cent. for others. "To sum up," the report says, "Jewish children have the advantage in height, weight, mental capacity, nutrition, diseases of the heart and blood, bronchitis, nervous diseases, tuberculosis other than lung trouble, rickets, deformities, and teeth; but they suffer more from bad vision, phthisis, enlarged tonsils, and adenoids." The advantages are ascribed to the conditions of the Jewish home life. Backward children are divided in two groups: (1) backward on account of mental condition; and (2) those backward from physical defect or from some temporary circumstances. It is suggested that these children could be best dealt with by special classes at the ordinary schools to which children from adjoining schools could be drafted.

This would not interfere with the ordinary work or with the ordinary routine of the school life, and such a plan as this would make intermediate schools unnecessary.

County of Bedford.—The chief difficulty in Bedfordshire is that experienced in following up cases and in their treatment. The comparative table of conditions in urban and rural districts is interesting. Mr. W. J. Butcher classifies 25·1 per cent. boys in urban areas as being of bad nutrition and 21·8 per cent. boys in rural districts. Attention has been called to nutrition percentages in other reports, and the very wide divergencies make it plain that no uniform standard is being used. Mr. Butcher, in an addendum to the report, goes into the question of treatment, and makes the suggestion that the education authority should spend £100 a year on the treatment of the most urgent vision cases, and in subscription to the local hospitals in exchange for letters which would enable at least the most urgent cases of enlarged tonsils and adenoids to be treated. The formation of care committees is also considered, with lady visitors to visit the homes and also school nurses. No school nurse has as yet been appointed, and it is to be hoped that Mr. Butcher's very modest scheme will be duly sanctioned.

County of East Sussex.—Mr. A. G. R. Foulerton considers that enlarged tonsils and adenoids cause more ill-health in East Sussex than any other single disease or defect. Some very marked cases are noted in his report. Out of 273 children for whom operative treatment was recommended in 1909 51 per cent. obtained treatment within six months. Out of 346 children in 1910 35 per cent. received treatment. The schools are revisited after inspection at an interval of two to four months, and of 1372 children noted for treatment in 1910 50·22 per cent. obtained it, the corresponding figures for 1909 being 1353 and 49·8 per cent. Coöperation with the local sanitary authorities has usually been effective. But two cases are quoted of apparently capricious closure of a school on account of an outbreak of infectious illness which appeared to be already over when closure was required. There is also an instance where closure for three weeks by advice of the county medical officer for diphtheria (the school not having been visited by the local authorities concerned) was followed by an order for another closure of three weeks given four days before the school would normally have reopened on account of a drainage defect which could have been discovered and dealt with earlier had the premises been visited earlier. These disorders of coöperation appear to be due to the unwieldy overgrowth of the local sanitary area concerned. Dr. Arthur Beeley presents two special reports on (1) Dental Caries and (2) on the Relation of Enlargement of Glands of Neck with Enlargement of Tonsils, Caries of Teeth, and Impairment of Nutrition Respectively. Tables displaying the relation of these various factors are given, but would have been more valuable if greater help had been given in their interpretation.

County of Salop.—Dr. James Wheatley's report pays considerable attention to dental caries, rules for the prevention of which are formulated and have been circulated among the medical practitioners in the county. Voluntary helpers have been appointed in 190 schools out of 279 to assist in obtaining treatment. About half the children with defects appear to have been treated, more than half by private practitioners.

County Borough of Halifax.—Dr. D. M. Taylor has made special efforts to enlist the sympathetic coöperation of parents. Evening addresses have been given at some schools on personal, school, and home hygiene. Visitors' or exhibition day is condemned reluctantly. The clinic held at the medical offices treats the usual school ailments. A successful class for the treatment of stammerers has been held, the Berquand method being used; out of 22 children 18 were cured, two improved, and two remained as before.

DONATIONS AND BEQUESTS.—By the will of the late Dr. F. W. Pavy, Guy's Hospital will receive £2000 for the maintenance and upkeep of the "Pavy Gymnasium," founded by him. The testator also left £1000 to the British Medical Benevolent Fund.—His Highness Sir Chandra Shum Shere Jung has sent a donation of £1000 towards the new laboratory extension fund at the Brompton Hospital for Consumption and Diseases of the Chest.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7671 births and 4633 deaths were registered during the week ending Oct. 14th. The annual rate of mortality in these towns, which had steadily decreased from 21·2 to 15·2 in the seven preceding weeks, further declined to 15·0 per 1000 in the week under notice, and was 1·6 per 1000 below the mean annual rate recorded during the third quarter of the present year. In London last week the death-rate was equal to 15·4 per 1000, while the recorded rates in the other large towns ranged from 6·5 in Burton-on-Trent, 6·8 in Handsworth (Staffs.), 7·0 in King's Norton, and 8·3 in Walthamstow to 19·5 in Dewsbury, 19·6 in Bury, in Hull, and in Sunderland, and 23·3 in Oldham. The 4633 deaths from all causes in the 77 towns last week were 74 less than the number returned in the previous week, and included 512 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 802 in the seven preceding weeks. Of these 512 deaths, 357 resulted from infantile diarrhœa, 44 from diphtheria, 39 from enteric fever, 35 from whooping-cough, 27 from measles, and 10 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·7 per 1000 against 3·4 and 2·6 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœa, which had steadily decreased from 2714 to 628 in the seven preceding weeks, further declined to 357 last week, and caused the highest annual death-rates of 2·7 in Swansea, 3·3 in West Hartlepool, 3·4 in Burnley, and 3·5 in Wigan. The deaths referred to diphtheria, which had been 46 in each of the two preceding weeks, were 44 last week, and included 13 in London and its suburban districts, 4 in Liverpool, 3 in Norwich, and 3 in Hull. The fatal cases of enteric fever, which had been 35 and 37 in the two preceding weeks, further rose last week to 39; 6 deaths were recorded in St. Helens, 5 in Hull, and 3 each in London, Nottingham, Bradford, and Leeds. The deaths attributed to whooping-cough, which had been 61, 51, and 55 in the three preceding weeks, fell to 35 last week, and included 5 in London, 5 in Sunderland, and 2 each in St. Helens, Leeds, and Stockton-on-Tees. The deaths referred to measles, which had been 26, 19, and 18 in the three preceding weeks, rose to 27 last week; 7 deaths were registered in Wolverhampton, 4 in London, 4 in Liverpool, and 2 in Burnley. The 10 fatal cases of scarlet fever were 8 fewer than in the previous week, and was the lowest number returned in any week of the current year; 4 deaths occurred in London and 2 in Salford. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 1793 in the six preceding weeks, had further advanced to 1966 on Saturday last; 355 new cases of this disease were admitted to these hospitals during the week, against 240, 333, and 293 in the three preceding weeks. These hospitals also contained on Saturday last 1030 cases of diphtheria, 209 of whooping-cough, 178 of enteric fever, and 82 of measles, but not one of small-pox. The 1335 deaths from all causes in London last week were 34 in excess of the number in the previous week, and included 210 which were referred to diseases of the respiratory system, against numbers steadily increasing from 73 to 172 in the six preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 134 and 156 in the two preceding weeks, further rose to 170 last week, and 369 inquest cases were registered. The causes of 43, or 0·9 per cent., of the deaths registered in the 77 towns during the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified last week in Manchester, Sheffield, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, Portsmouth, and in 50 other smaller towns. The 43 uncertified causes of death last week included 11 in Liverpool, 7 in Birmingham, and 3 in South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated

population of 1,710,291 persons in the middle of this year, 829 births and 538 deaths were registered during the week ending Oct. 14th. The annual rate of mortality in these towns, which had been 16·7, 15·2, and 14·9 per 1000 in the three preceding weeks, rose to 16·4 in the week under notice. During the 13 weeks of the third quarter of this year the annual death-rate in these towns averaged 15·2 per 1000, and was 1·4 per 1000 below the mean rate recorded during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 10·2 and 11·2 in Perth and in Aberdeen to 16·1 in Dundee and 18·7 in Glasgow. The 538 deaths from all causes in the eight towns were 48 in excess of the number in the previous week, and included 74 which were referred to the principal epidemic diseases, against numbers decreasing from 134 to 60 in the six preceding weeks; of these 74 deaths, 41 resulted from diarrhœa, 12 from diphtheria, 8 from scarlet fever, 7 from whooping-cough, 5 from measles, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 2·3 per 1000, and was 0·6 above the mean death-rate from the same diseases in the 77 large English towns. The deaths attributed to diarrhœal diseases, which had steadily fallen from 113 to 33 in the six preceding weeks, rose to 41 last week, and included 37 of infants under two years of age; 24 deaths were recorded in Glasgow, 7 in Dundee, and 4 in Edinburgh. The deaths referred to diphtheria numbered 12, and were equal to the average in the two preceding weeks; 8 deaths occurred in Glasgow and 2 in Dundee. The fatal cases of scarlet fever, which had been 5, 3, and 8 in the three preceding weeks, were again 8 last week, and comprised 5 in Glasgow, 2 in Paisley, and 1 in Dundee. The deaths attributed to whooping-cough, which had declined from 12 to 3 in the three preceding weeks, rose to 7 last week, of which 6 were registered in Glasgow. The 5 fatal cases of measles were 1 in excess of the number in the previous week, and comprised 4 in Glasgow and 1 in Leith. The death from enteric fever was recorded in Glasgow. The deaths referred to diseases of the respiratory system, which had steadily risen from 41 to 78 in the four preceding weeks, further increased to 80 last week, and were 11 in excess of the number in the corresponding week of last year. Of the 538 deaths from all causes in the eight towns last week, 180, or 33 per cent., were recorded in public institutions, and 23 deaths were attributed to different forms of violence. The causes of 20, or 3·7 per cent., of the deaths in the eight towns last week were not specified or not certified; in the 77 English towns the proportion of uncertified causes last week did not exceed 0·9 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 584 births and 425 deaths were registered during the week ending Oct. 14th. The annual rate of mortality in these towns, which had been 18·0 and 19·6 per 1000 in the two preceding weeks, declined to 19·3 per 1000 in the week under notice. During the 13 weeks of the third quarter of this year the annual death-rate in these Irish towns averaged 18·3 per 1000; in the 77 English towns during the same period the mean annual death-rate was equal to 16·6, whilst in the eight Scotch towns it did not exceed 15·2 per 1000. The annual death-rate last week was equal to 21·7 in Dublin (against 15·4 in London), 15·9 in Belfast, 25·2 in Cork, 15·3 in Londonderry, 16·3 in Limerick, and 26·6 in Waterford; whilst in the 16 smallest of these Irish towns the mean annual death-rate was equal to 19·0 per 1000. The 425 deaths from all causes in the 22 Irish towns were 6 fewer than the number returned in the previous week, and included 74 which were referred to the principal epidemic diseases, against numbers decreasing from 153 to 81 in the six preceding weeks; of these 74 deaths, 58 resulted from diarrhœa, 5 from enteric fever, 5 from diphtheria, 3 from whooping-cough, 2 from scarlet fever, and 1 from measles, but not one from small-pox. These 74 deaths from the principal epidemic diseases were equal to an annual death-rate of 3·4 per 1000. The mean rate from the same diseases in the 77 English towns last week was equal to 1·7, while in the eight Scotch towns it averaged 2·3 per 1000. The deaths attributed to diarrhœal diseases, which had decreased from 121 to 71 in the four preceding weeks, further declined to 58 last week, and included 54 of infants under two years of age; 28 deaths were recorded in Dublin, 13 in Belfast, 4 in Londonderry, and 3 in Waterford. Of the 5 fatal cases of enteric fever, which were equal to the average in the two preceding weeks, 4 were registered in Dublin and 1 in Cork. The deaths referred to diphtheria numbered 5, against an average of 2 during the seven preceding weeks; 4 deaths occurred in Dublin and 1 in Belfast. The 3 deaths from whooping-cough were slightly in excess of recent weekly numbers, and comprised 2 in Belfast and 1 in Dublin The 2 fatal cases of scarlet fever occurred in Dublin and Belfast respectively, and that from measles in Dublin. The deaths referred to diseases of the respiratory system in the 22 town districts, which had been 42 and 64 in the two preceding weeks, declined to 50 last week. Of the 425 deaths from all causes in the Irish towns last week, 141, or 33 per cent., were recorded in public institutions, and 10 deaths were attributed to different forms of violence. The causes of 21, or 4·9 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 0·9 per cent. in the 77 large English towns, and was equal to 3·7 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Order in Council of April 1st, 1881, Fleet-Surgeon Jeremiah Sugrue has been placed on the Retired List (dated Oct. 9th, 1911).

Fleet-Surgeon William Wenmoth Pryn has been promoted to the rank of Deputy Surgeon-General in His Majesty's Fleet (dated Oct. 12th, 1911).

The undermentioned Acting Surgeons have been confirmed in the rank of Surgeon in His Majesty's fleet:—Roger Aiken Rankine, Vernon Lickfold Matthews, Adrian Charles Paterson, William Lewis Cowardin, Quintin Hume Richardson, Herbert White, and Leonard Alexander Moncrieff (dated May 19th, 1911).

The following appointments have been notified:—Staff-Surgeons: W. H. Pope to the *Sapphire*, on recommissioning; and H. J. Chater, to the *Attentive*, on commissioning. Surgeon: G. Carlisle to the *Vernon*, additional, for the *Furious*.

ROYAL ARMY MEDICAL CORPS.

Colonel F. H. Treherne, on vacating medical charge of the Cambridge Hospital at Aldershot on promotion, has embarked for a tour of service in India to take up the appointment of Administrative Medical Officer of the Allahabad Brigade. Lieutenant-Colonel (local Colonel) H. B. Matthias, Principal Medical Officer of the Egyptian Army, has arrived home on leave of absence from Khartoum. Lieutenant-Colonel H. Cocks, from the Royal Herbert Hospital at Woolwich, has taken up duty at the Military Hospital, Shorncliffe. Lieutenant-Colonel S. G. Allen, commanding the 28th Company, Royal Army Medical Corps, and in charge of the Military Hospital at Gibraltar, has arrived home on leave of absence. His Majesty the King has been graciously pleased to sanction the promotion of Surgeon-Lieutenant-Colonel Sir W. R. Crooke-Lawless, C.I.E., as a Knight of Grace in the Order of the Hospital of St. John of Jerusalem in England. Lieutenant-Colonel M. J. Sexton, at present holding medical charge of the Military Hospital at Arbor Hill, Dublin, has been placed under orders by the War Office to proceed to South Africa for a tour of service during the ensuing trooping season. Lieutenant-Colonel R. W. Wright has embarked for a tour of duty in India. Major M. P. Corkery, in medical charge of the Lawrence School and residency surgeon at Mount Abu, Bombay Command, has been granted leave of absence home from India for eight months. Major E. C. Anderson, D.S.O., from Rawal Pindi, has taken up duty at the Station Hospital, Karachi. Major P. H. Collingwood has been transferred from Exeter to Devonport. Major H. E. Staddon, from Chichester, has been appointed to the Military Hospital at Shorncliffe. Major C. A. Stone has

joined at Parkhurst Military Hospital and taken over charge from Lieutenant-Colonel J. F. Donegan, appointed Recruiting Medical Officer at Woolwich. Major F. W. Bebie, commandant of the Royal Army Medical Corps School of Instruction at Salisbury Plain, has taken up duty at the Military Hospital, Colchester, on the termination of field training. Major J. S. Gallie has been transferred to the home establishment from India. Major M. H. G. Fell, sanitary specialist at Cairo, has arrived home on leave of absence. Major T. H. J. C. Goodwin, D.S.O., at present serving at Aden, has been granted three months' general leave. Captain F. W. Dawson, attached to the Royal Infirmary, Phœnix Park, Dublin, has been placed under orders to embark for India about Nov. 10th for service with the Northern Army. Captain H. C. Hildreth, in charge of the military hospital at Glen of Imaal, has been granted leave of absence preparatory to joining the Royal Army Medical College, London, for the promotion course for captains commencing on Nov. 1st next. Captain G. Baillie, on the termination of leave granted for duty on the West Coast of Africa, has been appointed to the London District temporarily, pending embarkation. Captain E. M. Pennefather has been transferred from the Dublin District to the Cork District. Captain S. Boglan-Smith has taken up the appointment of Specialist Sanitary Officer in the Belfast District. Captain E. P. Lauder, from Aldershot, has been appointed to the Cork District. Captain W. S. Crosthwait, on relinquishing medical charge of the troops at Moore Park Camp, has been detailed for duty at Fermoy. Captain W. J. Thompson, from Lucknow, has been appointed to the station hospital at Cawnpore for duty. Captain V. C. Honeybourne has arrived home on leave of absence from India. An exchange of positions on the roster for service abroad has been sanctioned by the Director-General of the Army Medical Service between Captain A. R. Greenwood, specialist in advanced operative surgery, serving at Aldershot, and Captain H. T. Stack, doing duty at the Military Hospital, Londonderry. Lieutenant W. H. O'Riordan has joined at York from Whitley Bay. Lieutenant O. W. McSheehy, on the closing of Willsworthy Camp, has been posted to Okehampton. Lieutenant R. C. Priest, in medical charge of the staff and military families at Colchester, has been granted leave of absence from Oct. 31st to Nov. 28th next, pending embarkation for a tour of service in India.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel P. J. Lumsden, agency surgeon, Bengal Presidency, has been granted seven months' leave of absence home from India. Lieutenant-Colonel R. B. Roe has been transferred from the appointment of principal medical officer of the Allahabad Brigade to be Principal Medical Officer of Karachi Brigade. Lieutenant-Colonel C. H. Bedford, Bengal Presidency, has been granted six months' leave of absence from India by the Home Department. Lieutenant-Colonel J. R. Adie has taken up duty as Chief Medical Officer in Charge of Malarial Fever Prevention in the Punjab. Lieutenant-Colonel M. A. Ker has been transferred to the medical charge of the 2nd Gurkha Rifles in succession to Lieutenant-Colonel C. E. L. Gilbert appointed to the medical charge of the 26th Punjabis. Major A. E. Berry has been selected for appointment by H. E. the Commander-in-Chief in India as Specialist in Ophthalmology to the Fifth (Mhow) Division of the Southern Army. Major B. R. Chatterton, civil surgeon of Muzaffarpur, has arrived home on leave of absence. Major V. H. Roberts has taken up duty as District Plague Medical Officer of Rohtak District. Major R. G. Turner, civil surgeon of Gonda, has been granted privilege leave combined with furlough up to Jan. 14th next. H. E. the Governor of Bombay in Council has been pleased to appoint Major S. C. Evans to be Professor of Midwifery at the Grant Medical College, Bombay, and to hold medical charge of the Bai Motlibai and Sir D. M. Petit Hospitals. Captain G. A. Jolly has been appointed to officiate as Civil Surgeon of Mainpuri. The services of Captain R. T. Wells have been placed at the disposal of the Home Department. Captain C. A. Sprawson has been granted an extension of his leave of absence by the Secretary of State for India. Captain F. P. Mackie has been selected to officiate as Civil Surgeon of Bijnor. The services of Captain E. P. Mackie have been placed at the disposal of the Home Department. H.E. the Commander-in-Chief in India has appointed Captain G. C. L. Kerans to be Specialist in Ophthalmology to the Eighth (Lucknow) Division. Captain C. A. Gourlay, civil surgeon of Kamrup, has been permitted leave of absence home from India for 18 months. Captain W. S. Nealor has been appointed Civil Surgeon of Ahmednagar in succession to Captain A. Murphy. Captain C. J. Brierley, Bengal Presidency, has been granted six months' extension of his leave of absence by the Secretary of State for India. Major W. S. Willmore, civil surgeon of Mirzapur, has been deputed to the Central Research Institute at Kasauli for a course of instruction in clinical bacteriology. The services of Captain J. H. Horton, D.S.O., have been placed temporarily at the disposal of the Government of Bombay. Captain J. G. G. Swan, Bengal Presidency, has returned to India on the expiration of his leave of absence. Lieutenant E. H. V. Hodge has been appointed to the officiating Medical Charge of the 26th Punjabis.

TERRITORIAL FORCE.

Royal Army Medical Corps.

Eastern Mounted Brigade Field Ambulance: Lieutenant Oliver Smithson resigns his commission (dated Oct. 11th, 1911).

5th London Field Ambulance: John Pomeroy Grainger to be Lieutenant (dated Sept. 23rd, 1911).

3rd North Midland Field Ambulance: Major Howard H. C. Dent to be Lieutenant-Colonel (dated Sept. 5th, 1911).

1st Welsh Field Ambulance: Lieutenant John O'Sullivan to be Captain (dated June 19th, 1911).

Attached to Units other than Medical Units.—Captain George H. Goldsmith resigns his commission (dated Oct. 11th, 1911).

For attachment to Units other than Medical Units.—Surgeon-Captain William Reginald Eyton Williams, from the 4th Battalion, The Welsh Regiment, to be Captain (dated Oct. 11th, 1911).

THE TERRITORIAL DECORATION.

The King has conferred the Territorial Decoration upon the undermentioned officers of the Territorial Force:—

Royal Army Medical Corps.—Lieutenant-Colonel Archibald Kerr Chalmers, Sanitary Officer of the Lowland Territorial Division; Major Robert Rannie, attached to the 7th (Deeside Highland) Battalion, The Gordon Highlanders; Major Walter Alexander Atkinson, attached to the 21st (County of London) Battalion, The London Regiment (First Surrey Rifles); Major Walter Moffett Hamilton, attached to the 7th Battalion, The Lancashire Fusiliers; Major Charles Thomas Griffiths (Retired List); Captain Robert Thomson Ferguson (Retired List).

VOLUNTEER OFFICERS' DECORATION.

The King has conferred the Volunteer Officers' Decoration upon the undermentioned officer of the Territorial Force who has been duly recommended for the same under the terms of the Royal Warrant, dated July 25th, 1892:—

Royal Army Medical Corps.—Lieutenant-Colonel G. Sims Woodhead, Sanitary Service.

PRIZE DISTRIBUTION AT HASLAR HOSPITAL.

The course of instruction of the newly entered Acting Surgeons at Haslar was brought to a close on Oct. 10th. The prizes were distributed by Admiral Sir Arthur W. Moore, Commander-in-Chief. The gold medal was gained by Acting Surgeon V. L. Matthews of the London Hospital. The silver medal was awarded to Acting Surgeon R. A. Rankine of Guy's Hospital. Three Navy Regulation Pocket-cases—prizes for subjects in which instruction is given at Haslar—were awarded to Acting Surgeons R. A. Rankine, V. L. Matthews, and W. L. Cowardin. The following list shows the places gained by the combined marks of the London and Haslar examinations:—

		Marks.
Acting Surgeon	V. L. Matthews...	3716
,,	R. A. Rankine	3660
,,	Q. H. Richardson	3306
,,	W. L. Cowardin	3263
,,	H. White	3222
,,	L. A. Moncrieff...	3207
,,	A. C. Paterson	3154

The above gentlemen have now been confirmed in the rank of Surgeon, as stated in a foregoing paragraph.

HEALTH OF THE NAVY.

The annual report of the health of the Navy for 1910 has

just been issued as a Parliamentary paper. We hope in an early issue of THE LANCET to deal fully with this report, which shows a continuous improvement in the general health of the fleet as compared with the preceding five years.

THE NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on Oct. 10th, Sir W. Graham Greene, K.C.B., in the chair, the sum of £40 was distributed among the several applicants.

A complimentary dinner was given on Oct. 11th at the Grand Hotel, Trafalgar-square, London, to Captain F. M. Parry, R.A.M.C., late Adjutant Royal Army Medical Corps School of Instruction, Home Counties Division, by the officers of Territorial Royal Army Medical Corps Units in the Division. The chair was occupied by Colonel J. Turton, V.D.

Correspondence.

"Audi alteram partem."

THE ELECTION OF DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—Having after more than 35 years' residence in London as a general practitioner found it necessary to seek more healthful climatic conditions in my native county I had hoped to retire from public work, but in view of the Government Insurance Bill which so grossly attacks the rights and interests of general practitioners I have decided, at the request of numerous medical friends and supporters at former elections, to again offer myself as a candidate for a seat on the General Medical Council.

Another reason which has influenced me to accept nomination is that I think it most important to enter a protest against the attempt of the executive of the Association to capture all the seats reserved for Direct Representatives for England and Wales. If the Council and officials are permitted to use the financial and other resources of the Association in furthering the election of their nominees and to defeat other well-known members of the Association who for many years have borne the burden and heat of the day in the cause of medical reform—as was done at the last election, when my friend and former colleague on the General Medical Council, Mr. George Jackson, was defeated in his attempt to regain the seat he had so ably filled for five years—the independent candidate will be crushed out, freedom of choice on the part of the electors will no longer exist, and Direct Representation will be reduced to a silly burlesque.

I hope to have an early opportunity of presenting my views on current medical politics before the electors. Meantime I thank you in anticipation for your courtesy in publishing this communication.

I am, Sir, yours faithfully,
GEORGE BROWN,
Late Direct Representative for England and Wales on the General Medical Council.
Callington, Cornwall, Oct. 16th, 1911.

To the Editor of THE LANCET.

SIR,—As I have so recently been a candidate for election as a Direct Representative, when I polled within 200 votes of the successful candidate, I feel that any lengthy address is unnecessary now.

Having previously served on the Council from 1902 to 1907 I am thoroughly acquainted with the duties of the office, during which time I was a member of various important committees. One of the most important in my opinion amongst many matters requiring attention is that more stringent regulations should be adopted with regard to unqualified practice and quacks generally.

Any Act of Parliament which may be passed should contain a clause forbidding any colourable pretence being made of being a physician or surgeon. The necessity of some tangible return to the principle of modified pupillage is one which I have formerly urged on the Council, and should do so again. The necessity of more time being given to the purely professional side of the students' studies by allowing the scientific subjects to be taken elsewhere before entrance at the medical schools is an urgent one.

Having been the representative of my division (Plymouth) since the commencement of the representative meetings, I am well acquainted with the views of the British Medical Association with regard to the State Insurance Bill, and shall be prepared to support them if elected to the General Medical Council.

I am, Sir, yours faithfully,
GEORGE JACKSON, F.R.C.S. Eng.,
Late President, now Vice-President, South-Western Branch B.M. Association, Late Member of Medico-Political and other Central Committees of the Association.
Plymouth, Oct. 16th, 1911.

To the Editor of THE LANCET.

SIR,—With your permission, and in answer to several letters and inquiries I have received, I should like to state, through the medium of your columns, that I shall again be a candidate for one of the vacant seats on the General Medical Council.

I think the profession should have the opportunity of expressing its agreement or otherwise with the attempt which is now being made by the British Medical Association to monopolise the direct representation for those favoured by the council of the Association. I think the general body of members of the Association cannot quite realise the unfairness of the scheme under which their three candidates are now being put forward, and if the profession is foolish enough to ratify this scheme by returning the Association nominees, direct representation in England and Wales will be nothing less than a mockery.

I am, Sir, yours faithfully,
Leeds, Oct. 16th, 1911. ARTHUR HAWKYARD.

To the Editor of THE LANCET.

SIR,—I am joining Dr. George Brown and Dr. Hawkyard as candidates for the three vacancies on the General Medical Council. Our address will be published next week.

I am, Sir, yours faithfully,
Lower Edmonton, Oct. 18th, 1911. SIDNEY C. LAWRENCE.

CONDITIONS OF PRACTICE IN SOUTH AMERICA.

To the Editor of THE LANCET.

SIR,—In the issue of THE LANCET of August 26th, p. 657, appears an article on the conditions of medical practice in various countries of the world. In dealing with practice in the Argentine Republic the writer states that an examination in the Spanish language must be passed, and certain fees paid, before a foreign doctor is entitled to practise. This statement is certainly true, but is hardly calculated to give an accurate idea of conditions of practice in this country.

A foreign medical man is required to take the same course as the Argentine medical student, and as this course occupies seven years and includes some 30 examination it is not an undertaking which can be lightly embarked upon. It is true that a foreign practitioner is permitted to compress his examinations into a shorter period than seven years, but he cannot obtain exemption from any of the examinations. So many medical men have come out to this country under the impression that they can obtain permission to practise their profession without much difficulty that I think it advisable to make this statement of the true condition of affairs. Especially do I think this to be advisable after reading the somewhat incomplete statement in the article referred to.

Under the heading of "Brazil, South America," it is stated that in this country "the consent of the faculty of medicine and pharmacy must be obtained and certain small fees paid" before practice is permitted. This does not create a true impression of the state of affairs in that country. I understand from information obtained from medical men practising in Brazil that the difficulties put in the way of foreign practice are, if anything, greater than those existent in the Argentine. During the last few years very few foreign medical men have succeeded in establishing themselves in Brazil, and every discouragement is offered to those who attempt to do so.

The large number of qualified medical men turned out by the Universities of Rio de Janeiro and of Buenos Aires will not tend in the future to the lowering of demands made upon foreign doctors settling in South America. Although British medical men will always be courteously received, at any rate at the University of Buenos Aires, the demands made upon them will probably be even more exacting in the future than they are at the present moment. The Argentine Faculty of Medicine has learned the necessity of preventing the excessive immigration of foreign doctors, and one can hardly complain of the measure it has adopted in order to protect its own native practitioners.

I am, Sir, yours faithfully,

K. MACFARLANE WALKER, F.R.C.S. Eng.

Buenos Aires, Sept. 18th, 1911.

ANOTHER WAY OF DEALING WITH DEGENERATES.

To the Editor of THE LANCET.

SIR,—Will you allow me to offer for the consideration of your readers a few facts in support of my assertion, which Dr. Ewart has done me the honour to quote, that weakness of will, in proper circumstances, makes for morality and happiness. It is now about 13 years since I first began to call attention on every occasion to the evil we were permitting in leaving the feeble-minded at large and at liberty to propagate their species. I have tried to show that our very tenderness for the weak and suffering has, by its interference with the laws of natural selection, increased this evil, since we are keeping alive all weaklings whom by any means we can keep alive. At the same time I was anxious to show that there were legitimate and practical methods of dealing with the feeble-minded. Our colony at Sandlebridge has succeeded, not beyond our hopes, but beyond the expectation of those who have watched our experiment. Building on the weakness of will which is common to all feeble-minded people we laid our plans accordingly; we said that we would admit only children under the age of 13, and that we would make them so happy, we would so train them, that they should never leave us. The feeble-minded have, as a rule, no ideas except those that are suggested to them; we have suggested to them unceasingly the idea that they are at home and that if they will behave themselves they shall never be turned out. For the results we have now in our colony 232 boys and girls. These are what remain out of 284 admitted during ten years. Of the 52 not now with us, some were probation cases and were discharged after a few weeks' residence as too idiotic or too severely invalided to be suitable cases for us; a few have become insane and have been transferred to asylums; 6 have died; the remainder, 13 in number, represent our failures; they are young men and women who have been persuaded by bad parents to leave us after they had been trained. A very slight alteration in the law would give us powers to withstand such parents as these. Of those now with us, 74 are between the ages of 16 and 23. Of course, more of them are young men than young women; there are so many more boys than girls of this type. They are still simple, good children; subject, as are all children, to outbreaks of temper at times, but generally proving, by their behaviour and their contented happiness, that our method of dealing with them is, in itself, quite sufficient and efficient. We have an able doctor who looks after their health; we pay great attention to their diet and to all points of behaviour and manners. Our lads are engaged in farm and garden work; or they are busy with the carpenter or the plumber; or they are trained to be house-boys, and to do in the boys' houses what the girls do in the girls' houses. Our girls are busied with sewing, knitting, house and laundry work. From the moment we take them into the school for little children, we keep in view three essential considerations: our children must be good and happy; they must be permanently detained that they may never themselves have children; they must be so trained as to reach their greatest possible industrial value. I think anyone who will take the trouble personally to consider our work will realise that we are achieving our aims. I think it would also be admitted, by anyone visiting us, that no other means are necessary for the safeguarding of the national health than an extension of those we have adopted.

I am, Sir, yours faithfully,

Manchester, Oct. 11th, 1911. MARY DENDY.

THE RELATION OF THE ORGANIC PHOSPHORUS CONTENT OF VARIOUS DIETS TO DISEASES OF NUTRITION, PARTICULARLY BERI-BERI.

To the Editor of THE LANCET.

SIR,—In an annotation with the above title contained in your issue of the 14th inst. it is stated that "the disease, as it occurs in the Far East, is now generally recognised to be due to a dietary of white rice from which the pericarp of the grain has been removed in the process of 'polishing' or milling (the pericarp containing the bulk of the phosphates and other salts)." I venture to think that this statement requires modification, for it can only be explained on the assumption that the writer is not acquainted with the published works on "The Etiology of Beri-beri," by Dr. A. T. Stanton and myself, and with the botanical structure of the fruit (a caryopsis) of the rice plant. Eijkman originally stated that removal of the pericarp from the rice-grain rendered the product harmful, and believed that the pericarp contained an antidote to a poison contained in the grain. Schaumann copied this statement so far as the pericarp is concerned, but believed that its removal deprived the grain of organic phosphorus compounds. Simpson and Edie have copied Schaumann's statement, hence its appearance in THE LANCET.

The pericarp is a thin, cellular, protective structure, the removal of which does not in any way impair the nutritive value of the grain, and the pericarp does not contain the bulk of the phosphates and other salts. Parboiled rice which has been "pearled" once is free from pericarp, and, cooked in the ordinary way, can never produce beri-beri. The layers subjacent to the pericarp (the sub-pericarpal layers) are the important ones, and it is the retention of these layers which is essential for the prevention of beri-beri among peoples whose staple of diet is rice.

The plates published in 1911 in the report, entitled "The Etiology of Beri-beri" (No. 12 of the Studies from the Institute for Medical Research, Kuala Lumpur, F.M.S.), and which were drawn from actual sections, show clearly the retention of the important subpericarpal layers in an unpolished (harmless) rice and their absence from a polished (harmful) rice. In addition, the plates show that the contents of the cells in the subpericarpal layers differ from those of the other cells of the endosperm.

In direct proportion to the extent to which the subpericarpal layers are removed in the process of polishing is the phosphorus-content of the grain diminished, and so likewise is the content in respect of other substances, such as proteins, fats, and salts. The phosphorus-content serves, therefore, as an indicator of the extent to which rice has been polished, and this is all we have ever claimed for it. The quantitative estimation of any of the other constituents of the grain might serve this purpose equally well, but estimations of proteins, fats, and ash would not be satisfactory for reasons stated in our report.

The beri-beri producing power of a rice when consumed as the staple of diet is in inverse proportion to its phosphorus-content and in direct proportion to the extent to which it has been polished, but there is no evidence to show that white rice is harmful because of a diminished phosphorus-content. On p. 56 of "The Etiology of Beri-beri" we mention the case of a parboiled rice which after extraction with 94 per cent. alcohol was proved harmful; the phosphorus-content of this rice before and after extraction differed only to an extent compatible with the range of experimental error. The other experimental evidence, which we have stated in detail, proves that a deficiency of organic phosphorus compounds is not the cause of beri-beri.

We have dealt at length with some of the errors into which Dr. Schaumann has fallen; he has certainly produced no evidence, experimental or otherwise, to justify his conclusion that tropical beri-beri is due to deficiency of organic phosphorus compounds in the diet. Dr. Simpson and Mr. Edie have translated and abstracted Dr. Schaumann's book; their own experiments add nothing new to our knowledge of the subject.

The present problem is one for solution by a physiological chemist who shall isolate and identify the substance of high physiological importance contained in the subpericarpal layers. He will find a substance, which

is not a protein, which will not contain phosphorus, and the presence of which in extremely small amounts is necessary for the prevention of beri-beri. The etiology of other diseases may or may not be explained on a basis similar to that which explains the etiology of beri-beri, but in the present state of our knowledge wide-sweeping statements such as have been made are to be deprecated. Certain facts have been determined; apply these facts and true or tropical beri-beri must cease to exist. Other facts can now be determined, and until that work has been accomplished no conclusions other than those we have arrived at are possible or permissible. I am, Sir, yours faithfully,

H. FRASER,
Director, Institute for Medical Research,
Oct. 16th, 1911. Kuala Lumpur, F.M.S.

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—In the letter of your correspondent, Mr. Albert Benthall, there occurs this passage: "The suggestion of payment by fee for each attendance is a delightful dream, but purely Utopian and out of the range of practical politics, as it would land the Insurance Fund in bankruptcy in the first year." I would earnestly ask the profession to consider what this means. It is that the Bill does not provide money enough to pay medical men for the work it imposes upon them. The "magnificence" of this Bill would appear to consist in vicarious charity at the expense of the medical profession. I am, Sir, yours faithfully,

ALFRED E. A. LOOSELY.
New Cavendish-street, W., Oct. 15th, 1911.

To the Editor of THE LANCET.

SIR,—The question cropped up at a meeting of our medical society, viz., in the event of the Insurance Bill passing into law how much are we as practitioners going to charge for attendance on wife and family? A suggestion was put forward that 5*s*. per member per annum was a reasonable figure. What do other practitioners or other societies think—Should not mileage be considered? We must be prepared.—I am, Sir, yours faithfully,

T. L. ASHFORTH.
Woodlands, near Doncaster, Oct. 12th, 1911.

STRANGULATION WITHOUT VOMITING AND GENERAL PERITONITIS FOLLOWING PARESIS OF THE GUT.

To the Editor of THE LANCET.

SIR,—In your issue dated Sept. 23rd you commented on the absence of vomiting during strangulation. You mentioned that Sir James Paget regarded vomiting as one of the most constant symptoms, while another eminent authority, not so dogmatic, assigned it as being almost constant. In view of this conflicting testimony, the history of the following case, under the care of Mr. Jalland in the York County Hospital, may be of interest.

The patient was a male, aged 54. On admission his condition was good; temperature normal; pulse slow and full, having a frequency of 60; respirations numbered 20 to the minute. The patient complained of pain in the left inguinal region and showed tenderness over a swelling in that locality; in fact, a left femoral hernia presented. He maintained that the lump was always there; in any case it was absolutely irreducible, stony hard, with absence of impulse on coughing, and dulness on percussion. The bowels had acted during the morning, and with an enema a good result was obtained, together with flatus, the important item being that at no time had the patient vomited, though he stated he had a tendency to retch. The doctor who attended the patient prior to admission stated that the hernia was always reducible, and in view of this I cut into the swelling only to find a strangulated piece of gut with a fair amount of serous fluid in the sac. These facts show clearly that strangulation can exist without any history of vomiting; in fact, immediate operation was prompted by the reducible becoming irreducible.

Now this is only the initial stage of this unfortunate case. To continue. The strangulated bowel, having been washed in hot saline solution and marked with a small catgut stitch in the serous coat, was returned into the abdomen and a radical cure performed. After this, the patient's condition improved—e.g., he lost the tendency to retch, passed flatus, and felt fairly comfortable for at least 12 hours. This was followed by pain and tenderness in the left hypochondriac and lumbar regions. These increased both in severity and amplitude, and soon the whole abdomen became rigid; at the same time the patient acquired that pinched look so characteristic of peritonitis. It is worthy of note to state that the pulse had not altered, still maintaining its full character; and, indeed, it is notorious that in some cases of general peritonitis following a gangrenous appendix, you have the same class of pulse—one of almost normal frequency and good volume—probably due to a reflex inhibition of the heart or to direct stimulation of the vagi by the toxins circulating in the system. This stimulation is probably succeeded by paralysis, thus accounting for the running character that the pulse assumes before death.

To continue. Prompted by the foregoing considerations a laparotomy was performed 28 hours after the first operation and general peritonitis was discovered. However, the returned strangulated portion was absolutely indistinguishable from the rest of the gut. The whole gut was distended with gas, due no doubt to paresis following either the anæsthetic or an injured intestine; and in spite of all that was done, *mors* took place within two days.

The chain of events in this case is no doubt open to controversy, but this much is certain—that strangulation may exist without vomiting. The general peritonitis can only be explained by the transudate of pyogenic organisms through a paralysed gut.—I am, Sir, yours faithfully,

S. F. A. CHARLES, M.D.,
York, Oct. 9th, 1911. House Surgeon, County Hospital, York.

THE VIABILITY OF HUMAN CARCINOMA IN ANIMALS.

To the Editor of THE LANCET.

SIR,—In connexion with this question and in reference to the recent paper in your columns by Major C. L. Williams, I.M.S.,[1] may I mention that I was able, as shown in a similar series of experiments published in 1908,[2] to find mitoses after 16 days and well-preserved cells after seven weeks in pieces implanted into monkeys and mitoses after five days even in the frog. I think, as there stated, that there is much difference in the vitality of different tumours, or even parts of tumours, when transplanted into alien soil.

I am, Sir, yours faithfully,

A. S. GRÜNBAUM.
University of Leeds School of Medicine, Oct. 13th, 1911.

NOTE ON TWO CASES OF TUMOUR OF THE PREFRONTAL LOBE IN CRIMINALS.

To the Editor of THE LANCET.

SIR,—In regard to Dr. Tait's queries regarding the cases of prefrontal tumour published by me in THE LANCET of Oct. 7th, I find from my notes that the first patient was right-handed; I am not sure about the second. In the first case a small area of the cortex of the inferior frontal convolution about the anterior limb of the fissure of Sylvius appeared to the naked eye to be normal (it was not, however, examined histologically). The absence of aphasic symptoms would thus fit in very well with the apparent escape of the motor speech-centre.

I am, Sir, yours faithfully,

H.M. Prison, Holloway, Oct. 14th, 1911. W. C. SULLIVAN.

THE NOMENCLATURE OF SPINAL DEFORMITIES.

To the Editor of THE LANCET.

SIR,—Mr. Kellett Smith's letter unfortunately only adds to the confusion.

1. He states that a lateral curvature passes through three distinct stages, and then insists that the first of these three distinct stages must not be called scoliosis. One of the

[1] THE LANCET, vol. ii., 1911, p. 938.
[2] Journal of Pathology, vol. xii., p. 130.

objects of my letter was to emphasise the fact that the terms "lateral curvature" and "scoliosis" are synonymous.

2. He states that in the first stage the spine assumes a lateral curve without any rotation, and he applies to this variety of lateral curvature, which, he says, must not be called scoliosis, the term "lateral deviation"; yet as Lovett[1] has shown, lateral deviation never takes place without rotation, and W. Adams[2] even held that in lateral curvature the rotation takes place first and the lateral deviation afterwards.

3. He states that in the second stage, although the spine may be to some extent straightened out by posture, some of the deformity still remains owing to *bony displacement being maintained by muscular and ligamentous shortening*. But by the time there is any deformity that cannot be made to disappear by posture, the vertebræ and intervertebral discs have become wedge-shaped, and the plane of the superior and inferior articular processes altered in direction.

And finally, at the beginning of his letter Mr. Kellett Smith states that his three stages are distinct, and at the end of it, that they pass imperceptibly one into the other.

Now, Sir, what the practitioner wants to know, is whether there is bony deformity or not. If there is no bony deformity, then with plenty of fresh air and out-door exercise, with attention to posture and dress, the patient may completely recover; but if there is any bony deformity, then the practitioner may be certain that unless a proper course of treatment be adopted, the deformity will progress. How is he to tell if there is bony deformity? By making the patient, stripped to expose the iliac crests, bend down to the ground, thus completely flexing the spine. If the practitioner then observes the "horizon" of the back from different levels—I thank Mr. Kellett Smith for that valuable metaphor—he will at once notice any bony deformity; the ribs, or the erector spinæ in the lumbar region, will project more on one side than on the other.

If there is no projection on one side more than the other then the case is one of "postural scoliosis." If there is projection the case is one of "bony scoliosis." If the projection is only just enough to be noticed at all it is described as a "trace"; if it is easily seen it is described as "moderate"; if it is so noticeable as to be obvious to the untrained eye it is described as "severe"; and the very worst cases of all are described as "extreme." These four degrees are not distinct, but clinically they serve their purpose. The division into postural and bony scoliosis is, however, absolutely distinct, and I cannot too strongly emphasise its importance.

I am, Sir, yours faithfully,

Harley-street, W., Oct. 16th, 1911. PAUL B. ROTH.

IODISED PHENOL IN CHRONIC DISCHARGING SINUSES.

To the Editor of THE LANCET.

SIR,—Every surgeon knows the difficulty of curing a chronic discharging sinus. For some years I have treated, without a single failure or recurrence, long-standing as well as recent cases by the application of iodised phenol on a probe dressed with cotton-wool—Playfair's for large sinuses, an ordinary probe for small ones. These cases range from old tubercular hip sinuses down to small abscess sacs. In one case there were seven large and deep sinuses; in another the bare femur was struck by the probe. I once treated a Bartholinian abscess by dressing the sac in this way immediately after letting out the pus, and the wound healed without further discharge and without pain. Most cases require three or four dressings at intervals of a fortnight or three weeks. Contact is continued for about five minutes.

I am, Sir, yours faithfully,

DIGBY F. B. COTES, M.R.C.S. Eng.

Burton-on-Trent, Oct. 11th, 1911.

[1] Robert W. Lovett: The Mechanism of the Normal Spine and its Relation to Scoliosis, Boston Medical and Surgical Journal, vol. cliii., No. 13, pp. 349–358, Sept. 28th, 1905.

[2] W. Adams: Lectures on Curvature of the Spine, second edition, p. 90.

UNIVERSITY OF GLASGOW.—Mr. James Eric Paterson has gained the Brunton memorial prize of £10 awarded to the most distinguished graduate in medicine of the year.—The recently founded Struthers medal and prize in anatomy have been awarded to Dr. William B. M. Martin, Carnegie Fellow.

THE CORONATION DURBAR AT DELHI.

(FROM A SPECIAL CORRESPONDENT.)

Sanitation Arrangements.

IN view of the danger of epidemic disease, chiefly plague, cholera, or small-pox, occurring in and around the Delhi district during the Coronation Durbar, owing to the assembly of very large numbers of persons from different areas in India, in some of which the above diseases are constantly prevalent, and in view of the insufficiency of the ordinary civil law provisions for checking the outbreak and spread of these diseases, the following temporary regulations have been drawn up by the local government of the United Provinces under the Epidemic Diseases Act (III. of 1897). These regulations apply to the area in which the Delhi Durbar Act is in force, but do not apply within the limits of the Delhi municipality, except the civil station ward and that portion bounded by the Ridge, the Grand Trunk Road, and the Najafgarh Canal.

Administrative arrangements.—The general control of the epidemic disease operations will vest in the Coronation Durbar Committee. The district magistrate, or a magistrate of the first class deputed by him in writing, will be the Durbar executive epidemic diseases officer for the area contained within the civil ward of Delhi municipality, and the executive sanitary officer and the special magistrate for the Durbar will hold the same functions for the rest of the area to which the notification applies, subject to the control of the Durbar Committee. The Durbar Committee will appoint an executive epidemic diseases officer for every provincial camp or other suitable area, and a Durbar health officer and Durbar plague medical officer to supervise medical arrangements in connexion with epidemic diseases and plague within the whole Durbar area. The committee will also appoint a health officer for every provincial camp, under the general control of the administrative medical and sanitary officer for the Durbar. There will be one or more segregation hospitals for the Durbar area, and an observation hut or tent for the detention of suspicious cases in every central or provincial camp. No persons shall be removed to a segregation hospital without the sanction of a Durbar plague medical officer or health officer.

Sanitary precautions.—Power is given to a plague medical and health officer to order the compulsory cleansing of any house, hut, or tent which is in such an insanitary condition as to make the inmates specially liable to an attack of plague, cholera, or small-pox.

Notification of sickness and death.—Rules are laid down for the notification to the health officer of each camp of cases of sickness or death from contagious or infectious disease, or of excessive mortality among rats, and the health officer will report to the medical and sanitary administrative officer of the foreign and administrative camp.

Medical examination.—For the purpose of inquiring into suspected cases of plague, cholera, or small-pox a plague medical or health officer, or an officer not below the rank of assistant surgeon, deputed by him, is empowered to enter any place, with due precautions to safeguard as far as possible the social customs of the occupants. If possible the officer in question shall give an opportunity to the principal adult member of the family concerned to be present at the visit, and shall when possible be accompanied by the executive epidemic diseases officer of the camp. It is laid down that the inspection of women shall be conducted in accordance with the customs of the country, and no female shall be required to submit to examination by any other agency than that of a female medical officer or *dhai* (native female nurse). No compulsory corpse inspection for the purpose of discovering cases of plague, cholera, or small-pox is allowed, but the relatives of the deceased may submit a dead body to a plague medical or health officer for examination, if they wish to avoid the death being treated as due to one or other of the above diseases.

Removals to hospital and medical attendance.—In cases of plague, cholera, or small-pox, if the patient is unwilling to use a hospital, he may be removed to a suitable place where he and his attendants can be properly segregated; or if the place which the patient is occupying is suitable, segregation may be carried out there, subject to the sanction of the executive officer of the camp or area concerned. The opinion of a plague medical or health officer as to whether a place is or is

not suitable for isolation shall be final. No patient who has not a fair chance of recovery shall be removed except at the express wish of his friends. In all other cases patients may be removed compulsorily to a segregation hospital. Proper *purdah* arrangements will be maintained in removing *purdah nashin* persons to hospital and keeping them there. At least two friends may be permitted to attend on a patient. Patients will also be at liberty to employ *vaids* or *hakims* (native medical attendants) in preference to Government medical officers, and to receive visits from religious instructors, subject to the sanitary control of the plague medical or health officer.

Treatment of contacts.—Immediate attendants on a sick person are to be subject to the same isolation as a patient, and provision is made for the removal to a segregation hospital for 10 days, if a Durbar plague medical officer thinks it advisable, of all attendants on a sick person and other contacts. A daily inspection for 10 days may be substituted for segregation at the discretion of a Durbar plague medical or health officer.

Disinfection.—Powers are given to the plague medical and health officers for carrying out the disinfection of any place in which a case of plague, cholera, or small-pox has occurred or is suspected, and the disinfection and destruction of bedding, clothing, and articles of a similar nature, subject to due precaution for protecting the privacy of female members of the family concerned. Any place or any article adjacent to a place in which a case or suspected case of plague, cholera, or small-pox has occurred, and any other place or other articles in danger of infection may also be disinfected by a plague medical or health officer. If disinfection cannot be satisfactorily effected otherwise, the medical officer, with the sanction of the Durbar executive epidemic diseases officer concerned, may burn or otherwise demolish a hut or other temporary structure, and similarly he may destroy contaminated clothing or bedding.

Evacuation.—In addition to the evacuation of actually infected places, evacuation shall be compulsory also in the case of places suspected by a plague medical or health officer to be infected. Accommodation for persons so removed shall, if necessary, be supplied in suitable places. No places so evacuated shall be reoccupied without the sanction of a plague medical or health officer. All property may be removed from an evacuated place by the owner subject to disinfection. If the owner declines to remove it it will remain at his risk.

Disposal of corpses.—Rules are laid down for the burning of corpses, in cases where cremation is the custom, at the usual burning ghat or other isolated locality, and for the burial six feet deep of corpses in other cases.

Compensation.—The Durbar epidemic diseases executive officer concerned may pay compensation to any person who has sustained substantial loss or damage by reason of anything done under these regulations.

Duty of compliance.—Every person to whom an order is given by any officer empowered to act under these regulations, such order being in accordance with the regulations, is bound to obey that order.

LONDON SCHOOL OF TROPICAL MEDICINE.—The annual school dinner of the London School of Tropical Medicine was held on Oct. 17th, at Princes' Restaurant under the chairmanship of Dr. M. Cameron Blair, senior sanitary officer, Northern Nigeria. The toast of "The School" was proposed by Surgeon-General A. M. Branfoot, C.I.E., I.M.S., who paid a warm tribute to the part which was played by Mr. Chamberlain in the establishment of the institution. He referred to the progress which the school has made since its foundation 12 years ago. During this time 1238 students have passed through the school. The toast was acknowledged by the chairman and by Sir Patrick Manson, who in a humorous speech referred to the proposed extension of residential accommodation for students, and to the forthcoming issue of a Journal of the London School of Tropical Medicine. The toast of "The Guests" was proposed by Captain A. W. Clarke. Director-General Sir James Porter, in his reply, touched on the progress which has been made with the scheme for the new Naval Medical School at Greenwich, and indicated that the school would probably open in a small way early next year. "The Health of the Chairman" was proposed by Mr. James Cantlie, and was warmly received.

SOME REFLECTIONS ON THE INTERNATIONAL HYGIENE EXHIBITION AT DRESDEN.

(FROM OUR OWN CORRESPONDENT.)

THE British Government refused for many months to recognise the educational importance of the International Hygiene Exhibition. All attempts to impress on the various Ministers that a vast difference existed between this exhibition and every other exhibition yet organised fell upon deaf ears, and even the idea that a British participation might have a political significance was not entertained for one moment. In May the great organisation opened its doors in expectancy, but not even the sanguine administration had the pluck to anticipate such success as has since been achieved. Success in every direction has attended their endeavours, and we may congratulate ourselves that we share in this success.

There can be no doubt that a very strong feeling was rampant toward the end of August and during the early part of September on the subject of war. Every action of England was analysed with scrutiny, and a certain class of German citizens interpreted each sign as a further signal of hatred and unfriendly feeling of our country towards Germany. The very presence of a British pavilion at the Dresden Exhibition sufficed to counteract a fair amount of this bad feeling, not only in Saxony, but all over the empire, since Germans flocked in surprising numbers to the world's great educational effort. No more crushing denial to the rumour that England and Germany were antagonistic could be forthcoming than the fact that while France held a corner at the end of the beautiful Hercules Allee, for the first time taking part at a German exhibition since the Franco-Prussian War, Great Britain had its serious little hall guarding the entrance to the Fest Platz, and the men of science of England were constantly offering a welcome to the German people in the pavilion dedicated to the preservation of life. The administration of the exhibition recognised from the first what a gap would have been created if our country had been absent, and the warmth of the welcome on the part of the Germans to the British Committee and its representatives indicates that while political feeling may engender a bitter feeling against us as a nation, this feeling will never affect us as individuals as long as we do not give due cause.

Over five millions have paid their way through the turnstiles. These number came from near and from far, not with the idea of spending a good time in roundabouts, scenic railways, and the like, but with the intense purpose of learning something about health. The pavilions closed throughout the season at dusk, but not later than 7. During September, as the days drew in, the people were turned out of the halls, at first at 6.30, then at 6, and then at 5.30 P.M., and as the attendants cleared the pavilions the people inquired in almost despair where they could go save to the three or four pleasure halls. It was found advisable to light the popular pavilion with electricity and to keep it open until 10 in order to satisfy the public. On Sundays, when the crowds became denser than ever, the halls were so full that it was difficult to worm one's way into any of them. And yet they held firmly to their purpose and strained to see what was placed on show.

What the People Learned.

What did these masses learn? That their mission was not merely pretence or sight-seeing is proved by the fact that even when the crowd was at its height the Statistical Section was practically empty. The populace could not understand that. The Hall, "Der Mensch" (The Human Being), formed the chief attraction and the second was the Historical Section. In the former, for the first time in their lives, the uninitiated found themselves face to face with themselves. It would be too much to expect that they learned even elementary physiology, although the material exhibited was sufficient to give a clear insight into physiology of a somewhat advanced type. But the great mass saw and began to think. Simple lessons of the best way to carry out every-day problems, which are usually carried out wrongly, were driven completely home, but not all. Besides, the ordinary lesson on anatomy or physiology given to an unprepared individual

tends to leave the impression that life hangs on a thread, that the machine is so delicate, so complicated, and so much dependent on tiny arrangements, that the man dare scarcely move lest the whole machine refuses to act. Not so in "Der Mensch." The populace were able to measure the enormous power exercised by the heart 72 times in a minute, by the jaws when a nut has to be cracked, by the metabolism when a meal has been swallowed, and they learnt that all this goes on without the windows of the house breaking. They learned, too, that the body in health is far stronger than they had imagined, and they realised that each mechanism is so exact and so well planned that, granted a fairly reasonable treatment, things right themselves without much trouble. Not only were a number of the *noxæ* which might prove serious to the mechanism recognised, but above all the masses learned that the charlatan who talks mysteriously of the body and its functions knows nothing at all about it and must be dangerous. As a graphic demonstration of the dangers of quackery the Hygiene Exhibition was superb.

Next the masses learned that knowledge was possessed to a high degree in ancient times, and that this knowledge was lost in the middle ages. They saw how laborious was the work of building up again knowledge which had been scattered to the winds, and how much of the dangers and defects of our modern life are the results of our absurd habits and our ignorant ways. An open-mouthed gaze was seen repeatedly when the uneducated visitor was placed in front of the modern plant devised for the treatment of sewage, or the recent researches in illuminating, or even in the section dealing with infective diseases. Much was, no doubt, wrongly interpreted, but this is of little moment, as long as great principles were driven home.

The Exhibition and the Expert.

A different tale naturally applies to the expert, who found so much to study in his own line that days and even weeks were spent in one hall. Here was a record of all that modern investigations had revealed, while in the historical section the development of that branch of science in which he works found expression. Practical lessons were supplemented by theoretical ones, until, armed with a stack of catalogues and pamphlets, the expert left the exhibition a wiser, a wealthier, and perhaps a happier man. At times a municipality determined to employ a different method of dealing with house refuse or of disposing of the sewage. In these cases the experts were sent to study, not only what the Germans had exhibited in well-nigh perfect form, but also what each nation had to say of the various methods. A constant stream of expert visitors sought interviews with those in charge of the pavilions to inquire what the latter had to tell them, what publications were to be had on the special subject, and how further details could be acquired. School authorities compared notes, and the one set the other thinking. And so in every branch of hygiene. The seekers after truth and after human ingenuity came from every nation of the world, including England.

Our own pavilion met the same fate as the other halls in this respect. A considerable demand was made for a general account of the public health measures in our great cities. School children were among those who asked for pamphlets on general and special subjects, often without any distinct idea of what could be produced, but always with a veritable hunger for some form of knowledge. A striking observation could be made in each of the halls. While the mere man in the street wandered about, taking in what happened to present itself and what appealed to his mind as being interesting, the expert deliberately sought out exhibits bearing on his own subject, and armed with notebooks wrote pages on pages in order that nothing might be forgotten. The exhibits themselves frequently gave the impetus for further search, and then brochures, catalogues, and other publications were produced, until all the forthcoming details were found and duly catalogued in the notebook. To this he wished to add more, and so penetrating into the inner sanctum of the chief of the section, where such existed, he directed a bombardment of questions, all aimed at laying a foundation to a comprehensive knowledge of the matter in hand. Those who were unfortunate enough to be limited as far as time was concerned were compelled to satisfy themselves with headings, without details, and even in such cases the impressions would suffice to give a living colour to the subject.

Success of the Exhibition: Permanent Museum of Hygiene.

In general, the verdict of the expert, unanimously expressed, was that the food for study offered was well-nigh inexhaustible, and that the great pity of the thing was that such a collection should be distributed after the spell of a few months. This verdict, supported by the result of an excellent business management and favourable meteorological conditions, has led to a scheme being set up for the retention of at least a goodly part of this wonderful collection. The exhibition has been a brilliant financial success. Thanks to the foresight of the authorities heavy charges were made for space let to industrial firms. These charges appeared at first to be prohibitive, but time has proved that the sums spent were well invested in practically every case. It is indeed doubtful whether a flimsy firm exhibiting would have come out of the fire unscathed, but stable concerns rejoice that they had the courage of their opinions and participated at Dresden. Next, the great crowds brought grist to the mill, and the returns of this undertaking may be gathered from the fact that one week-day evening toward the middle of October when the Popular Hall opened at 6.30 with an extra entrance fee of 6*d*., over 3000 persons paid this fee within a single hour. The result was that long before the exhibition was closed there was a substantial profit. According to previous arrangements a material balance was to be utilised for the purpose of creating a permanent museum of hygiene. As time passed, it became clear that the authorities would be enabled to carry out the permanent museum scheme on a large scale. The site is still undetermined, and will depend on the amount which the organisers are prepared to spend on the building. However, Dresden is the most probable place. Next, the idea has been evolved that the whole will be more educative and more valuable, if set up as a historical representation of what is known of hygienic undertakings from the prehistoric times up to the year 1911. The basis will be those objects which have been specially made in the Historical Section. Of the 20,000 or so objects contained in this section, a good proportion have been created in the laboratories and workshops of the administration. Professor Sudhoff, Dr. Neustätter, and Mr. Kohl, assisted by a large army of experts, have evolved material which has only been guessed at before. Old manuscripts, pictures, broken odds and ends have been utilised for this purpose, and the marvellous models and schemes owe their existence to the great ingenuity of these able men. Next, the administration has wisely examined every object in all the halls, and has sought to acquire the things which would supplement the collection, more especially in regard to the modern development of hygiene. In many instances these objects have been dedicated. It is worthy of note that the British Committee, in recognition of the excellent objects of the scheme and in the wish to show its appreciation of the treatment meted out to it by the administration during the difficult period of its existence, has determined to give those exhibits which it has prepared specially for the British Section. In other cases the administration is purchasing the exhibits, and in still others, where the originals cannot be acquired, the administration, with the exhibitors' permission, is reproducing the exhibits either in model or in pictorial form. It is difficult to conceive at this stage the proportions of the permanent museum. Judging from the thousands of objects which are being set aside for the purpose, either in virtue of actual possession, or gift, or reproduction, or of purchase, the building will have to be the largest ever set aside for a museum.

Given that the educational value to student, expert, man in the street, and even yokel, of the International Hygiene Exhibition has been greater than can be measured in a few sentences, what will be the value of this future museum, which can easily be kept up to date year by year, for posterity? The place which the Popular Hall will take in the permanent museum does not appear to be quite clear. That it is to form a part, an important part, is certain, and tempting offers of purchase from the other side of the Atlantic have wisely been refused without hesitation, in view of the necessity of this collection for the greatest scientific nation in the world. The names of Dr. Luerssen, Dr. Ingelfinger, and of the members of their staff have become great through this colossal work. Splendid credit redounds to the names of the heads of the scientific departments—namely, Regierungsrat Dr. Weber of

the Kaiserliches Gesundheitsamt, Stabsarzt Dr. Xylander, Dr. Woithe, and Dr. Roessle. It is due to the excellent diplomatic and business capacities of Dr. Steinbach and Dr. Graupner that the running of the exhibition was so smooth and so successful. Many other names might well be added to the list of those who have contributed materially to the success of the most exceptional, the greatest, and the most scientific exhibition ever organised. Each has won his spurs. One other name, however, must be given—namely, that of Dr. Mallwitz, who has fought to popularise sport on hygienic lines and who has done wonders in a country in which sport is young. The Saxon Government has already recognised the value of the work done and has extended honours to the two Presidents. The one, Geheimer Kommerzienrat K. A. Lingner is now His Excellency, in recognition of his steadfast purpose in conceiving the plan and collecting the most skilled men of his country to carry it through. The other is a worthy scientist, a medical man of fame, Geheimer Medizinalrat Dr. Renk, who has been promoted to the title of Geheimer Rat. His general management of the scientific part of the undertaking was great. But with all the names of those who have deserved the thanks of the whole world, the chief thing about this undertaking is that the public has benefited by it to an extraordinary degree and those who did the work may reap their satisfaction by the appreciation of this fact.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday Fund.

THE collections this year have reached the record of £21,463, being £1212 more than in 1910. This growth of the fund is encouraging to the committee, as they are embarking on a very considerable extension of their work in the maintenance of a new home for consumptives. £10,000 will be distributed as usual among the hospitals and nursing societies of the city, the chief items being: General Hospital, £3150; Queen's Hospital, £2100; General Dispensary, £1040; Children's Hospital, £800; Eye Hospital, £350; Women's Hospital, £500; and Orthopædic Hospital, £300. Altogether, 27 charities participate.

An important event occurred on Oct. 14th, when the Lord Mayor, Alderman Bowater, laid the foundation-stone of a new home for consumptives at Romsley Hill, near Rubery. The site, which is a gift from an anonymous donor, is 25 acres in extent, about one-third being woodland. It is on the southern slope of a hill between the Lickey and Clent Hills, and has an altitude of 800 ft. At the ceremony, which was presided over by Alderman Hallewell Rogers, the President, a large number of gentlemen connected with the public life of the city and of workers belonging to the movement were present. The home is intended as a memorial to the late Sir William Cook, who was for many years chairman of the Hospital Saturday movement and also of the Health Committee. An ambitious scheme was prepared, the original plans providing for a large building with central administrative quarters and accommodation for patients on each side. At present a start is being made with the central block and with one wing providing accommodation for 30 beds, 16 for men and 14 for women. The cost is £14,000, but another wing can be added later at a cost of £4250, when the accommodation will be increased to 60 beds.

A Change of Name.

At a special meeting of the supporters of the Midland Counties Asylum it has been decided to alter the title of the charity to "The Midland Counties Institution: A Training Home for the Feeble-minded." It was felt that the word "asylum" applied to an institution for the care and training of the feeble-minded was undesirable and misleading. Since 1868, when it was founded, several changes have been made in its description in order to keep abreast of popular sentiment, the most important being the omission of the word "idiot." Funds are asked for to increase the accommodation and render possible the separation of the sexes.

Post-Graduate Classes.

Post-graduate demonstrations, open to any medical practitioner, will be held at the General and Queen's Hospitals for six weeks commencing Oct. 31st, and on Jan. 23rd, 1912, also for six weeks. The demonstrations will take place on Tuesdays at the General Hospital and on Fridays at the Queen's Hospital. Practitioners wishing to join must apply, enclosing the registration fee of 5*s*., to the honorary secretary, the Queen's Hospital, who will send the names of lecturers and subjects. A series of demonstrations on the Modern Methods of Diagnosis and Treatment of Consumption will be held at the City Sanatorium, Yardley-road, by the visiting physician (Dr. W. H. Wynn) on Wednesdays from Nov. 8th to Dec. 13th at 3 30 P.M. Special attention will be paid to the use of tuberculin in diagnosis and treatment.

Birmingham and District Provident Dispensary.

This institution, which has been established nearly three years, for some reason does not seem to succeed so well as it deserves. The promoters early sought the advice and good will of the profession, and the medical representation on the central committee is ample and a pattern for similar institutions elsewhere. The members are very unequally distributed among the medical staff. In certain quarters there has been some hostility, the reason for which is not apparent.

Oct. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Insurance Bill.

THE profession in and around Edinburgh seems to be maintaining a steadfast front with regard to this Bill. The Scottish branches of the British Medical Association have decided to hold a joint meeting in Edinburgh at the end of October, which, it is expected, will be addressed by Mr. J. Smith Whitaker and Dr. J. A. McDonald from the London headquarters of the Association.

Election of a Direct Representative for Scotland on the General Medical Council.

Dr. Norman Walker, whose five years' term of office as Direct Representative for Scotland upon the General Medical Council is now nearly completed, is offering himself for re-election, and his electioneering address will be found in the advertising columns of the present issue.

The Edinburgh Medical School.

With the beginning of this winter there are again changes in the medical curriculum at the Edinburgh Medical School. The student is now advised to begin his studies in summer instead of in winter. If he does so he is allowed to appear for the second professional examination—that is to say, for the subjects of anatomy and physiology—at the end of the second year of study. The third winter can thus be devoted to pathology, materia medica, and surgery. Fevers, diseases of children, mental diseases, diseases of the skin, ophthalmology, diseases of the throat, nose, and ear have all to be attended now during some time in the two last years, in addition to medicine, surgery, midwifery, public health, and medical jurisprudence. The student is no longer to be allowed to take the final examination in such sections as he chooses, but must take medicine, surgery, and midwifery together. It was found that the permission to take these subjects separately encouraged the undesirable system of cramming. A further regulation has been issued to the effect that every student must attend a course of tutorial instruction in physical examination, either before he clerks in the wards, or during his first term of attendance on clinical medicine.

Edinburgh School of Medicine for Women.

The number of students attending this school is maintained. The only changes in the teaching staff this winter are the appointment of Dr. Edwin Matthew as lecturer on systematic medicine in place of Dr. William Russell, resigned, and of Dr. G. L. Gulland as teacher in clinical medicine on his promotion to the full staff.

Changes in the Edinburgh Royal Infirmary.

Owing to the lamented death of Dr. Alexander Bruce there are changes this winter on the medical side of the Royal Infirmary which would not in ordinary course have taken place until next year. Dr. G. A. Gibson has moved into wards 30 and 33, Dr. W. Russell has moved into wards 29 and

30, Dr. Lovell Gulland has been promoted, from senior assistant physician, to wards 27 and 5, while Dr. J. J. Graham Brown has become senior assistant physician in charge of the incidental delirium ward No. 3. The new and recently appointed assistant physician is Dr. W. T. Ritchie.

Edinburgh Royal Medical Society.

This society is to have as its principal guest at the annual dinner this winter Professor Robert Saundby of Birmingham. Professor Saundby is an Edinburgh graduate and was a president of the society in the "seventies."

Inauguration Ceremony at Western Infirmary, Glasgow.

A new building in connexion with the Western Infirmary, consisting of a handsome pavilion with three wards, as well as a new clinical laboratory presented by an anonymous donor, was formally opened a few days ago by Sir James Barr, who took the opportunity to emphasise the need for research work with a view to the prevention of disease. At the same time he expressed the opinion that the new Insurance Bill, which he described as a great step in the downward path to Socialism and degeneracy, would encourage rather than prevent disease. The chairman of the infirmary, Sir Matthew Arthur, outlined the connexion of the Western Infirmary with the Glasgow Hospital for Skin Diseases from the year 1871, when an arrangement between the two institutions was arrived at whereby the outdoor cases were to be treated at the Skin Hospital, while two wards were to be set apart in the Western Infirmary for cases recommended from the Hospital for Skin Diseases for indoor treatment. After the death of Sir Thomas McCall Anderson in 1908 it was thought by the board of the Hospital for Skin Diseases that the two-fold object aimed at by the founders of the hospital—the gratuitous treatment of patients and the advancement of medical science—would be most effectively carried out by drawing closer the ties with the Western Infirmary and by the foundation of the McCall Anderson Memorial Lectureship in the University. The sum of £2500 was accordingly given by the Hospital for Skin Diseases to the University to endow the lectureship, and the remainder of the funds—£2300—was handed over to the infirmary for the endowment of beds. It was arranged that the dispensary work should be done in the Western Infirmary. The managers of the Western Infirmary welcomed the suggestion that one of the wards now in the new wing should be called the McCall Anderson's Memorial Ward, in grateful acknowledgement of Sir Thomas McCall Anderson's many services and in recognition of his distinguished career, and that the other should be called the A. B. Buchanan Memorial Ward, to associate it with the name of Sir Thomas McCall Anderson's colleague in the work of the Hospital for Skin Diseases during the early years of its existence. The third ward was due to the liberality of Mr. William Robertson, who gave £8500 to build and equip it, and a further sum of £3500 to provide an operating theatre.

Revised Regulation for the Carnegie Fees at Aberdeen University.

At a meeting of Aberdeen University Court, held on Oct. 10th, a communication from the Carnegie Trust was read stating that the demands for payments of class fees had considerably exceeded the available income, and it had become necessary to modify the scheme. In the case of present beneficiaries it was hoped to continue the payment of fees as formerly, but new beneficiaries would receive restricted benefits. The annual amount paid to the student of medicine would henceforward be £15, to be paid by means of coupons valued at £1 each, which, when signed by the beneficiary, would be accepted by the university authorities towards payment of ordinary class fees. There would be no value for fractions of a £; the beneficiary must himself pay the shillings in cash in case of guineas, and under no circumstances whatever was cash to be given in exchange for coupons or part thereof.

Aberdeen University Lecturer in Bio-Chemistry.

At a meeting of the Aberdeen University Court held on Oct. 10th, Mr. Edward S. Edie, M.A., B.Sc., was appointed lecturer in bio-chemistry in connexion with the physiological department of the University. Mr. Edie has been for some years director of chemical research in the Liverpool School of Tropical Medicine, and has done much valuable original work.

Opening of the University of St. Andrews.

The winter session of the University of St. Andrews was opened on Oct. 10th. In his opening address Principal Sir James Donaldson, in alluding to bursaries, said that money received in bursaries ought to be regarded as a sacred debt, and when the recipients attained to better circumstances they should apply the sum to the same noble purposes to which the original donors had dedicated the bursaries. In that way the students of a university should be, when they reached maturity, a great help to the university; they should show their interest in the working of it, and endeavour, when their means allowed, to establish facilities by which the able poor could obtain all the privileges of education.

Oct. 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Academy of Medicine in Ireland.

THE annual general meeting of the Royal Academy of Medicine was held last week to hear the report of the council and to elect officers and sectional councils. The report stated that during the past session, 1910–11, the Fellows of the Academy numbered 181, the members 20, associates 2, and student associates 8. These figures show a reduction of three Fellows and two members, with one additional associate. The attendances at the meetings during the past session amount to 817. Last year, owing to special circumstances, the number was only 692; the two previous sessions were 731 and 753. This points to an increased interest in the meetings of the Academy. The accounts show a balance to the credit of the Academy in the National Bank of £262 6*s.* 5*d.*, as against a credit balance last year of £255 9*s.* 7*d.*, showing a small increase of £6 16*s.* 10*d.* The following officers and councils were elected: President, Sir Charles B. Ball, Bart.; general secretary, J. Alfred Scott; secretary for foreign correspondence, Sir John Moore. Medical Section: President, Sir John Moore; council, J. Craig, W. R. Dawson, H. C. Drury, J. A. Matson, T. G. Moorhead, J. F. O'Carroll, G. Peacocke, F. C. Purser, W. A. Winter. Surgical Section: President, R. H. Woods; council, C. A. Ball, A. J. M. Blayney, L. G. Gunn, W. S. Haughton, S. S. Pringle, H. Stokes, R. A. Stoney, E. H. Taylor, and W. I. de C. Wheeler. Obstetrical Section: President, A. J. Horne; council, J. S. Ashe, G. Fitzgibbon, A. N. Holmes, H. Jellett, T. Neill, R. D. Purefoy, J. S. Sheill, A. Smith, B. A. Solomons, and E. H. Tweedy. Pathological Section: President, A. H. White; council, A. H. Benson, W. Boxwell, J. B. Coleman, L. G. Gunn, W. G. Harvey, T. G. Moorhead, T. T. O'Farrell, W. D. O'Kelly, and R. J. Rowlette. Section of Anatomy and Physiology: President, E. P. McLoughlin; council, B. J. Collingwood, A. F. Dixon, A. C. Geddes, T. P. C. Kirkpatrick, A. A. McConnell, and N. C. Rutherford. Section of State Medicine: President, M. J. Nolan; council, A. E. Boyd, T. P. C. Kirkpatrick, J. A. Matson, G. E. Nesbitt, G. R. S. Stritch, and W. A. Winter.

Pensions in the Poor-law Service.

Some notable examples have occurred lately of the niggardliness with which boards of guardians treat medical officers who, through age or disability, are forced to retire from service. Poor-law medical officers have no claim to a retiring allowance, but it is open to guardians to grant such allowance according to a certain scale. The officer must first resign, however, before the question can be discussed. In one union recently the guardians granted an allowance of £40 a year after 21 years' service, although they could have granted £55.

Death of Mr. J. H. Chapman, F.R.C.P. Irel.

The death occurred on Oct. 15th of Mr. J. H. Chapman, a well-known Dublin physician. For some months he had been seriously ill, so that his death was not unexpected. In his younger days Mr. Chapman was a keen cricketer and the best underhand bowler in Ireland of his time. He was President of the Leinster Cricket Club, and rarely missed a good cricket match in Dublin. Mr. Chapman enjoyed a large practice and held several public appointments. He had been for many years honorary secretary, and subsequently President, of the Irish Medical Association. His death will be widely regretted.

Death of Dr. John S. Cargin.

Sincere regret was felt in Belfast on the announcement of the sad death of Dr. J. S. Cargin, of Holland House, Seabank-road, Liscard, Cheshire, which took place in Chester Infirmary on Oct. 6th as the result of a motor accident on Sept. 18th at Penymynedd, a little Flintshire village between Hawarden and Hope. Dr. Cargin and a friend in a small two-seated car came into collision at a right-angled crossing with a large car travelling along the high road. The friend was killed instantly, and Dr. Cargin sustained a fractured skull and internal lesions from which he has since died. The occupants of the other car fortunately escaped with comparatively slight injuries. Dr. Cargin, who was an Ulsterman, was educated at the Royal School, Dungannon, and at Queen's College, Belfast, and graduated as M.B. of the Royal University in 1900, and M.D. in 1905. During the Boxer rising in China he saw service in Peking with English, German, and Russian colleagues, and received honourable mention. He went to Liscard about six years ago in succession to Dr. Bristowe. He was a member of the Wallasey Medical Society, and medical referee to a number of assurance societies. He was most popular with his patients. Dr. Cargin was buried at Dromore, co. Down, on Oct. 10th.

Scarlet Fever Epidemic in Portadown.

A mild epidemic of scarlet fever is at present prevalent in Portadown. There are now 50 cases of fever in the Lurgan workhouse fever hospital, chiefly from Portadown.

Midwives or "Handy Women."

At a meeting of the Cookstown board of guardians held on Oct. 14th a motion to appoint a midwife for Coagh was defeated by 16 to 13 votes, and a similar motion for Pomeroy district by 15 to 14, notwithstanding that the Local Government Board had requested the guardians to meet especially to do so, and that its medical inspector, Dr. B. O'Brien, attended and spoke in support of such appointments.

The Water Famine.

The rain still keeps away in the North of Ireland and the water famine every day is becoming more acute. In Londonderry the supply will last but a few days longer, and water is being hawked round that city to be used only for drinking or for preparing food. A mass meeting of the citizens has urged the corporation to go in for a large scheme, by which that city would be permanently relieved from the dread of famine. The city council at a meeting on Oct. 16th decided to adopt the "Cabry" scheme, which various engineers have advocated. The reservoir which supplies the town of Monaghan is almost empty. Many of the larger merchants and bakers now cart water from lakes adjoining that town. Holywood is also in a deplorable condition. The reason why things are not so bad in Belfast is that a few hundred feet below the surface there seems to be an inexhaustible supply of "Cromac" water, largely used by all the manufacturers, who generally have an artesian well sunk on their premises, which makes them largely independent of the city supply.

Oct. 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Wireless Telegraphy and Anæmia.

ADMIRABLE as is the new invention of wireless telegraphy, and great as are the services it renders, already certain inconvenient results are making themselves evident among its operators. A French medical man, Dr. Auber of Peyrelongue, has paid particular attention to this question, and he finds that the wireless telegraphy operators on battleships are prone to be affected with a mild anæmia. This anæmia he finds to be the result of a combination of causes of unequal importance, but whose effects are synergic. The ozone must not be incriminated in all cases in the presence of circumstances of a strictly professional nature, though the same cannot be said of the nitrogenous products. The most probable factor is the confinement rather than the many other defective conditions to which the *personnel* is subject. As the most effectual prophylactic measure Dr. Auber recommends an open-air installation in peace time.

First Aid in Paris.

Public assistance is organised in Paris in the town halls, at temporary posts, and by movable ambulance stations on the occasion of public displays, also in first aid stations established on the banks of the Seine and of the canals, to render service in cases of submersion, violent death, death from natural causes, and confinement in public places, as well as in cases of accident and illness. The director, M. Thoinot, a member of the Academy of Medicine, has published his report on the aid thus rendered during 1910–11. Aid was rendered in 1670 cases, of which 321 were in cases of submersion, as against 1526 cases with 352 submersions in 1909. Out of this number in 232 cases the submersion was less than a minute, in 22 more than a minute, in 35 two minutes, and in 3 more than ten minutes. The last three persons could not be resuscitated. At the first-aid stations in 30 town halls 268 cases of injury, and 12 cases of illness received attention. The station of the fifteenth arrondissement alone received 114 wounded. The stretchers of the different posts were used 661 times for transport to the morgue, the hospitals, or to homes, in cases of accident in the public thoroughfares.

Medical Reforms.

On the resumption of work in regard to the Budget on Oct. 10th M. Thomson, speaking on the question of the universities and their supplies, called the attention of his colleagues to the urgent need of reform in the medical curriculum. He insisted on the unsatisfactory state of the equipment of the clinics and laboratories, and added that the decrees reforming the medical curriculum, which were passed as far back as 1909, had not yet been put in force. M. Viviani also insisted on the necessity for arriving at a speedy settlement.

The French Congress of Surgery.

The twenty-fourth Congress of the French Association of Surgery was held in Paris from Oct. 2nd to 7th under the presidency of Professor Segond, who delivered a splendid opening address. The diagnosis and treatment of chronic appendicitis formed the first subject, which was opened with communications by M. Silhol and M. Walther of Paris. Dr. Laplace of Philadelphia discussed the subject from the operation standpoint. M. Lanz of Amsterdam, M. Sonnenberg of Berlin, M. Richelot of Paris, M. Boeckel of Strasburg, M. Tédenat and M. Forgue of Montpellier, M. de Farkas of Budapest, M. Broca of Paris, M. Delagenière of Mans, M. Phocas of Athens, and MM. Lejars, Bégouin, Lambret, Auvray, Reynés, Mauny, Vanvers, Reymond, Paul Delbet, and Maurice Cazin in succession discussed the subject, giving their own personal experiences. Among other subjects dealt with must be mentioned the work of M. Duvergey on phlebitis in the evolution of uterine fibroma; that of Dr. Jayle on conservative surgery of inflammatory lesions of the uterus and annexa in one operation of MM. Cathelin, Boulanger, and Grandjean on the hospital statistics of 1000 reno-vesical cystoscopic explorations; and of M. Buscarlet on the treatment of vesical tuberculosis by insolation. The second subject in the orders of the day was the treatment of acute peritonitis. Professor Hortmann, and Dr. Témoin made the opening communications. The discussion gave occasion to interesting communications from MM. Kirmisson, Forgue, Sonnenberg, Depage, Montprofit, Delagenière, Thiéry, Auvray, Chibret, Savariaud, Vidal, Lecène, Lapeyre, Marquis, and Leriche. The third and last subject was the operative technique of the open treatment of simple fractures. The communications were made by MM. Alglave and Bernardet, and the discussion brought out the opinions of MM. Koch of Groningen, Lucas-Championnière, Depage, Lambotte, Willems, Ceci, Tuffier, Van Stokum, Thiéry, Herman, Princeteau, Dujarier, Gourdet, Paul Delbet, Lardennois, Dupuy, and Hocher. At the close of the Congress Professor Segond gave a delightful reception at the Palais d'Orsay.

Obituary Notes.

Dr. Pouillot, surgeon-major of the colonial troops, recently died a heroic death in Africa. He was in Commandant Hilaire's column at Beshéré and was returning with it, when he received a despatch ordering him to report at Abecher, where an epidemic of small-pox was threatening. Dr. Pouillot obeyed the order by a forced march. At a village through which he passed he was warned that the people being in revolt it would be imprudent for him to proceed, but,

listening only to the call of duty, he pushed on. The next day he was surrounded while passing through a village by 600 armed men, and he and his small escort were massacred. —Dr. Griffon, while performing an operation for empyema, infected an abrasion on his neck with the pus that spirted from the pleural incision. A fatal phlegmon ensued.

Oct. 14th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Cholera Infantum and Housing Accommodation.

AT a recent meeting of the Verein für Innere Medicin Dr. Rietschel of Dresden read a paper on cholera infantum in connexion with the problem of housing. He drew his hearers' attention to the fact that this disease only became known at a time when questions of house accommodation presented difficulties because of the great increase of large cities. The first description of the disease came from America as early as the year 1789, and on this occasion it was expressly said to have been observed only in towns and not in country places; but in 1835 the editor of a German journal when reviewing the American statistics of infant mortality mentioned that he had some doubts as to whether cholera infantum was in reality an entirely American disease. During the "sixties" and "seventies" of the nineteenth century, when the cities of Germany began their marvellous development, cholera infantum spread in a remarkable way and continued to increase until about the year 1900. It was generally admitted that the disease had a relation to the summer temperature, and that it was more frequent in certain districts and streets, and even in certain houses, than in others. Dr. Rietschel maintained that there was a connexion between infantile mortality and certain classes of dwellings the temperature of which was habitually above the average. He said that the temperature of a room depended not only on the temperature of the external air, but also on the size of the room and the number of people living in it; cooking was another cause of the overheating of rooms. These were the reasons which in Dr. Rietschel's opinion made cholera infantum so extremely frequent among the poor. On taking the temperature of the dwellings of poor people during a week he found that it did not fall below 24° C., and that it sometimes rose to 36°. He did not consider that the increased mortality was due either to the heat acting on the milk consumed by the children or to the decomposition of the milk by bacteria. He was of opinion that the heat acted directly on the infant. This was made obvious by the fact that infants in the best of health showed a slight rise of body temperature in a very hot room, and when this was continued for a period of weeks the vitality of the infants and their power of resistance to illness became very much impaired, so that an indisposition originating with slight dyspepsia might prove fatal. With a view to lessening the mortality of infants in summer time it was therefore desirable to avoid a high temperature in the living-rooms, to prescribe cold baths, and to bring the infant as much as possible into shaded places in the open air. Breast-feeding was, of course, essential for the prevention of disorders of digestion.

Assistance for Discharged Asylum Patients and Feeble-minded Persons.

Alienists have for a long time been recommending that something ought to be done by way of after-care for patients who have been discharged from lunatic asylums as recovered, and also for the assistance of feeble-minded persons who, though not actually requiring asylum treatment, are nevertheless unfit for the struggle of life. This course has been especially advocated by Dr. Möli, chief medical officer to the Herzberge asylum of the city of Berlin, and the municipality of this city will now establish an office of which an alienist will be the head, the idea being that these persons require the care of a specialist. When a patient is fit for discharge from one of the municipal lunatic asylums notice will be given to this office, the authorities of which will see that the patient finds proper lodging in a family willing to receive such persons and to allow supervision of them by visitors acting on behalf of the office. The office will also undertake to find employment for patients according to their capacity for work. When the mental disorder has apparently been due to over-indulgence in alcoholic liquors the office will work in connexion with temperance societies and will recommend the patient to become a member of such a society. Patients will not only be assisted in obtaining the necessities of life but in other ways as well; legal advice, for instance, will be given if required. In addition to the medical officer, nurses who have had experience of mental cases will be engaged by the new institution, and there will be voluntary members who will assist the salaried staff.

Simulation of Albuminuria.

Dr Hadda, physician to the Jewish Hospital in Breslau, has published in the *Berliner Klinische Wochenschrift* an interesting case of simulated albuminuria. The patient was a girl 12 years of age, who had suffered from severe sore-throat and subsequently from albuminuria, œdema, and slight symptoms of uræmia. These symptoms disappeared completely in February, 1910, and she was considered to have recovered. Albuminuria, however, again appeared in November, and the mother of the patient declared that she had observed great masses of mucus in the urine. The medical practitioner in attendance accordingly sent the patient to the hospital for catheterisation of the ureter; but when it was found that the first discharged urine contained 0·125 per cent. of albumin and only very few leucocytes catheterisation was not performed, and the patient's mother was advised to give notice when something abnormal appeared in the urine. Six weeks later the mother again brought her to the hospital declaring that the former symptoms had returned. The first urine obtained by catheterisation of the bladder did not contain albumin, neither did the second portion passed in the afternoon, but on the following morning an enormous quantity of albumin was present. There was no indication of either œdema or headache or alteration of the pulse, and the specific gravity of the urine was only 1026. The quantity of albumin was so great that it could not be measured by the usual Esbach albuminometer. The same thing happened again during the next few days, and the case appeared very obscure until the suspicion was expressed that the mother, who used to be in the patient's room from the early morning, had added white of egg to the normal urine. A quantity of the first morning urine was therefore secretly removed previously to the arrival of the mother, and on examination was found to be absolutely normal. The remainder of the same urine was examined after the mother's arrival and then contained a large quantity of albumin. It was therefore obvious that albumin had been added artificially, and a chemist, who also examined the urine, stated that the albumin was egg-albumin. The reason why the mother had tried to deceive the physicians was because she hoped to receive more money from the guardian of the child when the latter was ill. The family medical man afterwards informed the hospital authorities that the child after her discharge remained in perfect health.

Oct. 16th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Toronto's Water-supply.

AT a meeting of the Board of Health of the city of Toronto on Oct. 5th Dr. G. G. Nasmith, director of the board's laboratories, gave expression to some statements and opinions which apparently startled and disconcerted that body. For two years there has been under construction on Toronto Island a sand filtration plant at a cost of £150,000. The citizens have been boiling practically all their drinking water for the past three years and waiting patiently for the completion of this plant, in order to ensure pure water for domestic purpose; and now Dr. Nasmith states that, "while the city has been occupying two years in building a filtration plant, the advance of science has declared the plant an antiquated piece of machinery." Moreover, the city has spent upwards of £400,000 in overhauling its sewerage system and constructing a trunk sewer to empty the sewage some four or five miles east of the city into Lake Ontario at a point known as the Woodbine. During the past months another problem has had to be dealt with—namely, that of laying a new intake pipe beyond the island, extending it further into Lake Ontario, and from a point known as Fisherman's Island. Dr. Nasmith states that the water off

this island will be polluted with at least 28,000,000 gallons of fresh sewage every day. He goes on to say: "From what I have seen this summer I have little doubt but that at times this polluted water will be carried to and beyond our present intake, or any other intake that may be subsequently laid." Dr. Nasmith further says that with all care it is impossible, with the sewerage system as it is now being constructed, to hope to keep all untreated sewage out of Lake Ontario all the time, and, therefore, even should the main effluent from the sedimentation tubes be chlorinated, both filtration and sterilisation must be used to obtain pure water. Toronto's water, drawn from Lake Ontario, passing under Toronto Bay through a concrete tunnel constructed a few years ago and reaching the mainland in the city at the foot of John-street, where the main pumping-station is situated, is pumped for the northern section to the reservoir on the hill north of the city, in Deer Park, and for the southern portion directly into the mains. At the pumping-station chlorination has proceeded for some months with distinct advantage from a sanitary standpoint and also with considerable complaint, particularly as to palatability, on the part of citizens. Into Toronto Bay, lying between the mainland and Toronto Island, the sewage of Toronto has been poured for years. At either end of this bay are gaps or water passages, known as the Eastern and Western Gaps. It will thus be apparent, he says, how easily currents of sewage-polluted water may at times flow almost directly from the Eastern or Western Gap to any intake pipe that may be placed within a radius of several miles from the city, though it is also apparent that in general terms the farther away from the source of pollution and the deeper the water, the greater will be the dilution of sewage, and therefore the greater the safety. The conditions which are causing pollution of Lake Ontario in the vicinity of Toronto at present will, however, change in a short time. When the sewage of the entire city is collected by the new trunk sewers and carried to the Woodbine, and after passing through the Watson sedimentation tanks is deposited in the lake opposite Fisherman's Island, an entirely new set of conditions will be inaugurated. The best, however, that these tanks will do will be to remove 50 per cent. of the suspended matter in well-screened sewage. Dr. Nasmith goes on to suggest three methods of lessening the danger to the citizens of Toronto arising from pollution of its water-supply: (1) By chlorinating the sewage effluent, which, according to one authority, will destroy over 90 per cent. of the pathogenic organisms; (2) by adding biological oxidising beds to the sedimentation tanks; and (3) by sterilising the filtered water. Following these suggestions the local board of health has decided to establish a chlorination outfit in connexion with the filtration plant on Toronto Island, to be used if occasion requires, and also to chlorinate the effluent from the sewage disposal plant. In order, no doubt, to dispose of those persons who, prior to the undertaking of the construction of the filtration plant and the tunnel under the bay, advocated that the Toronto water-supply should be drawn from Lake Simcoe, 50 miles north of the city, Dr. Nasmith reported from samples taken from that lake, that the "bacillus coli was proved out on two occasions," and that a gas-producing organism, which did not prove to be bacillus coli, was found in 15 samples. Accordingly the analyst pronounced against securing Toronto's water-supply from Lake Simcoe.

Diseased Meat Sold in Toronto.

In the monthly bulletin of the Toronto Board of Health Dr. Charles J. Hastings, medical officer of health, states that approximately 500 head of cattle are killed weekly in the 20 abattoirs of the city. Attached to the medical officer of health there are now three veterinary officers in place of one. These three officers are able to make only 116 post-mortem examinations a week. Of these 116 carcasses, 13 on the average are found to be diseased, and 13 carcasses or portions of carcasses are condemned weekly. Among the diseases found are actinomycosis, tuberculosis, sapræmia, abscess, parasites, and new growths. When these figures—which are the averages for the past nine weeks, the lightest killing weeks of the whole year—are taken into consideration, and it is remembered that the percentage inspected of those killed was 23·2, the percentage of diseased was 11·2, and that out of the 500 killed weekly some 55 are probably diseased, this diseased meat being placed on the market without inspection, it is little wonder that some are inquiring if there is any "jungle" business in Toronto. If the 20 abattoirs all kill at the same time, the three veterinary officers can inspect only three of them. Dr. Hastings advocates the construction of one large municipal abattoir where an efficient inspection of every animal killed could be made. The objection to this, however, is that it would strengthen the system, which is now accused of keeping up and increasing the cost of living. Apparently the question of efficient inspection is one merely of expense; and now that the citizens are enlightened as to the conditions, the civic authorities will have to take immediate steps to eliminate any appearance of this evil.

Consumption in Toronto.

There are at the present time 418 cases of tuberculosis under the supervision of the Toronto municipal nurses, 113 of these cases being registered by physicians and 117 of them being in sanatoriums. The health officer fears, however, that there are a thousand or more cases unknown to the city health authorities, even though compulsory notification is now in vogue, and that these may infect their families, friends, and fellow-workers.

Infant Mortality in Ontario.

Ontario has issued its second special report on infant mortality, the first being, so far as can be ascertained, the first instance in which any similar report has been issued by any Government. Both these reports have been specially prepared by Dr. Helen MacMurchy of Toronto. The author has gone far afield to gather material for this report, which is a comprehensive exposition of conditions prevailing and work being done in different parts of the world. It points out that in Toronto 7618 children were born in 1908, and that 1215 of them, or 159 in 1000, died before they were a year old. Stillbirths are not included in the above figures. Illustrations show a row of ten houses in Toronto with one water-tap at the end for their sole water-supply; four houses with only one sanitary convenience; and six houses, containing 50 persons, with only two sanitary conveniences. To attend to the slums and housing problem in Toronto, therefore, the medical health officer has his work cut out. In Ontario the number of illegitimate births in 1908 was 819. There is no separate record of deaths in those under one year. The baby farmer is not unknown in Ontario; £10 is the fee for adoption. There is no system of licensing and registering midwives in Ontario. This is a necessary thing, the report says, and should no longer be delayed. It is doubtful if in Ontario 90 per cent. of the births are registered. The report of the Registrar-General for Ontario for 1908 gives 55,388 births; deaths under one year, 6895; infant mortality rate, 125 per 1000. The highest rate was in the capital, Ottawa, with 521 deaths out of 2035 births, or 256·0 per 1000. The lowest rate was in Woodstock—viz., 98·0.

Registration at McGill University, Montreal.

On Oct. 5th the registration at McGill University for the season 1911–12 shows that the number of first year students in arts and science surpasses all previous records. The first year medical students amount to 71 to date, which is about one-fourth of the entire medical student-body, and is a gratifying increase over any freshmen medical class for the past six years. In science, a department famous the world over, there are 509 students, the freshman class comprising 156.

Oct. 6th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

An Exhibition of Pure Foods.

THE second annual Exhibition of Pure Foods was held at Madison-square Garden, New York, from Sept. 23rd to Oct. 4th. Only manufacturers of preserved goods who eschew the use of artificial preservatives, such as benzoate of soda, were represented, and the exhibition comprised hundreds of varieties of preserved foods, from soup to nuts and raisins and cheese. In an exhibit of adulterated tinned foods a demonstrator showed a doll the clothing of which was dyed solely with the colouring matter taken from ketchup, tomato, and vegetable soup; a steel hatpin was dipped into

a tin of *petits pois* and when withdrawn showed a brilliant plating of pure copper. Strawberry jam was proved to contain only the cores of apples, grass seed, and eosin, with sometimes a little gelatin. Boric acid was shown to exist in many varieties of potted cheese, and the salicylates in many tins of the cheaper condensed soups. An especially interesting feature was 12 babies reared solely on tested milk from the stations established by the New York Milk Committee. A nurse in charge lectured to mothers on the dangers of trying to raise a baby on beefsteak, water-melon, and candy, and, in the case of German and Hungarian mothers, on beer. A different group of babies was shown daily and each was weighed in public. Lectures were given on the various problems presented by foods and other domestic matters. Two large ranges were in constant use, one in the charge of an army cook, the other under the supervision of a "doctor" from the galley of one of the new Dreadnoughts, demonstrating the economical catering in the Federal public services. The new paper-bag cooking received earnest attention in view of the servant problem. Food placed in the specially made paper bags was cooked in the oven and stewed in its own juice with remarkable results as to flavour and economy. The bags were then thrown away, the labour of cleaning and scraping pots and pans being thus abolished. The idea is a modification of the older self-basting baking pan.

Meeting of the American Hospital Association.

At the American Hospital Association, whose recent meeting was referred to in THE LANCET of Oct. 7th, p. 1047, the secretary of the State Board of Charities of New York said that New York was a generation behind the age in ambulance and other public hospital facilities. £600,000 have recently been appropriated by the city for modernising the hospitals, and it is hoped soon to consolidate under one head the Department of Public Charities, the Department of Health, and the Trustees of Bellevue and Allied Hospitals. Despite four training schools, much of the work of caring for patients is carried on by hospital helpers, nearly 1000 of whom receive wages of barely 2*s*. a day. More than 8000 changes have been made in a single year on account of the general inefficiency. In one of the Health Department's hospitals there are as many as six children in one bed. In the lower part of the city there is no organised ambulance service at all, and the city depends upon a charitable organisation for its altogether inadequate help. A new motor ambulance was exhibited which in time will probably replace horse-drawn vehicles. Dr. Walter S. Goodale, superintendent of a Buffalo hospital, exhibited his new ambulance for infectious cases. Its unique feature is the lining, consisting of an aluminium box strengthened with channel steel, which can be slid in and out of the body of the vehicle. After use the lining is removed and sterilised either by live steam or by burning formaldehyde candles inside. There are five such linings, so that a sterile one is always at hand. Each is mounted on wheels in the garage, so that two attendants can change linings in a few moments. Each lining weighs about 300 pounds. It can readily be adapted to an ordinary ambulance of sufficient size.

A Ferryboat as a School.

The New York Committee for the Prevention of Tuberculosis has fitted up an old ferryboat as a school for tuberculous children. The children do all their school work on board, have their meals in the open air, and are under constant supervision by a physician and a nurse.

Public Drinking Cups Abolished in New York City.

By the new Sanitary Code ordinance which came into force in New York City on Oct. 1st, public drinking cups have been legally abolished in hotels, public schools, railroad stations, factories, theatres, and all public places. In schools and factories drinking cups must be provided by children and workers, and it will be a violation of the law to use another person's cup.

The American Electro-Therapeutic Association.

This association held its twenty-first annual meeting at Philadelphia from Sept. 5th to 7th, under the presidency of Dr. Frederic de Kraft, who delivered his presidential address on the Development of High Potential Currents as Applied to Medical Uses. Dr. G. B. Massey, of Philadelphia, in a report on the Direct Continuous Current, urged the paying of greater attention to medicamental ionisation with low voltage currents. Dr. Frederick M. Law, of New York, in a report on Induced Currents, including the alternating and high-frequency current and apparatus, said that in using the d'Arsonval current the amount of dielectric rendered the therapeutic effect more superficial so that the influence was felt more on the sensory nerve endings. The current was of value in intestinal auto-intoxications. The bipolar current might be dangercus unless carefully used. Dr. F. Howard Humphris of London described Professor Bergonié's method of electrically stimulating the muscles for the treatment of obesity. He also read a paper on the use of compressed gases for increasing the efficiency of the static machine. Dr. Edward C. Titus of New York, in a report on phototherapy, considered that its effects were attributable not to heat but to certain invisible, non-caloric, luminous radiations. Dr. W. Benham Snow of New York recommended the establishment of standards for the employment of electro-therapeutic and other physical measures. In a report on the rational treatment of cardio-vascular disease, Dr. Snow said that in tachycardia, due to thyroid hypersecretion, X rays promptly relieved the tachycardia and dyspnœa. He considered the auto-condensation method of treatment of hypertension most valuable, except in cases where parenchymatous nephritis was present. Dr. G. E. Pfahler showed a muffle for the static or high-frequency spark. Dr. D. H. Yates, of Madison, Fla., reported three cases of pellagra treated by high potential currents. Dr. G. Betton Massey, of Philadelphia, read a preliminary note on arsenionisation in inoperable cancer followed by improvement in the general health. Many other papers were read. Richmond, Va., was chosen for the place of meeting next year.

Dr. Wiley at the Conservation Congress.

The attempts to oust Dr. Wiley from the position as head of the Bureau of Chemistry of the United States Department of Agriculture have resulted in a remarkable public expression of opinion. The enemies of the leader of the campaign for pure food and drugs in the United States are strong in influence and money, and they have omitted nothing to accomplish his political ruin. Although certain recent judicial decisions have nullified much of the Bureau of Chemistry's good work the outcome of the effort to expel Dr. Wiley has shown clearly that the community at large is with him. Speaking recently at the Conservation Congress at Kansas City Dr. Wiley stigmatised as "a thief and a corrupter of public morals" the man who substitutes ground peanut shells for pepper, who puts poisonous dyes into children's candies, or keeps wholesome food in storage until the taste has vanished and poisonous products have developed. He made a strong plea for a National Department of Health, and urged the public not to be deterred by the cry of a "doctors' trust."

Oct. 3rd.

NOTES FROM CHINA.

(FROM OUR OWN CORRESPONDENT.)

Flood and Famine in China.

EVERY present symptom points to the fact that the distress in China during the coming autumn and winter will be almost without parallel in the Empire's history. There are sad tidings of inundations from various provinces, but mainly from the valley of the Yangtze River, where over 100,000 people have been drowned or starved to death. Relapsing or famine fever has broken out among groups of refugees huddled together on hills or in towns to which they have fled. Owing, it is said, to a combination of heavy rainfalls and late melting of snow in the mountain ranges of Thibet, the Yangtze has risen to such an extent that in some places it is now only bounded by the ranges of hills which rise many miles from the banks. It is not possible to quote actual figures, but the appalling nature of the disaster may be appreciated when, to quote from the *North China Daily News*, the best informed paper in China, "it would probably be no exaggeration to suppose that half the population of the Yangtze Valley will have to depend upon charity throughout the winter or starve." As this population numbers over 100,000,000, it will be seen that the ruin has been widespread. At the city of Nanking 70,000 refugees have

gathered. Cholera is rife among them, and typhus fever is said to be equally bad, so that the death-rate is reported to be between 200 and 300 a day. Food has been sent to them, but under the awful conditions now prevailing there it is next to impossible for medical science to do anything. Corpses are seen floating about in large numbers. The whole matter has now got beyond the scope of charitable efforts, and the Central Government is being impressed with the need of undertaking some comprehensive scheme of relief. The condition of the Yangtze Valley has been described as a burning disgrace to the history of any nation. Rivers and canals have been embanked instead of dredged until their very beds are many feet above the level of the surrounding country. Hillsides have been recklessly denuded of trees, so that their alluvial soil is washed down in ever-increasing quantity, silting up the river beds. In some hands these disasters are callously regarded as a part of Nature's provision, terrible but necessary, to keep down the surplus population of this prolific race, but such a tame acceptance of such drastic laws of Nature is against the spirit of the age. What is wanted is a central irrigation board maintained by special funds, as in the case of the public works department in India. Meanwhile there is noticeable among Europeans and others in China a certain abatement of charitable enthusiasm due to the malversation of famine funds by various local officials and the heartless "cornering" of foodstuffs (especially rice) by native dealers.

Case of Abdominal Streptotrichosis.

It may be of interest to add to the literature of streptotrichosis a case recorded in the *China Medical Journal* by Mr. A. F. Cole and Mr. G. J. Evans of Ningpo. A Chinese farmer, aged 54, came under their notice suffering from a large fluctuating immoveable mass in the left iliac fossa. It was continuous with an indurated mass extending into the right iliac region, and the upper margin of this was very sharply marked on palpation. The growth had first appeared four months previously, and there were no other symptoms of importance. The patient was not particularly ill nor was he wasted. On operation three ounces of yellowish pus were removed in which were very numerous yellow granules of various sizes, chiefly about 1/16 inch in diameter. The wound healed up completely in the three weeks he was under observation, during which time he was given iodide of potassium in doses gradually increasing up to a drachm per diem. Microscopical examination of the pus at the time of operation showed dense masses of felted mycelium, but no clubs were visible in potash solution. Simple staining and the Gram-eosin method demonstrated branching mycelium and in a few cases thickenings resembling clubs. No other organisms were noticed, nor did they grow on agar or glycerine agar, which produced a very limited growth of the streptothrix only. The case was regarded as one of infection by a very fine sporothrix. The patient died about six months after leaving hospital. It is well that the case has been reported in the *China Medical Journal*, as in this land of abundant tuberculosis in all its forms it may be found by other medical men whose attention is drawn to the matter that some or many of their cases ascribed to the bacillus of tuberculosis would be more accurately included among the streptothricæ, and possibly future reports may show that there are streptotrichoses peculiar to China.

Death of Dr. Lillie E. V. Saville.

Dr. Lillie Saville was well known in North China, and her death, which occurred at the beginning of this month, is deeply deplored. She succumbed to an attack of cerebro-spinal meningitis. During the past few years there have been a number of sporadic cases of this disease among Europeans at Tientsin, and its etiology has puzzled the local medical men since it occurs at indefinite intervals without any epidemic incidence. Dr. Saville studied medicine in Edinburgh where she qualified, and later she received the degree of M.D. at Brussels. In 1895 she was sent out by the London Missionary Society to Peking to take charge of the society's medical work for women. She went through the siege of Peking in 1900 and did heroic work, for which she was decorated with the Royal Red Cross. Some years later she broke down in health from overwork and returned to England. In 1909 she came back to China, having been appointed to the Imperial Government Hospital for Women at Tientsin, where she died. Dr. Saville was a woman of more than ordinary ability and an exceedingly able surgeon. Her tireless energy and ambition to make her hospital a success, as also her efforts to bring the benefits of Western medicine to Chinese women, were evidently too much of a drain on her physical resources.

Peking, Sept. 23rd.

Obituary.

SIR H. J. BLANC, K.C.V.O., M.D. MONTPELLIER,

DEPUTY SURGEON-GENERAL, INDIAN MEDICAL SERVICE.

BY the death of Sir Henri Jules Blanc in Paris on Sept. 30th (recorded in THE LANCET of Oct. 7th) a man of mark, of influence, and of historic interest, has passed from our profession. Born in 1831, he had just completed his eighty years, and in their course had passed a varied and adventurous life. Shortly after his graduation at the University of Montpellier he joined the allied forces in the Crimea, and there saw something of the privations and trials of war. After his return he entered as an assistant surgeon in the Bombay Medical Service, and in that rank served during the China war of 1857–60, where again he had the experience for which his courage and his capacity well fitted him. Selected in 1867 to accompany as its surgeon the mission sent to Abyssinia, he, with its other members, was seized by King Theodore and treated with great cruelty as his prisoner. Upon more than one occasion they were led out for execution, when, being placed at the end of a long line of fellow-captives, they saw them hurled one by one over a precipice, and only when their own turn seemed certain was the performance arrested. This experience, however, did not daunt Sir Henri Blanc, for it has been told of him that upon one occasion, the cruelty of the treatment having been greater than usual, he personally remonstrated, and this in strong terms, with the king, and by thus acting rather gained than lost in his favour. King Theodore was a tyrant, but an unquestionably brave man, and he admired and gave credit to the courage of another. With his release and the storming of Magdala, in which he bore a part, this trying period came to an end, and after receiving a considerable sum of money in compensation for his sufferings, Sir Henri Blanc, on his return to India, was appointed a physician and afterwards a surgeon to the Grant Medical College at Bombay. The latter position he occupied for a good many years, lecturing upon surgery and doing a large amount of operative work. Through the excellence of this work he gained a wide and notable reputation, and his skill principally in operations for vesical calculus brought him from native rulers some princely rewards. In 1887, his health having given way, he retired from the service with the honorary rank of Deputy Surgeon-General, and settled in Cannes. There, with vigour happily restored, he soon formed a large and select practice, and had in his *clientèle* many whose names are to-day well known in the Courts of Europe. To the late King Edward, when Prince of Wales, he proved of signal service, the reward for which came to him in the K.C.V.O., given immediately after the King's accession.

A man of strong and striking personality, of iron will, of the highest courage and resolution, with great natural capacity and wide and well-garnered clinical knowledge, he was peculiarly well fitted for the various positions he was called upon to occupy. How great was the impression made upon him by the stern days of the Abyssinian captivity was evidenced by the fact that in his room, and close by his side, hung the heavy fetters that had then bound him; and it was a sad thought to those who, in the later days of his life, had the privilege of attending him professionally to feel that he was then bound by stronger fetters than those of King Theodore—fetters from which there was no escape and no release on this side of Time, and yet he bore these with as true and great a courage as he had done those of iron.

WILLIAM RICHARD HUGGARD, M.D., M.CH. R.U.I., F.R.C.P. LOND., LL.D.

WE regret to announce the death of Dr. William Richard Huggard, British Consul at Davos, Switzerland, which took place on Tuesday, Oct. 10th. He received his medical education at Queen's College, Galway, at Queen's

College, Belfast, at University College, London, and in Geneva and Vienna. In 1875 he took the M.D. and M.Ch. degrees of the Royal University of Ireland, and in 1880 became a Member of the Royal College of Physicians of London, obtaining the Fellowship of that College in 1898. Eleven years later the Royal University of Ireland conferred upon him the honorary degree of LL.D. "as one of its most distinguished graduates." Formerly he was physician to St. Pancras and Northern Dispensary, Euston-road, London. His contributions to medical literature comprise a Handbook of Climatic Treatment, including Balneology, which was published in 1906, and several articles in the medical press on the subjects of lunacy and phthisis. In 1885 we printed in THE LANCET a report by Dr Huggard on some experiments on the excitable area of the cerebral cortex which he had witnessed in the clinic of Professor Schiff.

CHARLES VERNON HITCHINS, M.R.C.S. ENG., L.S.A.

Mr. Charles Vernon Hitchins died at his residence in Weston-super-Mare, Somerset, on Oct. 11th, in his eighty-fifth year. He was born at Bath, received his medical education at St. Bartholomew's Hospital, and qualified M.R.C.S. Eng. and L.S.A. in 1854. Mr. Hitchins went to Weston-super-Mare in 1857. Two years later he was appointed medical officer of health for the town. He was at one time district medical officer for the urban district of Weston-super-Mare, but some years ago resigned this appointment with a superannuation allowance. He was honorary surgeon to the Weston-super-Mare Hospital and Dispensary, certifying factory surgeon, and Admiralty surgeon and agent. Mr. Hitchins was one of the oldest and most esteemed residents of Weston and the senior medical practitioner of the town. He was extremely popular, and was a fine specimen of the old-fashioned medical practitioner, and his wonderful vigour made it difficult to realise that he had attained such a great age, for until a few weeks ago he was attending to his professional duties.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Council of the Royal College of Surgeons of England on Oct. 12th the under-mentioned diplomas were conferred upon the following candidates, who have now complied with the respective by-laws:—

F.R.C.S.—Anandrai Keshavlal Dalal, L.M.S. Bombay, L.R.C.P., M.R.C.S., Bombay University, King's College and Middlesex Hospitals; and Herbert Henry Sampson, M.B., Ch.B. Birm., L.R.C.P., M.R.C.S., Birmingham University and London Hospital.

M.R.C.S.—John Bruce Baird, B.Sc., M.B., Ch.B. Glasg., Glasgow University and King's College Hospital; Robert Coltart Harkness, M.B., Ch.B. Edin., Edinburgh University; Victor Stanley Kaufman, M.B. Toronto, Toronto University and London Hospital; and Henry Goulding Rice, B.A. Cantab., Cambridge University and Guy's Hospital.

L.D.S.—Henry Kinnear Ovey, Charing Cross and Royal Dental Hospitals; and John Herbert Wiles, Guy's Hospital.

UNIVERSITY OF CAMBRIDGE.—At the examination in sanitary science held recently the following candidates satisfied the examiners in both parts of the examination:—

William McEntire Clendinnen, James Frederick Corson, Douglas Vernon Cow (Trinity), Albert Victor Craig, Frederick Douglas Crosthwaite, Peter Paul Debono, Thomas Scarbrough Dudding, *Robert Hankinson Williams Fisher (Emmanuel), Kenneth Fraser, †John Gilmour, †Alexander Campbell Nicholson McHattie, Ada McLaren, William Nicoll, Ardeshir Beheramshah Pestonji, Ralph Montgomery Fullerton Picken, Mary Janet Pirret, Laura Gertrude Powell, Reginald Fawcett Priestley (Caius), Leethem Reynolds (Trinity), Ernest Theophilus Roberts, †Berkeley Hope Robertson, James Alexander Richard Thompson, George Henry Hitchcock Waylen (King's), Ernest Alfred Freear Wilkes, Lisette Anne Macdonald Wilson, and Frederick Lindsay Woods.

* Distinction in bacteriology. † Distinction in hygiene.

FOREIGN UNIVERSITY INTELLIGENCE.—*Baltimore* (*University of Maryland*): Dr. G. Timberlake has been appointed Professor of Genito-Urinary Diseases.—*Berlin:* Dr. Walter Albrecht of Tübingen has been appointed *Oberarzt* of the Laryngological and Otological Clinic of the Charité under Professor G. Killian.—*Breslau:* Dr. Carl Bruck, *privat-docent* of Dermatology, Dr. Curt Zeigler, *privat docent* of Medicine, Dr. Friedrich Strecker, *privat-docent* of Anatomy and Biology, Dr. Heinrich Sachs, *privat-docent* of Neurology, and Dr. August Most, *privat-docent* of Surgery, have been granted the title of Professor.—*Lemberg:* Dr. Raczynski, Extraordinary Professor of Pædiatry, has been promoted to Ordinary Professor.—*Louisville:* Dr. W. B Doherty, Lecturer, has been promoted to the chair of Midwifery in succession to Dr. H. E. Tuley, resigned.—*Marburg:* Dr. F. König of Greifswald has been offered the chair of Surgery in succession to Dr. P. L. Friedrich, who goes to Königsberg.—*Moscow:* Dr. N. A. Savelyeff, Professor in Dorpat (Iurieff), has been appointed Professor of Therapeutics.—*Münster:* Dr. Eugen Kurz, one of the Prosectors in the Anatomical Institute, has been offered the position of Director of the Anatomical Department of the Shanghai German Medical School in succession to Dr. Ammann.—*Palermo:* Dr. S. Diliberti Herbin has been recognised as *privat-docent* of Surgical Anatomy and Operations; Dr. G. Caramanna as *privat-docent* of Neurology and Psychology; and Dr. G. Spotu as *privat-docent* of Ophthalmology.—*Parma:* Dr. E. Cecchetto has been recognised as *privat-docent* of Ophthalmology; and Dr. J. Bocchia as *privat-docent* of Hygiene and Sanitary Police.—*Pavia:* Dr. C. Barazzoni has been recognised as *privat-docent* of Internal Pathology; and Dr. G. Morone as *privat-docent* of External Pathology.—*Prague* (*German University*): Dr. Wilhelm Wiechowski, Extraordinary Professor in Vienna, has been appointed to the chair of Pharmacology in succession to Dr. J. Pohl, who is migrating to Breslau.—*Rome:* Dr. F. Fulci has been recognised as *privat-docent* of Pathological Anatomy; Dr. P. Ciuffini and Dr. F. Felici as *privat-docenten* of Otology and Laryngology; and Dr. D. Valebona as *privat-docent* of Physio-therapeutics.—*St. Louis* (*Washington University*): Dr. Roger S. Morris, Adjunct Professor in Johns Hopkins University, has been appointed Adjunct Professor of Medicine.—*Saratoff:* Dr. A. Bogomoletz of Odessa has been appointed Professor of General Pathology.—*Sienna:* Dr. F. Pancrazio has been recognised as *privat-docent* of Internal Pathology.—*Würzburg:* Dr. G. Hotz, *privat-docent* of Surgery, has been granted the title of Extraordinary Professor.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on Oct. 12th, with Sir Francis Champneys in the chair. A letter was considered from Adeline Margaret Taylor, a midwife, as to a letter received by her from the honorary secretary of the Enfield Medico-Ethical Society, informing her that the society had unanimously agreed that a midwife calling in a medical practitioner in any stage of a confinement must guarantee a fee of not less than a guinea and a half, and that the case must be taken over entirely by the doctor. The secretary reported that he had forwarded a copy of the letter of the Enfield Medico-Ethical Society to the Privy Council, and the reply of the clerk of the Council was considered. The Board decided that a copy of Sir Almeric FitzRoy's letter (in which he observes that "the medical interests of the society in question appear to be more prominent than its ethical pretensions, and that in my opinion the correspondence discloses a most improper imposition on the midwife, and one which it is her duty to ignore") be sent to Adeline Margaret Taylor, and that she be informed that the Board has no control over the medical profession, but that if she does her duty under the rules she will discharge the responsibility that attaches to her. The Board, however, regrets that the Government has not yet made provision in such cases. A letter was considered from the deputy clerk of the Privy Council transmitting a copy of a letter addressed to the Home Secretary by Mr. A. Shaw of Bromyard with regard to the case of an uncertified woman practising as a midwife. The Board directed that it be pointed out to the clerk of the Council that the Board has no jurisdiction over uncertified women, the duty of prosecuting whom for a breach of Section 1 of the Midwives Act devolves on the local supervising authority under Section 13 of the Act. A letter was considered from the town clerk of St. Helens, inquiring as to the power of the local supervising authority to make a rule prohibiting a midwife from laying-out a dead body. The Board directed that inquiry be made of the Privy Council as to the power of the local supervising authority to frame a rule as indicated by Rule E. 17 (*b*). A letter was considered from the medical officer of health of Bradford, suggesting that the Board should prescribe a temperature chart for the use of midwives. A letter was considered from Miss Wooldridge, one of the inspectors of midwives for Staffordshire, on the same subject. The Board

decided that the medical officer of health of Bradford be informed that the Board does not propose to prescribe a temperature chart, suitable books for the purpose being already in circulation; and that Miss Wooldridge be informed that the temperature should not be entered in the register, but in a separate book, as directed by the local supervising authority. A discussion took place on a letter from a teaching institution, asking if the training of an epileptic candidate for midwifery should be continued. The Board expressed the opinion that a woman subject to epileptic fits is not competent to practise as a midwife.

LEWES VICTORIA HOSPITAL.—The new Lewes Victoria Hospital, which was opened early last year, is now entirely free of debt. When the report and balance-sheet were drafted for presentation at the annual meeting of donors and subscribers on Oct. 10th there was a debt on the building fund of £246 16*s.* 3*d.*, and on the furnishing fund of £46 1*s.* 7*d.*, but when the meeting-time came the satisfactory announcement was made that with the aid of an unexpected donation and the assistance of other friends the debts had been liquidated. In connexion with the hospital a new dispensary has been opened on modern lines.

THE LONDON HOSPITAL MEDICAL COLLEGE.—The following entrance scholarships have been awarded: Price Entrance Scholarship in Science, value £120, H. W. L. Molesworth; Entrance Science Scholarship, value £60, D. Valentine; Entrance Science Scholarship, value £35, A. G. Harsant; Epsom Scholarship, value £126, A. Alexander; Price Scholarship in Anatomy and Physiology (University Scholarship), value £60, L. P. Costabadie, B.A., Gonville and Caius College, Cambridge; Buxton Scholarship in Arts, value £30, C. A. Hutchinson; and Buxton Scholarship in Arts, value £20, C. O. Carter.

BRITISH MEDICAL BENEVOLENT FUND GUILD: GLASGOW BRANCH.—A branch of the British Medical Benevolent Fund Guild in Glasgow was formed on Oct. 14th at a drawing-room meeting held in Lady McCall Anderson's house, 6, University-gardens. Sir George Beatson presided, and there were present: Sir John Tweedy, London; Sir James and Lady Barr, Liverpool; Sir Hector Cameron, the Misses Turner, Edinburgh; Dr. May Thorne, London; and others. The chairman explained that it was not proposed to form a new society. All that they aimed at was to set on foot an auxiliary or adjunct institution to the British Medical Benevolent Fund. Dr. May Thorne explained the objects of the Guild, and said that the Guild was very anxious not merely to be a giver of doles and even sympathy, but to be a real help in advising and helping people to earn their own living. There was no doubt that the ordinary responsibilities of the upbringing and education of children by the general practitioner were greatly added to by the very small means that many of them had and by the uncertainty of those means. The doctor's bill was frequently the last to be paid. The British Medical Benevolent Fund for many years had been giving grants to medical practitioners, and where necessary to the wives and children and widows and children; but it became borne in on some that grants were not sufficient; that if a measure of personal service could be brought in it would be of infinite value. Therefore this hand-maid of the Fund—the Guild—was organised two years ago in order that the funds might really be more efficiently made use of than perhaps they had been in some cases in the past. The Guild consisted of members and associates, and its objects were to help the British Medical Benevolent Fund by obtaining additional subscribers to the Fund and making it more widely known, and to assist members of the medical profession, their wives and families, who were beneficiaries of the Fund. Lady Barr spoke of the formation of the Liverpool branch, which she said had now 120 members. Sir John Tweedy said that the British Medical Benevolent Fund was instituted in 1835, and since then about £72,000 had been distributed in annuities and £75,000 in grants. During these years there had been 530 annuitants, and there were 131 persons at present on the list. 8330 cases had been relieved by grants. It was agreed to form a branch of the Guild, and on the motion of Sir Hector Cameron the following ladies were elected a committee: Lady MacAlister, Lady McCall Anderson, Mrs. Bryce, Mrs. Maitland Ramsay, Mrs. Ranton, Mrs. Grant Andrew, Mrs. Mackintosh, Mrs. John Cowan, Mrs. William McLennan, Mrs. Ebenezer Duncan, with Miss Alice McCall Anderson and Miss Beatson as joint secretaries. Sir James Barr moved a vote of thanks to the speaker, and Mrs. Maitland Ramsay proposed a vote of thanks to the chairman.

THE London Vegetarian Association will hold a reception illustrated with an "unfired food demonstration," arranged by Mrs. Spencer, in the Board Room of the Memorial Hall, Farringdon-street, London, on Thursday, Oct. 26th, at 8 P.M., with Dr. Knaggs in the chair. Mr. Charles Spencer will speak on "The Diet of the Coming Race."

CENTRAL LONDON THROAT AND EAR HOSPITAL.—The inaugural lecture of the winter session at the Central London Throat and Ear Hospital will be delivered by Dr. P. Watson-Williams on Friday, Oct. 27th, at 3 o'clock precisely. On the same evening the annual dinner of the medical staff will take place at the Trocadéro, when Dr. Andrew Wylie will preside.

INCORPORATED ASSOCIATION OF HOSPITAL OFFICERS.—The ninth annual dinner of the association will be held on Saturday, Nov. 4th, at 7 for 7.30 o'clock, at the Holborn Restaurant, High Holborn, W.C. The President of the association, Mr. Richard Kershaw, will be in the chair. Colonel Sir John Young, C.V.O., will be the guest of the evening. Application for tickets should be made to the honorary secretaries, 32, Sackville-street, London, W.

THE ROYAL SANITARY INSTITUTE: SOUTH AFRICAN BRANCH.—The South African Branch of the Royal Sanitary Institute is arranging to hold a congress in Cape Town on Nov. 9th, 10th, and 11th. This is the first sanitary congress to be held in British South Africa, and it is hoped that a large number of delegates will be sent by the municipalities and other authorities interested in sanitation. Among the subjects set down for discussion are: the disposal of sewage, the prevention of tuberculosis, the inspection of food, milk-supplies, and school hygiene. Papers will also be read dealing with other aspects of public health work. The South African Branch, which has only recently been established by the Royal Sanitary Institute, will no doubt have a beneficial effect in the development of public health administration in the Union of South Africa. The honorary secretary to the branch is Dr. A. Jasper Anderson, the medical officer of health of Cape Town.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The winter session was opened on Oct. 16th, when the prizes of the previous session were distributed by the President, Mr. Robert H. Woods, as follows:—Barker Anatomical Prize, £31 10*s.*, Miss Eleanor Taylor; special prize (£15 15*s.*), T. Mulcahy. Carmichael Scholarship, £15, E. Connell. Mayne Scholarship, £8, J. T. Duncan. Gold Medal in Operative Surgery, J. T. Duncan; Silver Medal, H. J. Burke. Stoney Memorial Gold Medal in Anatomy, M. Shipsey. Practical Histology: G. M. C. Powell, first prize (£2) and medal; W. P. Cooney, second prize (£1) and certificate. Practical Chemistry: V. A. Power, first prize (£2) and medal; M. Moran, second prize (£1) and certificate. Public Health and Forensic Medicine: G. N. Smyth, first prize (£2) and medal; G. E. Pepper, second prize (£1) and certificate. Materia Medica: G. N. Smyth, first prize (£2) and medal; E. Connell, second prize (£1) and certificate. Biology: N. E. Stephens, first prize (£2) and medal; K. Elms and L. M. Rowlette (equal), second prize (£1) and certificate. Systematic Anatomy: W. H. Carden, first prize (£2) and medal; L. S. O'Grady and R. P. Weldon (equal), second prize (£1) and certificate. Surface and Topographical Anatomy: W. P. Cooney, first prize (£2) and medal; A. Merrin, second prize (£1) and certificate. Practical Anatomy: First year, A. F. Carbury, first prize (£2) and medal; P. J. Polson, second prize (£1) and certificate; second year, M. Shipsey, first prize (£2) and medal; W. Morrow, second prize (£1) and certificate. Practice of Medicine: M. J. Hillery, first prize (£2) and medal; Vernon J. White, second prize (£1) and certificate. Surgery: M. J. Hillery, first prize (£2) and medal; Vernon J. White, second prize (£1) and certificate. Midwifery: M. J. Hillery, first prize (£2) and medal; Vernon J. White, second prize (£1) and certificate. Physiology: W. H. Carden, first prize (£2) and medal; R. P. Weldon, second prize (£1) and certificate. Chemistry: L. M. Rowlette, first prize (£2) and medal; P. J. Polson, second prize (£1) and certificate.

Pathology: G. N. Smyth, first prize (£2) and medal; G. E. Pepper, second prize (£1) and certificate. Physics: J. W. E. Graham, first prize (£2) and medal; J. C. Fergusson, second prize (£1) and certificate.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At the conclusion of the Harveian Oration on Oct. 18th the President of the College presented the Baly medal to Professor W. D. Halliburton, M.D., and the Bisset Hawkins medal to Dr. Clement Dukes.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—The following scholarships were awarded at the opening of the winter session:—First entrance scholarship (£100), W. T. Warwick; second entrance scholarship (£50), J. K. Muir; third entrance scholarship (£25), W. L. Thomas; University scholarship (£50), A. T. Edwards, St. John's, Cambridge; and Freer Lucas scholarship (Epsom College) (£126), E. St. Clair Gainer.

DEATH OF DR. LEONARD KEATLEY YELF.—Dr. L. K. Yelf was born at Ryde, Isle of Wight, in the year 1828, and was apprenticed in the old-fashioned way at Leamington before pursuing his medical studies at King's College Hospital. He became M.R.C.S. Eng. and L.S.A. in 1852, and then practised for a short time at Melbourne, but returned from Australia in 1856. He then took the degree of M.D. of St. Andrews University, and settled down to practice at Moreton-in-Marsh. In the Cotswold district he worked hard and unceasingly for close on 40 years, and was much esteemed by his patients of all classes. He was particularly kind to the poor, who regarded him as a friend. He took an active part in founding the Moreton Cottage Hospital, of which institution he was surgeon till his retirement in 1895, when he was made consulting surgeon. At the same time he was presented with a silver bowl and purse of money, this mark of appreciation having been subscribed for by his patients and friends. He afterwards resided at Boscombe and latterly at Bransgore, Christchurch, enjoying a well-earned rest. He died on Oct. 3rd from cerebral hæmorrhage.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors was held on Oct. 11th, Dr. Rigden, Vice-President, being in the chair. Fourteen members were present. The court opened by the chairman referring to the great loss the society had sustained by the death of its president, Dr. George Fielding Blandford, who was elected a member in 1869, and who had always taken the keenest interest in its work. A formal vote of condolence was passed to Dr. Blandford's widow and family. The chairman then moved a vote of congratulation to Sir Thomas B. Crosby, one of the vice-presidents of the society, on his being selected to hold the high office of Lord Mayor of London. This was carried. Four gentlemen were elected members of the society. The acting treasurer reported that the funds of the society would allow of some increase of the grants being made, and brought forward two alternative schemes. It was eventually resolved that in future the yearly grants to orphans be £25 instead of £15. The sum of £515 was voted as a Christmas present to the annuitants of the charity—each widow to receive £10, each orphan £3, and each orphan on the Copeland Fund £5. Relief is only granted to the widows and orphans of deceased members. Any registered medical practitioner who at the time of his election is resident within a 20-mile radius from Charing Cross is eligible for membership. Full particulars may be obtained from the secretary at the offices of the society, 11, Chandos-street, Cavendish-square, W.

BOOKS, ETC., RECEIVED.

CHURCHILL, J. AND A., London.
Domestic Hygiene for Nurses, with so much of Physics and Chemistry as are necessary to the reasonable Understanding thereof. By Fred. J. Smith, M.D., F.R.C.P., Physician to the London Hospital and Examiner in Elementary Hygiene to the Nursing Probations. Price 2s. 6d. net.
A Handbook of Physics and Chemistry. Adapted to the Requirements of the First Examination of the Conjoint Examining Board of the Royal Colleges of Physicians and Surgeons, and also for General Use. By Herbert E. Corbin, B.Sc. Lond., M.R.C.S., L.R.C.P., D.P.H., Medical Officer of Health, Stockport, and Archibald M. Stewart, M.A., T.C.D., B.Sc. Lond., Headmaster of Alresford Grammar School. Fourth edition. Price 7s. 6d. net.

CORNISH BROTHERS, LIMITED, 37, New-street, Birmingham.
Plague at Home and Abroad. Being the Annual Public Lecture on "The Laws of Health," delivered at the Midland Institute, Birmingham, October 6th, 1911. By David Fraser Harris, M.D., D.Sc., B.Sc. Lond., F.R.S.E., Professor of Physiology in the University of Halifax, Nova Scotia. Price 3d. net.
A Miscellany of Verse. By Joseph J. Mooney. Price 2s. 6d. net.

COX, HORACE, "Field" Office, Windsor House, Bream's Buildings, London, E.C.
Sugar Beet, Some Facts and Some Illusions. A Study in Rural Therapeutics. By "Home Counties" (J. W. Robertson-Scott). Price 6s. net.

FROWDE, HENRY, AND HODDER AND STOUGHTON, London.
A Manual of Fevers. By Claude Buchanan Ker, M.D. Ed., F.R.C.P. Ed., Medical Superintendent, City Hospital, Edinburgh. Price 7s. 6d. net.
Clinical Surgery. By C. B. Lockwood, Surgeon to St. Bartholomew's Hospital. Second edition. Price 5s. net.
Manual of Physiology. For Students and Practitioners. By H. Willoughby Lyle, M.D., B.S. Lond., F.R.C.S. Eng., Assistant Ophthalmic Surgeon to King's College Hospital. Price 15s. net.
Tuberculous Diseases of Bones and Joints, their Pathology, Symptoms, and Treatment. By Sir W. Watson Cheyne, Bart., C.B., F.R.S., F.R.C.S., D.Sc., LL.D., &c., Professor of Clinical Surgery at King's College Hospital. Second edition. Price 16s. net.

GREEN, WILLIAM, AND SONS, Edinburgh and London.
Reproduction in the Human Female. The Uterine Mucosa in the Resting, Menstrual, and Pregnant States, and the Function of the Decidua; incorporating an Account of an Early Human Ovum. By James Young, M.D., F.R.C.S. Ed., Physician to the Lauriston Pre-Maternity Home. Price 21s. net.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, London.
Where Do We Come from? Is Darwin Correct? A Philosophical and Critical Study of Darwin's Theory of "Natural Selection." By Herbert Morse, B.A. Oxon., and Lincoln's Inn, Barrister-at-Law. Price 7s. 6d. net.

KELLY, CHARLES H., 25-35, City-road, and 26, Paternoster-row, London, E.C.
National Health Manuals. School Life. Edited by T. N. Kelynack, M.D. Price, limp cloth, 1s. net.; cloth boards, 1s. 6d. net.

KIMPTON, HENRY, 263, High Holborn, London, W.C. STENHOUSE, ALEXANDER, 40 and 42, University-avenue, Glasgow.
Delayed and Complicated Labour. By Robert Jardine, M.D. Edin., M.R.C.S. Eng., F.R.F.P. & S. Glasg., F.R.S Edin., Professor of Midwifery in St. Mungo's College, Glasgow. Price 7s. 6d. net.

KING, P. S., AND SON, Orchard House, 2 and 4, Great Smith-street, Westminster, London, S.W.
A German Invasion and the Real German Peril. By Henry Sewill. Reprinted with permission from "The Westminster Review," August, 1911. Price 6d.

LANE, JOHN, The Bodley Head, Vigo-street, London, W.
The Dempsey Diamonds. By Allen Arnot. Price 6s.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.
Dental Disease in its Relation to General Medicine. By J. F. Colyer, L.R.C.P., M.R.C.S., L.D.S., Dental Surgeon to Charing Cross Hospital and the Royal Dental Hospital, with the Assistance of Stanley Colyer, M.D. Lond., M.R.C.P., D.P.H. Price 4s. 6d. net.

ROUTLEDGE, GEORGE, AND SONS, LIMITED, London. (DUTTON, E. P., AND CO., New York.)
Medical Education and Infant Feeding. An Impeachment and a Suggested Remedy. By D. Hastings Young, M.B., Ch.M. Edin. Price 2s. 6d.

SEELEY, SERVICE, AND CO., LIMITED, 38, Great Russell-street, London.
Medical Science of To-Day. A Popular Account of the More Recent Developments in Medicine and Surgery. By Willmott Evans, M.D., B.S., B.Sc. Lond., F.R.C.S. Eng., Surgeon to the Royal Free Hospital and Surgeon to the Hospital for Diseases of the Skin, Blackfriars. Price 5s. net.

STATE GAZETTE PUBLISHING CO., Printers, Trenton, N.J., U.S.A.
Thirty-fourth Annual Report of the Board of Health of the State of New Jersey, 1910, and Report of the Bureau of Vital Statistics. Price not stated.

THIN, JAMES, 54, 55, and 56, South Bridge, Edinburgh.
Practical Chemistry for Medical Students. By Alexander Charles Cumming, D.Sc., Lecturer on Chemistry in the University of Edinburgh. With Preface by Professor James Walker. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ATKIN, E. E., M.B. Cantab., has been appointed Assistant Bacteriologist at the Lister Institute of Preventive Medicine.

BRAMWELL, BYROM, M.D. Edin., has been appointed Physician to Chalmers' Hospital, Edinburgh.

COOPER, W. R., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Samaritan Free Hospital.

DEWAR, ALLAN, M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Surgeon at the Royal Albert Hospital, Devonport.

FUNK, CASIMIR, has been appointed a Research Scholar at the Lister Institute of Preventive Medicine.

HARDENBERG, E. J. F., M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon to the "N" Division Metropolitan Police at Chingford.

HOLDICH-LEICESTER, J. C., Major, I.M.S., has been appointed Clinical Assistant to the Samaritan Free Hospital.

ILLIUS, H. WARWICK, Captain, I.M.S., has been appointed Clinical Assistant to the Samaritan Free Hospital.

MACFARLANE, W. D., M.B., M.S. Glasg., has been appointed to the Chair of Midwifery and Gynæcology at Anderson's College Medical School, Glasgow.

MOLONEY, M. F., M.B.N.U.I., has been appointed Coroner for the County of Waterford, and assigned to the Western District.

MUNRO, H. L., M.D. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Beverley District of the county of Yorks, East Riding.

NORRIS, A. H., M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed Assistant School Medical Officer for the Berkshire County Education Committee.

O'CONNOR, S. V., L.A.H. Dub., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Crossabeg District of the county of Wexford.

RANSON, WILSON, L.R.C.P. Edin., F.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health to the Beverley Rural District Council.

RAY, W., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Bacteriologist at the Lister Institute of Preventive Medicine.

REID, R., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Whitehouse District of the county of Antrim.

WHEELER, H. Q. O., L.R.C.P. & S. Irel., has been appointed Senior House Surgeon at the Borough Hospital, Birkenhead.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BATH, EASTERN DISPENSARY.—Resident Medical Practitioner. Salary £130 per annum, with apartments, coals, gas, &c.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM CITY ASYLUM, Winson Green.—Junior Assistant Medical Officer. Salary £150 per annum, with board, laundry, &c.

BIRMINGHAM EAR AND THROAT HOSPITAL, Edmund-street.—House Surgeon for six months. Salary at rate of £70 per annum, with board, lodging, and washing.

BRISTOL GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, residence, &c.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House Surgeon. Salary £75 per annum, with board, apartments, and washing.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

BUXTON, DERBYSHIRE, DEVONSHIRE HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Second House Surgeon for nine months. Salary £80 per annum, with board, residence, and laundry.

CARDIFF INFIRMARY (GENERAL HOSPITAL).—House Surgeon for six months. Salary £30, with residence, board, and laundry.

COBHAM, SURREY, SCHIFF HOME FOR SURGICAL CONVALESCENTS.—Resident Surgical Officer for six months. Salary £100.

CROYDON GENERAL HOSPITAL.—Junior House Surgeon. Salary £75 per annum, with board, laundry, and residence.

DENBIGH, DENBIGHSHIRE INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, apartments, laundry, &c.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £72 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—House Physician. Salary at rate of £80 per annum, with board, residence, and washing.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—House Physician and Assistant House Surgeon for six months. Salary of former at rate of £90 per annum, and of latter at rate of £80 per annum.

GLAMORGAN COUNTY COUNCIL.—Medical Officer for Inspection of School Children. Salary £250 per annum.

GLOUCESTER COUNTY ASYLUMS.—Assistant Medical Officer, unmarried. Salary £150 per annum, with rooms, rations, laundry, and attendance.

HAMILTON ISOLATION HOSPITAL, near Motherwell.—Resident Physician-Superintendent. Salary £200 per annum, with board, &c.

HOLT, NORFOLK, GRESHAM'S SCHOOL.—Medical Officer. Salary £250 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Assistant Casualty Medical Officer, unmarried, for six months. Salary £30, with board, residence, &c.

HUDDERSFIELD ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £60 per annum, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Two Assistant House Surgeons. Salary at rate of £60 per annum, with board and lodging.

LEICESTER INFIRMARY.—House Surgeon. Salary at rate of £120 per annum, with board, apartments, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, residence, and washing.

LINCOLN MENTAL HOSPITAL, The Lawn, Lincoln.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, &c.

LIVERPOOL, CANCER RESEARCH LABORATORY, The University.—Assistant. Salary £150 per annum.

LIVERPOOL EYE AND EAR INFIRMARY, Myrtle-street.—Honorary Assistant Surgeon.

MANCHESTER, CITY OF.—Registered Medical Practitioner. Salary £250 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham Hill-road.—House Surgeon. Salary £100 per annum, with apartments and board.

MELROSE, ROXBURGH DISTRICT ASYLUM.—Assistant Medical Officer. Salary £160 per annum, with board, lodging, and washing.

NAPSBURY, ST. ALBANS, MIDDLESEX COUNTY ASYLUM.—Assistant Medical Officer. Salary £160 per annum, with board, lodging, washing, and attendance.

OLDHAM ROYAL INFIRMARY.—Third House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.

OLDHAM UNION WORKHOUSE.—Resident Assistant Medical Officer.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Clinical Assistants.

POPLAR AND STEPNEY SICK ASYLUM, Bromley, Middlesex, E.—Third Assistant Medical Officer. Salary £120 per annum, with rations, apartments, and washing.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Senior House Surgeon. Salary at rate of £135 per annum, with board and residence.

PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.

PORTSMOUTH WORKHOUSE INFIRMARY, WORKHOUSE, AND CHILDREN'S HOME.—Second Assistant Resident Medical Officer. Salary £120 per annum, with apartments, rations, &c.

RICHMOND, SURREY, ROYAL HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board and apartments.

ROCHDALE INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and laundry.

ROUSAY AND EGILSHAY, PARISH OF.—Resident Medical Officer. Salary £71 per annum.

ROYAL NAVAL MEDICAL SERVICE.—Fifteen Commissions.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Honorary Dental Surgeon.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.—Honorary Vaccine-Therapeutist.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square, W.—Honorary Surgeon. Also Resident Medical Officer. Salary £150 per annum, with apartments, attendance, coals, and light.

SHEFFIELD ROYAL INFIRMARY.—Three Junior Resident Medical Officers. Salaries £60 to £65 per annum.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—House Physician. Salary £82 per annum, with board, residence, and laundry.

SURREY COUNTY COUNCIL.—Assistant Medical Officer for Inspection of School Children. Salary £250 per annum.

SWANSEA EDUCATION COMMITTEE.—Assistant School Medical Officers (one Male and one Female). Salaries £250 each per annum.

WALSALL AND DISTRICT HOSPITAL.—House Physician and Casualty Officer. Salary £80 per annum, with board, residence, and laundry.

WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Junior House Surgeon. Salary at rate of £80 per annum, with board, residence, and washing. Also Honorary Ophthalmic Surgeon.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

WESTMINSTER HOSPITAL (opposite Westminster Abbey).—Assistant House Physician for two months, non-resident, but board provided.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY.—Junior House Surgeon. Salary £100 per annum, with rations, washing, and apartments.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Act at Ramsgate, in the county of Kent; at Workington, in the county of Cumberland; and at Weston-super-Mare, in the county of Somerset.

Births, Marriages, and Deaths.

BIRTHS.

FLETCHER.—On Oct. 10th, at Haverstock-hill, the wife of N. Corbet Fletcher, M.B., B.C. Cantab., M.R.C.S., of a son.

FREEMAN.—On Oct. 11th, at Devonshire-place, W., the wife of Dr. John Freeman, of a daughter.

JEFFERISS.—On Oct. 8th, at Artois House, Chatham, the wife of Frederick B. Jefferiss, F.R.C.S., of a son.

MARRIAGES.

BIGGS—THOMPSON.—On Oct. 14th, at the Parish Church, Hampstead, Arthur Cecil Barker Biggs, M.R.C.S., L.R.C.P., to Dora Adeline Thompson, daughter of Archibald Thompson, Chesterford-gardens, N.W.

GRAY—MALLETT.—On Oct. 3rd, at St. Luke's Church, West Norwood, William Harrington Gray, M.R.C.S. Eng., L.R.C.P. Lond., to Lydia Alice Maud Mallett, of Wandsworth.

JAQUES—TATUM.—In Montreal, Canada, on Oct. 18th, 1911, by the Dean of Montreal, Mr. Frank H. Jaques, to Muriel, eldest daughter of H. T. Tatum, M.R.C.S.E., grand-daughter of the late Thomas Tatum, F.R.C.S.E., L.S.A., Consulting Surgeon to St. George's Hospital, London.

RIGBY—MACBETH.—On Oct. 12th, at All Souls', Langham-place, Hugh Mallinson Rigby, F.R.C.S., to Flora, daughter of Norman Macbeth, of Woldingham, Surrey.

WORTHINGTON—BANKART.—On Oct. 5th, at Exeter Cathedral, Robert Alfred Worthington, F.R.C.S., to Evelyn Marian, third daughter of the late James Bankart, F.R.C.S., and of Mrs. Bankart, of Exeter.

DEATHS.

HARGRAVE.—On Oct. 16th, at London Hospital, from pneumonia, Donald Herbert Hargrave, aged 19 years, the eldest son of Herbert J. Hargrave, M.B., C.M., of 32, Spital-square, Bishopsgate, E.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

COW-DUNG WASHING AND PLAGUE PREVENTION.

WITH reference to an annotation in THE LANCET of Sept. 30th, 1911, p. 968, Dr. C. N. Saldanha writes:—"I do not eulogise cow-dung floors. Concrete cement floors would be vastly preferable. But we have not got them and are not likely to have them for a long time yet for the general masses of the vast population of India. Finances forbid their adoption. Even concrete cement floors should be frequently cow-dung washed in India, especially during plague epidemics. What Dr. C. J. Martin means by a cow-dung floor is the common Indian mud floor which is cow-dunged over when first laid down. To keep it clean and habitable it requires to be frequently cow-dung washed. This is what is generally neglected in the Punjab and the North-West and other such plague provinces. Hindu conservatism in Madras and Eastern India generally secures indirectly much better attention to this most important sanitary rule. Dr. Martin's remarks on cow-dung floors, seemingly quoted in THE LANCET editorial as against my proposal, are in reality in support of it. The difference between the cow-dung floors of Dr. Martin and the cow-dunging, or cow-dung washing, of my proposal, and as understood by all the classes of the natives, is the difference between black boots or shoes and blackening boots or shoes. Black boots indicate the sort or colour of boots: blackening boots means the cleaning of them. Two different things altogether. Is this not so? Cow-dung washing destroys the rats' nests in the Indian rooms referred to by Dr. Martin, for the odds and ends in the room have to be removed. In fact, the room gets quite as empty as the builder first left it. Every bit of furniture goes out into the open central courtyard before the preparatory sweeping of the room for the cow-dunging commences at all. It is for this reason that the cow-dung-washing day is not in India a fixed day of the week. It comes once a week or once a year, or anywhere between the two periods, and in some families even oftener than once a week. But the day chosen is a bright sunny morning. This kills two birds with one stone. The housewife seeks a bright day to put out in the yard her sticks of furniture and odds and ends. She does not want them to get drenched with rain, but her main reason is that the cow-dung-washed room may get dried the quicker. Dry it she must and will. To obtain this end she must open wide all her doors and windows, which on other days is anathema maranatha. She thus unconsciously assists the scientific sanitarian on this one day. Now, among other things, I want to multiply the number of such days by increasing the frequency of cow-dung washing days. There is no other way of getting her to utilise the well-known effects of sunlight and free currents of air to devitalise B. pestis. Preaching is useless. Hearing is one thing and conviction is another. And one cannot convert all India to English and European notions of sanitation by simply preaching them. Actual demonstration is out of the question; one cannot get all India or any considerable fraction of it to attend to these demonstrations, least of all to believe in them. Sunlight and free ventilation, which are necessary for drying a cow-dunged room, also devitalise any tubercle bacilli that may have been present in the cow-dung used in washing the room. Free drying is a *sine qua non*. The housewife takes a pride in giving an even coat to the floor. Afterwards, and as a finishing process, the room is swept with a broom. Of course, if the floor is not quite dry this will cause smudges, and it will also stain the broom, both of which the housewife wants to avoid. Hence the great impetus to admit to-day heaven's gifts of light and air. The sweepings from the room must be burnt, as also the rag used in spreading the cow-dung. Cow-dung washing does not necessarily kill all the fleas caught in the process, but it facilitates their removal from the room. They get caught in the mucilage; it nets them. Some come off in the sweeping, which is therefore to be burnt, not thrown into the dustbin. As a precaution against conveyance of fleas from one floor to another, I have recommended a separate broom for each floor. Indian brooms only cost a farthing each, so it is a very inexpensive measure."

THE LATE DR. JOSEPH BELL.

"J. W. B." writes: "To many of those who studied at Edinburgh in the later 'seventies' and early 'eighties' of the last century Dr. Joseph Bell—or, as he was more familiarly called, Joe Bell—was one of the most attractive of the teachers of surgery, first in the Old and then in the New Infirmary. His ward visit was always a breezy one. Carrying a towel in his hand, he passed rapidly from bed to bed, getting information as to the progress of a patient, sometimes from the house surgeon sometimes from the staff nurse (there were no sisters then), sometimes from the patient, and sometimes from all three. In a few sentences we were told what had been the matter, when the operation had been done, and were assured that the man or the woman was getting along finely; very often, nearly always, the information was accompanied by a personal appeal for confirmation to the patient, and I remember wondering if any of Bell's cases ever went wrong. It was the early days of antiseptics, and the strength of the carbolic lotion employed would startle the present-day surgeon. With the really ill people he was very tender, gave us few details, and said to us almost in a whisper, 'Operate to-morrow; tell you all about it then.' Two or three of the cases requiring dressing were inspected, and three or four dressers putting on wool and bandages marked Dr. Bell's progress through his wards.

"But the ward visit was nothing in comparison to the out-patient clinic. It was there that Bell amazed us all, patients and students alike, with the rapidity of his diagnosis, with the brilliancy of some of his pieces of deductive reasoning, with the apparently irrelevant nature of some of the questions asked, and more particularly with the confident statements made as to the calling, habits, likes or dislikes, and place of birth of the men and women who came into the theatre and passed out again, often in the briefest space of time. Some of us explained it on the hypothesis that Dr. Bell got a sight of the out-patient clerk's note-book; but the patients who came up late spoiled that supposition. Occasionally, he condescended to tell us how he knew a policeman, a soldier, a sailor, or a cobbler, and then it all seemed uncommonly simple; but there were hundreds of little details which he seemed to obtain from nowhere, and about which he was silent. Of course, he occasionally made slips; once he asked a young girl when she came over from Ireland, to which she replied that this was the first time that she had left her native village in Ross-shire. Bell gave us the reason why he made that mistake, but I forget now what it was.

"One night I felt prompted to go to Bell's house to discuss a matter with him; I was shown into his library where he sat writing letters. He asked me to excuse him one minute as I had come a little earlier than he had intended. Presently he informed me that he had willed me to come along, but that I had come more quickly than he had expected. I had intended coming the previous evening, but had been prevented. Had I pressed this I suppose Bell would have retorted that on the previous evening he had not fully formulated his mental desire for my presence! On some similar occasion Dr. Bell told me of some curious experiences he had had. One of them, he thought, must have been the origin of Sherlock Holmes's discovery of the identity of a certain individual by reading the name on the lining of his hat. A patient had called one day to ask Dr. Bell's advice, but wished to remain *incognito*, and rather testily refused to give his name; Bell said nothing, but exchanging his ordinary sheet of notepaper for one of foolscap wrote his prescription in very small letters in the middle of it with the patient's name above it, and handed it to his would-be mysterious visitor. He had read his name on an article of his attire, which was not, however, the band of his hat.

"But there was another side of Joseph Bell's life, and to those who were present at that impressive funeral service in St. George's U. F. Church on Oct. 7th, Principal Whyte's marvellous prayer of thanksgiving to God for what Dr. Bell had been to so many patients, friends, students, and professional brethren must have seemed no idle words. Dr. Bell showed princely liberality when the occasion demanded; he was ready to give his surgical services for nothing when his patients were fighting hard to discharge all their obligations; he gave a helping hand to younger men climbing the ladder of professional success, and he did his kind things most unostentatiously, his kindest things almost as secrets from himself."

THE PRESERVATION OF VACCINE IN HOT COUNTRIES.

IN connexion with the annotation on this subject published in THE LANCET of Oct. 7th, p. 1027, we have received a reprint of a paper on the Effect of Desiccation on Calf Lymph, by Dr. F. R. Blaxall, which was included in the Reports of the Local Government Board, 1900–01, Appendix C, p. 664. He showed that the vaccine organism could stand desiccation for as long as four months without loss of vitality. He also suggested that the process of desiccation might prove to be of value in storing lymph and in transmitting it to hot countries. These observations were made several years prior to the publication of the paper referred to in our annotation.

ARMY AND NAVY MALE NURSES' COOPERATION.

THE offices of this institution are at 11A, Welbeck-street, Cavendish-square, W., and not at the address given in THE LANCET of Oct. 14th, p. 1077.

DANGERS OF A 50-MILE WALK.

THE pitiful condition of two competitors in a recent London to Brighton walking race should act as a warning to those who, without the necessary training and physique, may be induced to take part in such a severe trial of strength. The race took place under the auspices of the clerks of one of the London banks. Seventeen competitors entered and out of these ten were "timed in." Of the remaining seven two succeeded in getting within a quarter of a mile of their goal, where they struggled to a public seat in some pleasure-gardens, and there, in a state of absolute collapse, were found by a police officer. The seriousness of their condition was only too apparent, and the officer lost no time in procuring assistance and had them conveyed to the Royal Sussex County Hospital. Over-exertion had brought about their condition, and it was some hours before they were in a fit state to leave the institution. Except to those accustomed to long walks at frequent intervals, a journey on foot of this kind may lead to serious consequences.

ITALIAN CONVERSATION.

AN Italian medical man, practising in the South-West of London, would be glad to exchange conversation with some brother practitioner who wishes to learn Italian *free*. Our correspondent also speaks French fluently.

A CORRESPONDENT writes to point out one or two small inaccuracies in our obituary notice of Mr. L. S. Little in our last issue (p. 1108). It was in 1869 that Mr. Little went to China, and he lived in China for 30 years. He did not return direct to England, but in 1899 left China for South Africa.

Dr. W. L. Maccormac, the Infirmary, Balham, S.W., would be glad to learn of a suitable institution for a boy, aged 15, with chronic coarse choreiform movements and good intelligence.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for October, 1911:—

April-October.—Rome Exhibition (United Italy's Jubilee).
,, 29th-Oct. 26th (Turin).—International Exhibition.
May 3rd-Oct. 31st (Glasgow).—Scottish Exhibition.
,, 6th-Oct. 31st (Dresden).—International Hygiene Exhibition (British Section opened June 14th closed Oct. 16th).
,, 12th-Oct. 31st (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
,, 18th-October 21st (London, Shepherd's Bush).—Coronation Exhibition.
,, 23rd-Oct. 21st (London, Olympia).—Electrical Exhibition.
September-November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Oct. 20th-22nd (Roubaix).—Second National Congress of the Mutualité Maternelle.
,, 22nd and 23rd (Lyons).—Twelfth French Congress of Medicine.
,, 25th-27th (New York City).—Annual Conference of Sanitary Officers of the State of New York.
,, 26th-28th (Rome).—Congress of the Italian Society of Laryngology, Otology, and Rhinology.
,, 31st-Nov. 4th (London, Royal Horticultural Hall).—Twenty-second Universal Cookery and Food Exhibition.
October (Paris).—First Congress of the International Medical Association for the Prevention of War.
Nov. 1st (opens) (Turin).—International Exhibition of Hygiene.
,, 1st-14th (London).—"The Englishwoman" Exhibition of Arts and Handicrafts.
,, 3rd-11th (London, Olympia).—Tenth International Motor Exhibition.
,, 9th-11th (Cape Town).—Congress of the South African Branch of the Royal Sanitary Institute.
,, 10th-25th (Manchester).—Smoke Abatement Exhibition.
,, 14th and 15th (Vienna).—Jubilee of Union of Austrian Dental Surgeons.
,, 21st-23rd (Montreal).—Canadian Public Health Association (First Annual Meeting).
November (Rome).—Fourth International Congress of Physical Education.
,, (London).—Motor Exhibition.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 18th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Oct. 12	30·19	S.E.	...	85	64	48	49	50	Foggy
,, 13	30·02	E.	...	64	61	50	52	53	Foggy
,, 14	29·98	S.	0·21	69	58	53	57	57	Overcast
,, 15	30·23	N.E.	...	70	59	55	54	56	Overcast
,, 16	30·18	N.E.	0·02	65	56	53	53	54	Overcast
,, 17	30·12	E.	...	89	60	54	53	55	Overcast
,, 18	30·10	S.E.	...	79	62	48	49	49	Foggy

The following journals, magazines, &c., have been received:—
American Journal of Clinical Medicine, New York Medical Journal, American Journal of Obstetrics, Birmingham Medical Review, Annales des Maladies des Organes Génito-Urinaires, American Journal of Orthopedic Surgery, La Clinique Ophtalmologique, Journal of Nervous and Mental Disease, American Medicine, South African Medical Record, Midland Medical Journal, Women's Industrial News, Australian Medical Journal, Los Angeles Mining Review, Albany Medical Annals, St. Paul Medical Journal, Die Therapie der Gegenwart, Yellow Fever Bureau Bulletin, Sleeping Sickness Bureau Bulletin, Journal of Anatomy and Physiology, Symons's Meteorological Magazine, American Journal of Surgery, Local Government Review, Medical Record, Eugenics Review, Caledonian Medical Journal.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

MONDAY.
ODONTOLOGICAL SECTION (Hon. Secretaries—W. W. James, Stanley Mummery): at 8 P.M.
Casual Communications:
Mr. Hopewell-Smith: The Presence of Blood Vessels in the Enamel Organ of the Kangaroo.
Paper:
Mr. J. G. Turner: Some Unusual Pathological Conditions of the Mouth.
President's Inaugural Address:
Mr. H. Lloyd Williams.

TUESDAY.
MEDICAL SECTION (Hon. Secretaries—Sir John F. H. Broadbent, Robert Hutchison): at 5.30 P.M.
Paper:
Dr. S. T. Pruen (Cheltenham): Slight Strokes.

THURSDAY.
NEUROLOGICAL SECTION (Hon. Secretaries—Wilfred Harris, T. Grainger Stewart): at 8.30 P.M.
Presidential Address:
Dr. F. W. Mott, F.R.S.: The Inborn Factors of Nervous and Mental Diseases.

FRIDAY.
SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—T. R. Whipham, H. S. Clogg, Percy G. Lewis), at 11, Chandos-street, W.: at 4.30 P.M.
Cases:
Dr. Porter Parkinson: General Paralysis of the Insane in a Girl.
Dr. G. A. Sutherland: (1) Infantilism; (2) Extreme Rickets.
Dr. F. Langmead: Two Cases of Sclerodermia (one previously shown on Oct. 28th, 1910).
And other Cases.
Paper:
Mr. Sydney Stephenson: On Cases of Night-blindness with Peculiar Conjunctival Changes in Children.
BALNEOLOGICAL AND CLIMATOLOGICAL SECTION (Hon. Secretaries—A. Manuel, F. A. de T. Mouillot): at 6 P.M.
Presidential Address:
Dr. G. H. Thompson (Buxton): Baths and Climate in Relation to Spa Treatment: Some Reflections and Suggestions.
(The ANNUAL DINNER of the Section will be held at the Imperial Restaurant, 60, Regent-street, W., at 7.30 P.M.)
EPIDEMIOLOGICAL SECTION (Hon. Secretaries—W. H. Hamer, G. S. Buchanan): at 8.30 P.M.
Paper:
Dr. R. Farrar: Plague in Manchuria.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.
MONDAY.—8.30 P.M., Mr. H. Tilley: Acute and Chronic Suppuration of the Accessory Sinuses: the Etiology, Diagnosis, and Treatment from the Point of View of the General Physician and Surgeon (illustrated by cases and the epidiascope).

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.
WEDNESDAY.—9 P.M., Dr. H. Fox: Presidential Address. Dr. F. Fox: Cases illustrating the Use of Venesection.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.
MONDAY.—4 P.M., Dr. H. MacCormac: Clinique (Skin). 5.15 P.M., Lecture:—Dr. J. L. Bunch: Rashes in Children.
TUESDAY.—4 P.M., Dr. H. Campbell: Clinique (Medical). 5.15 P.M., Lecture:—Dr. C. O. Hawthorne: Internal Ophthalmoplegias.
WEDNESDAY.—4 P.M., Mr. J. Cunning: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. F. J. Wethered: The Nature and Treatment of Certain Forms of Indigestion (with demonstration).
THURSDAY.—4 P.M., Dr. P. Parkinson: Clinique (Medical). 5.15 P.M., Lecture:—Dr. A. Latham: Principles of Treatment in Infective Disease.
FRIDAY.—4 P.M., Mr. W. Stuart-Low: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.
MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Edwards: Rectal Surgery.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Rtherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Davis: Diseases of the Throat. (Lecture I.)
WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Low: Malaria.
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture II.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Davis: Diseases of the Nose. (Lecture II.)

SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Dr. Hughes: Anæsthetics.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon. Skin. 2.15 P.M., Special Lecture:—Sir John Bradford: Pleural Effusion.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Habershon: The Value of Auscultatory Percussion.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. R. Russell: General Paralysis of the Insane.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. A. Turner: Neurasthenia.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Dr. A. Wylie: Larynx.

FRIDAY.—3 P.M., Inaugural Lecture:—Dr. Watson Williams: The Influence of the Upper Air Tract on Respiration (illustrated by lantern slides).

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Mr. W. Hampson: X Rays: the Tube and its Control.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: The Treatment of Eczema in all its Forms.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.45 P.M., Mr. W. R. Douglas: Differential Diagnosis of Chronic Lesions of the Tongue. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.). Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (25th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (26th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

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SATURDAY (28th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

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A Lecture
ON
ACUTE AND CHRONIC SUPPURATION OF THE NASAL ACCESSORY SINUSES:

ETIOLOGY, DIAGNOSIS, AND TREATMENT FROM THE POINT OF VIEW OF THE GENERAL PHYSICIAN AND SURGEON.

Delivered before the Medical Society of London on Oct. 23rd, 1911,

BY HERBERT TILLEY, B.S. LOND., F.R.C.S. ENG.,

SURGEON, EAR AND THROAT DEPARTMENT, UNIVERSITY COLLEGE HOSPITAL, LONDON.

[FOLLOWING some introductory remarks, Mr. Herbert Tilley pointed out that the mucous membrane of the nasal cavities was continuous with that lining the accessory sinuses (Fig. 1), and that acute inflammation of the former was practically always associated with a simultaneous inflammation of the accessory cavities, but a similar combination was less frequently met with in chronic suppurations because spontaneous resolution of acute inflammation occurred more readily in some of the sinuses than in others. The main anatomical features of the maxillary antrum were dwelt upon and were illustrated by diagrams, specimens, and lantern slides. Infection of the sinus by a diseased molar or bicuspid tooth was readily explained when the apex of the root reached close to the floor of the antrum, and this was frequently the case.]

ACUTE INFLAMMATION OF THE MAXILLARY ANTRUM.

In the majority of instances this condition is caused in one of two ways—(1) infection by way of the nose occurring in the course of acute specific fevers, and of this type influenza provides the greatest number of cases; (2) infection from the septic pulp of a diseased tooth. Facial erysipelas has been said to cause antral suppuration, but I am of opinion that repeated attacks of facial erysipelas are frequently due to infection by pyogenic organisms derived from suppuration of the antrum or other sinuses. Traumatisms account for a certain smaller number of acute antral inflammations, and here the careless use of the galvano-cautery or other intranasal operations, as well as unskilful or unclean dental extractions, add their undesirable quota.

Symptoms.—The symptoms vary according to the source of infection. Should the local inflammation complicate an acute systemic infection a considerable degree of pyrexia and severe pain in the cheek and its neighbourhood will be prominent symptoms. If the infection is caused by a tooth severe toothache and alveolar abscess might precede the antral symptoms and subside when the foul discharge from the nose takes place. Whatever the source of infection may be an examination of the corresponding nasal cavity will frequently reveal the presence of pus in the middle meatus.

Prognosis.—When the antral inflammation complicates a general systemic infection the inflammation of the mucous membrane is more general and intimate, and probably the patient's resistance is lower than when the suppuration is caused by a tooth, and hence the prognosis is less favourable from the point of view of rapid recovery in the former than in the latter and more local infection.

Treatment.—This will necessarily depend on the source of infection. If the antral inflammation complicates a constitutional infection—e.g., influenza—in addition to the treatment of the general disease every endeavour should be made to promote the spontaneous discharge of pus from the antrum. To this end the patient should rest in bed with the infected sinus uppermost, and every hour or two hours an application of equal parts of 10 per cent. cocaine and adrenalin chloride should be applied on cotton-wool mops to the middle meatal region. This will induce contraction and ischæmia of the mucosa and promote the free discharge of pus from the "ostium" in the middle meatus. Hot fomentations to the affected cheek and 10-grain doses of aspirin every four hours will go far to alleviate local pain and discomfort.

Should the symptoms persist in their severity the antrum should be punctured by trocar and cannula passed through the middle meatus or below the inferior turbinal and irrigated with warm normal saline solution or boric lotion; and I need scarcely say that the necessary manipulations can only be carried out with safety and a minimum of discomfort to the patient by those skilled in intranasal surgery. The irrigations may have to be repeated daily for a week or ten days.

When a diseased tooth is the cause of trouble it should be removed, the alveolus perforated, and a temporary alveolar plug inserted. The antrum can then be irrigated twice daily until the inflammation has subsided, when the alveolar passage may be allowed to close.

If bacteriological examination of the pus should prove that one organism is present or is in great predominance, an autogenous vaccine may assist and prove a valuable adjunct in treatment, but we must remember that, as a rule, acute cases tend to recover quickly and that a favourable result when a vaccine is used may be *post*, but not entirely *propter*, *hoc*.

CHRONIC ANTRAL SUPPURATION.

This is generally due to causes which hinder resolution of the acute inflammation and the most potent factors are those which obstruct free drainage such as an enlarged middle turbinal or deviation and irregularities of the nasal septum. In other instances the persistence of the discharge may be due to the virulence of the primary infection which has so damaged the lining membrane of the antrum that resolution has failed to take place. Furthermore, the type of organisms present may influence the chronicity of the inflammation (*vide infra*). Again, in the case of a diseased tooth the original focus of infection may remain.

I believe that sometimes chronic suppuration may slowly but ultimately graft itself on to a mucous membrane which has been in a state of simple chronic catarrh for a long while.

Symptoms.—These are: 1. A purulent or muco-purulent discharge from the nose nearly always described by the patient as "nasal catarrh." He may also complain of an offensive smell, or an unpleasant taste if the discharge passes backwards into the throat. 2. A certain amount of nasal obstruction caused by irritation and consequent swelling of the nasal mucosa. Not infrequently polypi are present in cases of long standing, and their presence indicates inflammation of the ethmoidal cells. 3. Headache, often supraorbital in position and not infrequently most marked in the earlier hours of the day.

Cough, liability to head colds, anæmia, indigestion, general debility, anorexia, mental depression are other symptoms which may be met with, and are possibly due to the irritation or absorption of the purulent discharge.

Finally, it has been shown that in certain cases of chronic antral suppuration there is a general contraction of the visual field. In other instances affections of the conjunctiva have been clearly traced to infection from the nose or antrum by way of the lacrymal canal and sac.

Bacteriology.—The very careful and exhaustive researches of Logan Turner and C. J. Lewis [1] have shown that four main types of cocci are generally responsible for chronic antral suppuration—viz., pneumococci, streptococci, staphylococci, and diplococci of the type of micrococcus catarrhalis, and that in recent cases the streptococci were virulent in 60 per cent., but only 30 per cent. were virulent in chronic suppuration.

Diagnosis.—Emphasis must be laid upon the importance of always suspecting sinus suppuration when a patient complains of *chronic nasal catarrh*, and especially so if pus is contained in the nasal mucus or if the handkerchief is found to be stained by it. A "morning headache" in a patient who has lived in malarial climates might easily lead to ineffectual dosing with quinine, when a little care might lead to the detection of antral suppuration. A positive diagnosis of the latter can be made by the detection of pus in the middle meatus, by transillumination of the antra or puncture of the sinus by a fine trocar passed through the inner antral wall—a proceeding which is almost painless when skilfully carried out.

Prognosis.—If the suppuration be of long standing it is improbable that any procedure short of operation will effect a cure, because the lining mucous membrane has undergone

[1] Edinburgh Medical Journal, April, 1910.

gross degenerative changes and excessive secretion has then become its normal function.

Cases of dental origin as a rule do better than those of intranasal origin, because the mucous membrane is less intimately infected.

When nasal polypi and therefore ethmoidal inflammation accompany antral suppuration the prognosis will be less favourable unless radical surgical measures are carried out.

Treatment.—Change of air, internal medication, and nasal washes are quite useless and are a waste of time and money, for they cannot remedy such a gross degeneration of the mucous membrane as is illustrated in the diagram taken from an ordinary case of chronic antral suppuration. Neither have I seen much success with vaccines, even when administered by the high priests of vaccine therapy. The infection is practically always a mixed one, there is a high degree of mucous membrane degeneracy, and drainage is nearly always obstructed. On the other hand, if only one organism be present or largely predominate, then vaccine therapy might be given a trial or used as an adjuvant in treatment.

Two methods for the cure of chronic antral suppuration may be considered. 1. Lavage or irrigation through the inner antral wall. By this means a small proportion of chronic cases may be cured, and bacteriology may give us a hint as to the type of case which may be benefited, for Lewis and Turner's researches show that "chronic cases in which no streptococcus pyogenes is found in the pus more readily respond to lavage than those in which the same organism is present," and also that lavage is more successful when a small number of lymphocytes are present than when an excess occurs. 2. Surgical measures. When these are contemplated the operator should endeavour (*a*) to remove diseased mucous membrane, and (*b*) to provide free, unhindered, spontaneous, and permanent drainage. To secure these ends two methods find favour. 1. A large opening is made, by way of the nose, in the inner antral wall after a preliminary removal of the anterior two-thirds of the inferior turbinal. Through such an opening daily irrigation may be practised by surgeon and patient until suppuration ceases. (Fig. 2.) 2. A similar opening in the inner antral wall, but the sinus is first entered through the canine fossa. (Fig. 3.) This is known as the Caldwell-Luc operation, and I believe it to be the better method because the surgeon can see into the affected region and remove only those parts which are diseased. Little recesses and pockets which serve as foci for suppuration are thus rendered visible, which is not the case when the antrum is opened by way of the nasal cavity. I have given each method a long and extensive trial, and am firmly convinced that the canine fossa route is the better for the large majority of chronic cases, while for a minority the intranasal route may be advisable and may be attended by completely successful results. The latter may be adopted when for any reason the more severe operation is contra-indicated, because the intranasal opening may quickly be made under local anæsthesia or a combination of local anæsthesia with that induced by ethyl chloride or nitrous oxide gas.

Alveolar drainage.—The attempt to cure chronic antral suppuration by drainage through the buccal socket of a bicuspid or molar tooth must be unsparingly condemned, because, in the great majority of cases, the suppuration is only relieved and not cured. The tube or plug, whether it be of gold or vulcanite, rarely drains the suppurating cavity, it allows all sorts of organisms and particles of food to gain access to the antrum from the buccal cavity, and the long-continued daily irrigation is an intolerable nuisance to the patient.

ETHMOIDAL SUPPURATION.

The diagrams, lantern slides, and specimens will show how very complicated is the gallery of cells which form the "lateral mass of the ethmoid." (Fig. 4.) We note its intimate relation to the frontal bone above, to the orbit on its outer side, the sphenoidal sinus behind, the inner and upper wall of the antrum below, and the close relation which its posterior group of cells may bear to the optic nerve. Not less important than these relations is that part of the ethmoid bone which forms the cribriform plate. I cannot dwell in any detail on the anatomy of this complicated bone, which varies to such a degree that it is almost impossible to speak of a normal type. Its cells frequently spread outwards below the frontal sinus till they reach the external angular process of the frontal bone, or backwards to the small wing of the sphenoid; posteriorly they are in close union with the sphenoidal cavity, and inferiorly they may spread outwards below the orbit in the inner portion of the roof of the antral cavity. When suppuration occurs in the anterior ethmoidal cells a similar condition is nearly always present in the frontal and antral sinuses.

The diagnosis, prognosis, and treatment of chronic ethmoidal suppuration cannot be dealt with now, for it would involve the description of complicated anatomical details and surgical technique. Suffice it to say that when ethmoidal suppuration is present the symptoms involve a purulent nasal discharge, a varying amount of nasal obstruction due to polypoid and hypertrophic degeneration of the ethmoidal mucous membrane. Local pain and discomfort in the nasal, lower frontal, and orbital regions are usually present, and not infrequently patients are subject to considerable mental depression and incapacity for mental exertion.

Ethmoidal suppuration is of importance because of the grave complications to which it may give rise. Should caries of a cell or cells take place with an extension of inflammation to the orbital contents sad results to the eye and eyesight may rapidly ensue. In other instances eyesight may be damaged or even lost by a slower inflammation of the optic nerve caused by the spread of inflammatory changes or infective conditions from the posterior ethmoidal cells, where they are in close relation with the optic nerve. More frequently posterior ethmoidal cell suppuration causes temporal contraction of the visual field, while general contraction is more common when the anterior cells are affected. This subject has been recently receiving a good deal of attention, and Professor Onodi of Budapest has added much to our knowledge in these matters. Still more serious are the meningeal inflammations which are not infrequently the outcome of chronic ethmoidal suppuration, and to those who constantly work in this department of surgery it must be a matter of surprise that these foci of suppuration so close to the brain and its meninges do not more often produce fatal results.

With regard to treatment I would only say that it is obviously surgical in nature, and that the great principle which should guide the operator is so to remove diseased structures that free intranasal drainage shall be permanently secured.

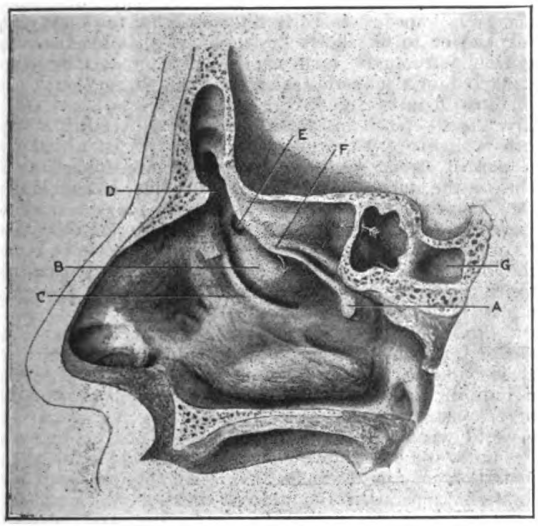
I make no apology for claiming that operative procedures in these regions should only be undertaken by those who are thoroughly conversant with the anatomy of the regions involved and who are skilled in the difficult technique of intranasal surgery. These regions are dark and must be well illumined so that the eye of the operator can see the end of his instrument. The parts are vascular, so that the surgeon must be prepared with means of checking the constant oozing of blood, and he must have patience to wait for a comparatively dry field in which to proceed with his manipulations. The bony structures are often soft and friable, and hence he must use no force in dealing with them. Vital structures are in close proximity to the limited area of operation, and hence the surgeon must have an almost instinctive knowledge of his whereabouts, and he should never be happy unless he feels that to the instrument which he holds in his hand there has been conveyed a tactile sensibility which is part and parcel of his own.

FRONTAL SINUS SUPPURATION.

[Some beautiful diagrams and lantern slides of the frontal sinuses were shown at the meeting illustrating their extreme variability in size and their relation to the orbits and meninges. (Figs. 5 and 6.) In some instances the sinus extended externally to the temporal region and backwards to the posterior limit of the orbit, and a patient was shown in whom at the time of operation the whole roof of the orbit and the posterior wall of the sinus had been destroyed by chronic suppuration, so that the orbital contents and the dura mater helped to form the walls of a large abscess cavity. The patient complained only of "seeing things double," and had never experienced any headache or other inconvenience.]

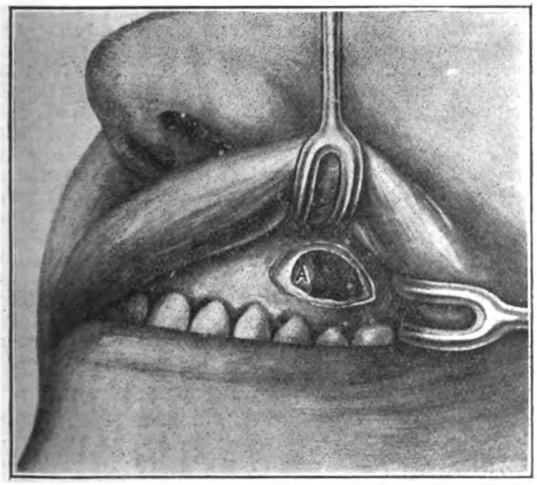
Frontal sinus suppuration may be acute or chronic. Acute inflammation is generally a complication of one of the acute specific fevers, and of these influenza accounts for more cases than all the other fevers together. I have seen cases complicating scarlet fever and they resembled in their acuteness

FIG. 1.



View of outer wall of right nasal fossa after removal of the middle turbinal from specimen dissected by lecturer. A, Cut attachment of the posterior end of the middle turbinal. B, Ethmoidal bulla. C, Uncinate process forming lower lip of hiatus semilunaris. D, Fronto-nasal canal. E, Opening of anterior ethmoidal cell. F, Line of attachment of middle turbinal (removed); immediately below this is seen the opening of the ethmoidal bulla into the middle meatus. G, Left sphenoidal sinus passing behind the right. (From Tilley's "Diseases of Nose and Throat." London: H. K. Lewis.)

FIG. 3.



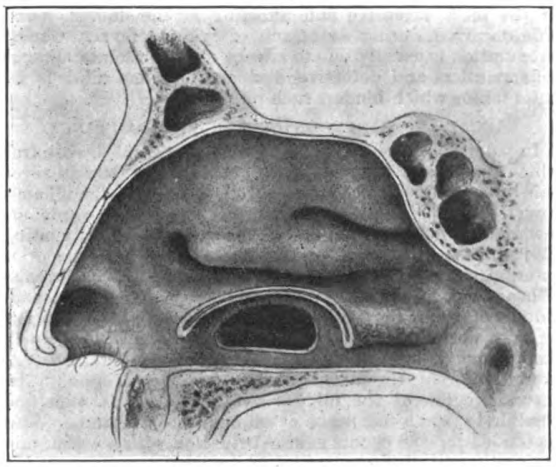
Caldwell-Luc operation. An opening is made through the canine fossa before removing A, the lower portion of inner antral wall.

FIG. 5.



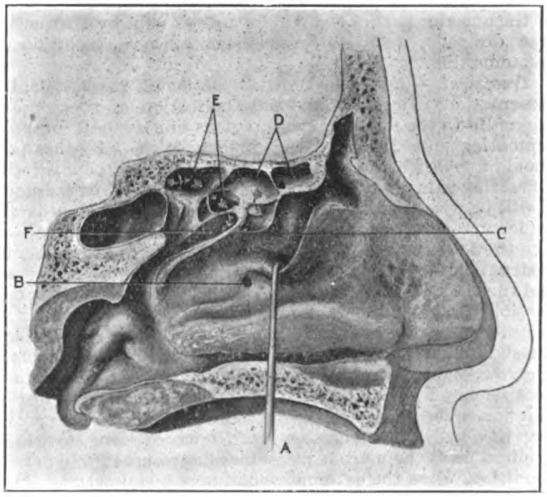
Frontal sinuses of normal size.

FIG. 2.



The anterior two-thirds of the inferior turbinal has been removed and an opening made in the inner antral wall.

FIG. 4.



A specimen dissected by lecturer illustrating the complicated cells forming lateral mass of the ethmoid. A, Hook drawing down the inner lip of the hiatus semilunaris to show normal "ostium" or opening of maxillary antrum into the middle meatus of the nose. B, Accessory antral opening. C, Opening of ethmoidal bulla into middle meatus. E, D, Posterior ethmoidal cells opening into superior meatus. (From Tilley's "Diseases of Nose and Throat." London: H. K. Lewis.)

FIG. 6.



Large left and small right frontal sinuses. Incomplete bony septa are seen in the left sinus which tend to divide that cavity into separate chambers or recesses. The left sinus extends considerably over to the right side and might easily be entered when operating on the right frontal sinus. (Figs. 5 and 6 kindly lent by Dr. Logan Turner, Edinburgh; *vide* "Accessory Sinuses of Nose," by same author. Wm. Green and Sons.)

and destructive nature the inflammations which are so commonly met with in the ear and the mastoid regions. One of the most extensive and affecting all the sinuses on each side occurred during an attack of typhoid fever. Chronic suppuration is usually due to a want of resolution of an acute inflammation and defective drainage of some kind is the chief factor which hinders such resolution.

ACUTE INFLAMMATION OF THE FRONTAL SINUS.

In addition to the symptoms of the general disease from which the patient is suffering we should expect to find severe pain above and around the eye on the side of the inflamed sinus. Often the pain induced by pressing upwards and inwards below the inner end of the eyebrow is excruciating. If intranasal drainage is free there may be little or no external signs suggesting that an inflamed sinus is the cause of headache, but if such drainage be obstructed redness and œdema of the upper eyelid and neighbouring soft parts may be very noticeable. The degree of pyrexia will vary with the amount of tension under which the pus is retained. An examination of the nasal cavity may reveal pus in the anterior region of the middle meatus, and it is sometimes possible to pass a fine probe or cannula into the sinus. When such good fortune occurs gentle irrigation with a warm, mild antiseptic will give great relief to the local symptoms.

Prognosis.—Most cases of acute frontal sinus suppuration recover spontaneously, probably because free drainage from the lower end of the sinus is naturally provided for. Septal deviations or hypertrophic irregularities in the neighbourhood of the anterior part of the middle meatus will, by obstructing free drainage, tend to check spontaneous resolution or inflammation.

Treatment.—Rest in bed, regular action of the bowels, hot fomentations externally, and the application of cocaine and adrenalin to the middle meatal regions are the best means of promoting subsidence of the inflammation. If the pain should increase and œdema of the eyelid appear, coupled with increasing pain on pressure over the anterior wall of the sinus, it will be wiser to adopt surgical measures. Possibly it will suffice to remove the anterior end of the middle turbinal and free the lower end of the fronto-nasal duct from any definite obstructions—this can only be done under general anæsthesia and needs care and special experience. It may then be possible to irrigate the sinus and quickly induce relief of symptoms. If the intranasal method affords no improvement, the sinus should be opened externally through the line of the eyebrow, the pus carefully washed out, and the fronto-nasal duct rendered patent by means of gentle probing or insertion of a fine rubber tube which can be removed in the course of a few days. Daily irrigation and light dressings will be required until the mucous membrane has returned to a normal condition, when the external wound may be allowed to close.

CHRONIC SUPPURATION OF THE FRONTAL SINUS.

Low resisting power of the patient, a virulent infection, and especially defective drainage are factors which tend to an acute inflammation becoming chronic.

Symptoms.—A purulent nasal discharge possibly associated with headache in the neighbourhood of the sinus are often the only symptoms complained of. Since the anterior and even the posterior ethmoidal cells are frequently in a similar condition of chronic inflammation and suppuration, polypi with consequent nasal obstruction and excessive discharge of mucus may be additional symptoms.

Diagnosis.—An inspection of the nasal cavity may reveal pus in the anterior region of the middle meatus. Frequently it will be possible to pass a fine cannula into the sinus, and if air be now injected the pus may be seen issuing by the side of the cannula where it disappears from view in the higher regions of the nose. A frontal skiagram of the inflamed sinus will show it to be more opaque than on the healthy side, and this means of diagnosis has a further advantage in that, if a profile view be taken, we can gauge the depth of the sinus from before backwards and thus estimate the probable amount of deformity if an external operation be decided on—a matter of some importance if the patient is a female.

Prognosis.—Once chronic suppuration is established in the frontal sinus, cure is not easily brought about without intra- or extra-nasal surgical treatment. I have had a few cases in which frequent irrigation and injection of strong astringents and antiseptics have been followed by a cure, but they are the exception rather than the rule, and this happy result is probably due to very free drainage of a sinus possessing a regular contour in which there are no pockets or recesses where pyogenic organisms can lurk and flourish. When drainage is impeded there is a tendency for the sinus walls to expand or to be slowly destroyed, so that neighbouring important structures such as the orbit or meninges are endangered, or a subperiosteal abscess may form, burst, and an external fistula result.

Treatment.—When intranasal drainage is free it is always worth while to try the effect of daily irrigation and the injection of strong solutions of silver nitrate, from 60 to 80 grains to the ounce, or of tincture of iodine, 1 drachm to a pint. To promote such free drainage it may be wise to remove the middle turbinal and some anterior ethmoidal cells. By such means suppuration may sometimes be so much diminished and other symptoms relieved that the patient prefers to let matters remain thus, even though a complete cure has not been attained.

On the other hand, there are many instances where free drainage is difficult to secure by intranasal methods, or there may be evidences that the inflammation is extending beyond the sinus, or the patient may be suffering from profuse discharge, constant headaches, or he may be going to parts of the world where skilled help will not be obtainable; and under these and other circumstances an absolute cure of the suppuration may be desirable. This can only be secured by an external operation the aim of which is to completely obliterate the sinus by the formation and ultimate organisation of granulation tissue. Many operations have been advocated from time to time, but probably the best is that advanced by Killian (Berlin), in which the anterior wall and floor of the sinus are completely removed, as well as any neighbouring ethmoidal cells which are simultaneously diseased. By leaving a "bridge" of bone in the lower anterior wall of the sinus Killian's operation has done much to minimise the deformity which was the defect of many other operations formerly practised.

Slight deformity is nearly always present unless the sinus be small and shallow from before backwards, and, as I have said, the amount of probable depression can be fairly estimated by a skiagram of the sinus seen in profile.

Operations on the frontal sinus, especially for the cure of chronic suppuration, must be carried out with rigid regard for asepsis and the establishment of free drainage during the first ten days or fortnight following the operation. This warning is very necessary, because for reasons not altogether obvious the diploë of the frontal bone are peculiarly liable to septic infection, and once osteomyelitis has started only the most heroic and extensive removal of the frontal bone offers any chance of saving the patient's life.

Bacteriology of frontal sinus suppuration.—According to Lewis and Turner, "pus from the frontal sinus presents, as a rule, fewer varieties of bacteria than does pus from the antrum. It is more easy to assign predominance to one organism, and it appears that cocci of one kind or another are generally responsible."

INFLAMMATION OF THE SPHENOIDAL SINUS.

[The relations of this deep-seated sinus to the optic chiasma and nerves, to the sella turcica and frontal lobes of the brain, to the carotid artery and cavernous sinus, the third, fourth, and sixth cranial nerves, and its intimate connexion with the posterior ethmoidal cells were dwelt upon. (Fig. 7.) A graceful tribute was paid to Professor Onodi of Budapest, who had done so much in elucidating the anatomy of this sinus, and many of whose beautiful diagrams were shown during the course of the evening.]

Acute and chronic inflammatory conditions are caused by conditions almost identical with those already described in connexion with the other sinuses. We know little concerning acute primary inflammation of the sphenoidal sinuses. Chronic suppuration is nearly always associated with the same condition in the other sinuses, and more particularly with the ethmoidal cells.

Symptoms.—Subjective symptoms may be entirely absent, or the only complaint may be of "post-nasal catarrh." In other cases there may be some vertical or occipital headache. Still less frequently "earache" may be the chief complaint, as I pointed out some six years ago.

Inflammatory affections of the optic nerve, general or temporal contraction of the visual field, and other ocular disturbances have been recorded in many instances of chronic sphenoidal sinus suppuration, and this is only what

one might expect when the close relationship of the structures is borne in mind. Two observers have stated that half the cases of unilateral optic neuritis are of nasal origin, but this is probably an exaggeration.

Suppurative basal meningitis and cavernous sinus thrombosis are complications which are always possible when chronic suppuration exists in the sphenoidal sinus, and there can be no doubt that the source of many cases of unexplained and fatal meningitis has been within the sphenoidal sinus which has not been examined during life or thought of during the necropsy. StClair Thomson has collected 40 cases of intracranial complication following sphenoidal sinus suppuration, and has added two of his own.

Diagnosis.—This will involve a careful examination of the higher and posterior regions of the nasal cavity, to gain access to which it may be necessary to remove the middle turbinal bone. When suppuration is present a pulsating drop of pus may be frequently seen in the ostium of the sinus. Its presence within the cavity can be accurately determined by means of probe or cannula.

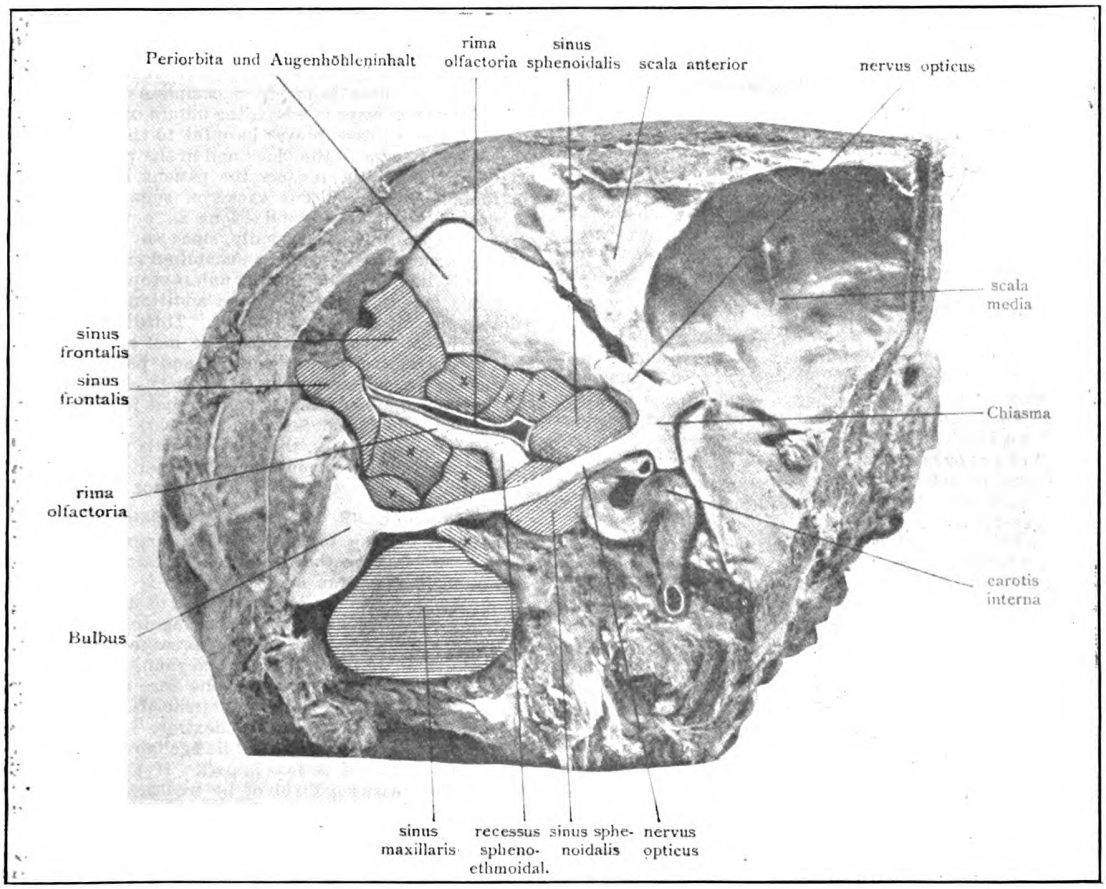
Prognosis.—This is usually very good if efficient drainage is provided by surgical intervention before dangerous symptoms have manifested themselves.

Treatment.—The operation usually involves removal of the middle turbinal and posterior ethmoidal cells in order to gain access to the anterior wall of the sinus. Hæmorrhage having been checked by the free use of gauze tampons moistened with adrenalin solution or peroxide of hydrogen, the anterior wall of the sinus can be removed by the use of suitable hooks or forceps. No curetting of the sinus walls is necessary nor is it advisable, for if free drainage be secured the inflamed mucous membrane will soon recover its normal condition.

I think my colleagues in this department of surgery will agree with me that chronic suppuration in the sphenoidal sinus is a favourable condition for surgical treatment, and a well-executed operation is usually fraught with the happiest results, for the symptoms are cured without any sign-manual of the surgeon's visit.

May I once more emphasise that the regions in the neighbourhood of the sphenoidal sinus demand the most careful manipulations. The reckless use of probes or curettes, blind or forceful probing, may have disastrous results; and hence the surgery of these regions must be entrusted to those who have devoted a large amount of time to the practical aspects of the subject.

FIG. 7.



To illustrate the intimate relations of the frontal ethmoid and sphenoid sinuses to the eyeballs, optic nerves, and chiasma, and carotid artery. Kindly presented to the lecturer by Professor Onodi (Budapest). The soft tissues of the sinuses and surrounding parts are hardened in formalin and the bony parts then carefully removed. The Latin descriptions explain themselves. "Augenhöhleninhalt" may be translated by "contents of orbit."

CONCLUSIONS.

Finally, what practical conclusions are we to draw from the facts which I have attempted to bring forward? Someone may ask, What is the frequency of suppuration in the nasal accessory sinuses? Very careful observations have been made in large clinics as well as in the post-mortem rooms of general hospitals, both at home and abroad, and they agree in showing that about 6·8 per cent. probably represents the average of sinus suppuration in the general mass of the population.[2]

Another and an important question is, To what degree does the presence of chronic suppuration in one or more sinuses (*a*) imperil the patient's health; (*b*) constitute a danger to life?

[2] Vide Comrie and Fraser, Edinburgh Medical Journal, November 1910.

For nearly 20 years I have been deeply interested in the matters under discussion, and am quite sure that no hard-and-fast or categorical answer can be given to these questions. In no department of surgery must a case be treated more upon its merits than in this. In the first place, much will depend on the sinus or sinuses involved. Compared with the other air cells, the antrum is far removed from vital or important structures, such as are in close relation with the sphenoidal, ethmoidal, and frontal sinuses.

Then, again, how frequent it is to be consulted by a patient who says that for years he has had "chronic nasal catarrh," which the history and examination clearly prove to be a foul empyema of the antrum, and yet the patient appears to be in robust health and possibly boasts that he has never had a day's illness in his life. A bacteriological examination of the pus from his antrum may show that it contains a variety of organisms possessed of great possibilities for evil, but in the laboratory of his body protective substances have been formed which seem to make him proof against the products of the local suppuration. In another and apparently identical case the general health may be seriously undermined by gastric disturbances, mental depression, or by one or more of a host of symptoms which render life intolerable, and that the local suppuration is the cause is proved by the fact that when the disease is removed the patient has rapidly regained his normal condition of health. Between such extremes there are many intermediate types and our line of treatment must be proportioned to meet the needs of the case. There will, of course, be less hesitancy in advising radical measures in the case of the antrum because there is little risk in the surgical measures which I have already outlined, recovery is rapid, and great relief or cure is generally attained.

The question is not so easily disposed of when we have to deal with the frontal, ethmoidal, or sphenoidal sinuses—or, what is very frequent, a combination of these sinuses in a state of suppuration. I would at once say that the mere fact of chronic suppuration being present in one of these sinuses in a patient whose general health is good, in whom there are no local symptoms of importance beyond a slight discharge of pus or muco-pus from the nose, does not warrant the surgeon in advising radical operations until simpler measures have been tried and there are cogent reasons for passing to severer ones.

Once or twice a year I see patients who consulted me 15 or 18 years ago for a nasal discharge which was more of a "slight inconvenience than a disease"—simple measures were adopted in some cases because (and possibly contrary to my advice) the patients would not submit to radical operation—and to-day these people are no worse and some of them are better than when I first saw them, although it is as obvious now as it was then that the higher sinuses are in a state of chronic suppuration. The drainage has been kept free, and probably they are protected by antibodies or opsonins manufactured in their own tissues.

But I have less happy memories than these, for in those pioneer days of nasal surgery the mere fact of pus being present in a sinus was considered a sufficient reason for immediate and often radical operations. The possibilities of intracranial infection, ocular lesions, ulcerative gastritis, infection of the lower air-passages perhaps culminating in septic pneumonia, appeared to many of us by no means impossible results of a neglected sinus suppuration. And in that faith, and acting in the light then vouchsafed to us, I fear that our surgical records were not free from disaster and that a life was sometimes lost in our endeavour to cure what might have proved merely an inconvenience. In yet other instances an unsightly depression over one or both eyebrows serves to remind us of what was possibly a misdirected enthusiasm.

To-day the pendulum has swung back somewhat and our first efforts are directed to the relief of symptoms by intranasal measures which in skilled hands involve little risk; and I think we are agreed that sometimes a cure, and certainly very often great improvement, may thus be gained—the latter to such a degree that both surgeon and patient are content to let matters rest awhile and see how far Nature will add still further to the good result. If, on the other hand, troublesome symptoms persist, or more serious ones threaten, then more radical measures must be undertaken. These will involve a knowledge of anatomy and technique which cannot be acquired from books, but only from patient investigation of the carefully prepared specimens to be found in our museums or post-mortem rooms, and by watching operations and after-treatment carried out by those whose disappointments and failures in earlier days have disclosed many of the little secrets which to-day enable them to intervene not only with courage but with a gratifying proportion of success.

Two Lectures
ON
THE TREATMENT OF DIABETES MELLITUS.

Delivered at St. George's Hospital

BY EDMUND I. SPRIGGS, M.D. LOND., F.R.C.P. LOND.,
SENIOR ASSISTANT PHYSICIAN TO THE HOSPITAL.

LECTURE I.

GENTLEMEN,—Although our knowledge of the pathology of diabetes mellitus is far from complete, we are able to recognise three ways in which the failure of the oxidation of sugar in this disease proves harmful to the body. Firstly, the excess of sugar in the blood and in the urine causes polyuria and thirst, and renders the patient liable to various septic inflammations. The excess of sugar is probably also responsible for such complications as neuralgia, sciatica, cataract and retinitis. Secondly, since so much food value is passed out in the urine as unoxidised sugar and lost, the patient is liable to be underfed unless steps are taken to see that this loss is made up by the addition to the diet of a suitable amount of oxidisable food. Thirdly, as the energy for the needs of the body has to be met almost exclusively from the burning of protein and fat, and particularly of fat, the tissues responsible for the metabolism of fat are liable to fail in the complete combustion of that foodstuff, with the result that unoxidised fatty acid appears in the blood and tissues. In such cases, this fatty acid is more to be feared than sugar, for unless you are able either to neutralise it or to lessen its formation it may lead to poisoning.

SOME POINTS IN PROGNOSIS.

I am not dealing to-day with the diagnosis of diabetes mellitus, and assume that we have ascertained that dextrose is present in the urine and that there is no evidence of a removeable lesion in the neighbourhood of the pancreas. In passing I must, however, warn you against attaching too little or too much importance to the presence of dextrose and of diacetic acid in the urine. In the young, glycosuria, with or without diaceturia, always calls for serious attention unless perhaps—an uncommon circumstance—it can be shown that a large quantity of dextrose has been recently taken by the mouth. When middle age is reached glycosuria may or may not be of serious import. If the amount is not large, if it is easily got rid of by treatment, if there is no diacetic acid in the urine, or if the glycosuria accompanies some other morbid condition and improves with that, it may pass off entirely or remain in small degree with no evil consequences. As an example of glycosuria accompanying another morbid state and recovering with it, I may quote the case of a patient suffering from failure of compensation of the heart, with hydrothorax, ascites, and œdema; the urine contained albumin and sugar. I advised his doctor to take no notice whatever of the sugar. Under the influence of rest and large doses of digitalis the heart became compensated, and in six months the urine contained neither sugar nor albumin.

With larger amounts of sugar, especially when accompanied by diacetic acid, more active treatment is required. Even if diacetic acid is present, however, be very careful how you form a conclusion about the severity of the case. The fatty acids in the urine in diabetes have only been regularly observed by physicians for a few years yet, and although their constant presence in severe cases points out their great importance to the prognosis, yet I can think of patients in the fourth and fifth decades of life who, to my knowledge, had diaceturia several years ago, and are in good health now. Here, again, the possibility of the removal of any cause of strain, such as overwork, is of great importance. For example, a patient whose business involved

habitual overwork had glycosuria 15 years ago, and diaceturia as well when I saw him first six years ago. He was able to alter his manner of life and both are now absent, whilst his general health is good and he takes a mixed diet, though he is naturally careful to eat only a moderate amount of starchy foods.

Bearing in mind, then, the importance of not giving a prognosis graver than the event is likely to justify, you will, nevertheless, always pay close attention to the presence of the diacetic reaction in the urine, and I advise you to divide cases of diabetes mellitus for the purpose of treatment into two classes—namely, cases in which the reaction is absent and cases in which it is present.

ACIDOSIS.

You know that besides diacetic acid β oxybutyric acid and acetone occur in the urine. If these substances are present in quantity diacetic acid is also present, so that the ferric chloride reaction may be taken as a reliable clinical guide. But a mild degree of acidosis may be present without the occurrence of this reaction. If a drachm of bicarbonate of soda is given to a healthy person the urine becomes alkaline in a few hours and may remain so for 24 hours. If a certain degree of acidosis is present, however, either in diabetes or in other diseases, more soda is required to render the urine alkaline; indeed, in severe diabetes a very large quantity, ounces a day, may not have this effect for two or three weeks. Hence in all cases of diabetes give first of all a drachm of bicarbonate of soda three times a day, usually in milk, and have the urine tested with litmus to see when it becomes alkaline. If that happens soon the degree of acidosis is slight. If the urine does not become neutral or alkaline the soda is increased so far as practicable until it does. A measure is thus obtained of the degree of acidosis. I must warn you that the intensity of the diacetic reaction is increased by giving bicarbonate of soda, presumably owing to washing out of acid products or to the conversion of more of them to the stage of diacetic acid; you must not, therefore, look on the deepening of the reaction as meaning that the condition is worse when alkali has been given; it may mean just the reverse.

ESTIMATION OF SUGAR AND RESTRICTION OF DIET.

The next step is to find out how much sugar is passed out in the 24 hours on the ordinary diet of the patient. The total figure must be obtained, for the percentage only may be very misleading. As the quantity of sugar varies from day to day it is better to estimate it for three days running and take the average. Dr. Pavy's method is by far the most accurate of the quick methods of estimating sugar in the urine. Remember that if you are not doing estimations regularly you may obtain a figure lower than the real one without recognising the error on repeating the test. You must guard against this by not dropping in the diluted urine too quickly. Count the drops, and if you can decolourise the copper solution with a fewer number of drops the second time than were used the first, the estimation should be repeated until you obtain three concordant figures of which you take the mean. The tests in which you use the larger number of drops are usually wrong and lead to the amount of sugar in the urine being underestimated. The gravimetric method of estimating sugar is still more reliable, and my practice is to have this done by an analytical chemist whenever possible, using Dr. Pavy's method if an immediate estimation is required.

Having found out how much sugar is being passed out on the average from an estimation, if possible, on three separate days, you will proceed to restrict the carbohydrates in the food. The restriction of carbohydrate has two good effects. Firstly, it lessens the amount of sugar in the blood and abolishes, except in the most severe cases, the symptoms due to an excess of sugar in the blood and in the urine. Secondly, doubtless again through lessening the sugar in the body fluids, the power of the tissues to burn carbohydrate becomes restored. The second effect is of fundamental importance. You may easily relieve your patient's symptoms in most cases by restricting his diet somewhat, but you must go further than that and find out what his assimilative power for carbohydrate is, and how much it can be improved. This investigation involves a certain amount of arithmetic and requires the active coöperation of the patient. Your procedure will differ somewhat according as diaceturia is present or absent.

If the diacetic acid reaction is absent, and if the urine rapidly becomes alkaline under the influence of bicarbonate of soda, the restriction may be made without fear of causing acid poisoning. Even in such cases, however, I do not advise you to put the patient upon a strict diet at once. For by putting a patient upon a strict diet you can induce a diaceturia which has not previously been present, and this is undesirable, even if the sugar entirely disappears. The diabetic, to begin with, cannot oxidise sugar properly; the appearance of the diacetic reaction means that another foodstuff, fat, is also no longer freely oxidised. Whilst, therefore, acknowledging that a large number of glycosuric patients can be put on a strict diabetic diet with impunity, my advice to you is not to do it. You can produce the same good result by going a little more carefully without the same risk of disadvantage.

There is another reason why it is not advisable to order a strict diet at once, and that is that many patients will find the sudden change so irksome that they will not carry it out properly. Your instructions are far more likely to be obeyed throughout if they are reasonably lenient at first. Some patients are but little inconvenienced by the diet prescribed, others need great self-control to adhere to it; you must recognise this and show your sympathy by not asking too much. For the same reason, always allow as much bread as you can, for that is the food which is missed the most.

AMOUNT OF CARBOHYDRATE IN VARIOUS FOODS.

The following tables may help you in drawing up a diet. They are compiled from the modern analyses of Atwater and Bryant, and you will see that I have arranged the foods in three lists. The first list includes foods which are free from carbohydrate or contain less than 1 per cent. In the second list the foods contain a small proportion of carbohydrate, much of it in some of them being in the form of cellulose, which is not absorbed. The third list contains articles of diet which are richer in starch or sugar arranged according to the amount which they contain.

All patients are allowed to eat freely from the foods in List 1, most patients may also take the foods in List 2, whilst those in List 3 are only allowed when specially prescribed in measured quantities.

LIST 1.—*Foods Free from Carbohydrate or Containing Less than 1 per cent.*

Beef.	Turtle.	Gelatine.
Mutton.	Lobster.	Starch-free "breads."
Lamb.	Eggs.	,, biscuits and cakes.
Pork.	Butter.	,, "flour."
Poultry.	Cheshire cheese.	Sugar-free jellies.
Game.	American ,,	,, marmalade.
Sweetbread.	Dutch ,,	,, jams.
Tongue.	Gorgonzola ,,	
Fish.	Lard.	

LIST 2.—*Foods Containing a Low Proportion of Carbohydrate.*
The figures indicate the percentage of carbohydrate.

Liver	1	Lettuce	3	Mixed pickles	4
Sausage (pork)	1	Spinach	3	Cauliflower	5
Crabs	1	Oysters	4	Cabbage	6
Crayfish	1	Mussels	4	Leeks	6
Scallops	3	Stilton cheese	3	Radishes	6
Asparagus	3	Cheddar ,,	4	Mushrooms	7
Celery	3	Rhubarb	4	Water melons	7
Cucumbers	3	Tomatoes	4	Brazil nuts	

LIST 3.—*Foods Rich in Carbohydrate.*

Milk	5	Artichokes	17	Bread (toasted)	61
,, skimmed	5	Peas (green)	17	Peas (dried)	62
Whey	5	Cherries	17	Gingerbread	63
Oatmeal (thin gruel)	6	Almonds	17	Macaroons	65
Strawberries	7	Potatoes	18	Sponge cake	66
Turnips	8	,, with cream	18	Oatmeal	67
Carrots	9	Dried pears	18	Chestnuts (dried)	74
Beet (fresh)	10	Figs (fresh)	19	Sago	78
Onions (fresh)	10	Grapes	19	Taploca	88
Cranberries	10	Plums	20	Arrowroot	97
Pineapple	10	Potatoes (boiled)	21	Dried fruits—	
Oatmeal (boiled)	11	Bananas	22	Apples	62 to 78
Blackberries	11	Rice (boiled)	24	Apricots	
Dried peaches	11	Taploca pudding	28	Currants	
Oranges	12	Cocoanuts	28	Dates	
Parsnips	13	Chocolate	30	Figs	
Apricots	13	Mince pie	38	Prunes	
Currants	13	Chestnuts (fresh)	42	Raisins	
Walnuts	13	Apple pie	43	Meal	70 to 80
Filberts	13	Bread (brown)	47	Flours	
Apples	14	Potatoes (fried chips)	47	Rice	
Pears	14	Bread (white)	53	Macaroni	
Macaroni (cooked)	16	,, (rolls)	56	Vermicelli	
Calves-foot jelly	17	Lentils (dried)	60		

ARRANGEMENT OF DIET.

In the case we are considering—namely, that of the patient who is passing out sugar but no diacetic acid—you may begin by allowing about as much carbohydrate as he is passing out in the urine. If the urine contains, for instance, 150 grammes of sugar you can easily devise from the list a diet containing that amount of carbohydrate. In making such a calculation you will require but few figures, even if the lists are not at hand. It is useful to remember the following data, which are in round figures :—

Bread contains 60 per cent. of starch.
Potatoes contain 20 per cent. of starch.
Milk contains 5 per cent. of milk sugar.
Thin gruel contains 6 per cent. of starch.
One ounce is (roughly) 30 grammes.
One gramme is 15 grains.

A diet containing about 150 grammes of carbohydrate may be constructed as follows :—

	Grammes of carbohydrates.
5 ounces (150 grammes) of milk ... ... equal	8
5 ,, ,, ,, of gruel ... ... ,,	9
6 ,, (180 grammes) of bread ... ... ,,	108
2 ,, (60 grammes) of boiled potatoes ... ... ,,	12
Ordinary helpings of the foods in List 2 (estimate) ...	20
Total	157

The diet will then consist of the foods in Lists 1 and 2, with the quantities prescribed above of the foods in List 3. Sugar and jam and dishes or foods made with flour are, of course, not allowed. Saccharin may be used for sweetening tea or coffee, though it is better to form the habit of taking them unsweetened, as much saccharin may cause indigestion.

Such a diet may be arranged as follows :—

Breakfast.—A small basin of thin gruel with 5 ounces of milk; 3 ounces of bread; butter, bacon, eggs; a tomato; coffee with cream.
Lunch.—Meat or fish, pickles, 1 ounce of potatoes, butter, greens; green salad with salad oil; 1 ounce of bread with cheese and celery.
Tea.—2 ounces of bread with abundance of butter; a boiled egg; tea with cream.
Dinner.—Soup (containing no flour), fish, meats, 1 ounce of potatoes, spinach; custard made with cream and saccharin; cheese with some starchless bread, celery; a few Brazil nuts.

The diet will be varied from day to day, the quantity of carbohydrate being kept constant. After three days the urine will be analysed. If the quantity of sugar is much less, continue the diet for another week and make another analysis, and so on for as long as the sugar in the urine is falling.

If there is little or no reduction of the sugar, or if the quantity has ceased to fall or is rising again, the carbohydrate should be reduced by 50 grammes. This may be done by omitting the 2 ounces of potatoes and 2 ounces of bread, leaving the diet otherwise the same. The diet will then be :—

	Grammes of carbohydrate.
5 ounces of milk ... ... equal	8
5 ,, of gruel ... ... ,,	9
4 ,, of bread ... ... ,,	72
Ordinary helpings of foods in List 2 (estimate)	20
Total	109

With this diet the patient would take freely of the foods in List 1 and moderate helpings from those in List 2.

If after five days on the above diet sugar is still present in quantity, you will omit the potatoes and milk, reduce the bread to 3 ounces, and allow from List 2 only well-boiled greens and a tomato. The carbohydrate in the diet will then be :—

	Grammes of carbohydrate.
5 ounces of gruel ... ... equal	9
3 ,, of bread ... ... ,,	54
Estimate of foods from List 2	10
Total	73

The rest of the food will be made up from List 1.

With such a diet in many cases sugar will no longer appear in the urine. If, however, there is still a quantity of 20 grammes or more passed out, the carbohydrate will be still more reduced by allowing only 2 ounces of bread in the day with greens and one tomato from List 2. These will contain about 46 grammes of carbohydrate. With such a diet as this care should be taken to alkalise the urine by giving bicarbonate of soda while the restriction is in force.

Before this stage it will be necessary to provide some substitute for bread, such as the starchless breads made by Callard and the Protene Company and other manufacturers, of which the patient will be instructed to eat freely with abundance of butter. Puddings and other dishes may be made by the use of the starch-free flour.

In the milder cases we are considering the urine will now be free from sugar. The allowance of carbohydrate will then be increased, going back through the same stages. By this means it will be possible to ascertain easily how much carbohydrate the patient can take in the diet without any of it appearing in the urine. The chief aim is to keep this quantity—namely, the quantity of carbohydrate which can be assimilated—as high as possible.

FURTHER OBSERVATIONS.

Do not, however, form the idea that there is a fixed quantity of carbohydrate which the patient can assimilate. That is not the case. The quantity varies from time to time, and under proper treatment may become larger and larger. Some kinds of carbohydrate are also assimilated better than others. You will give in the course of treatment various kinds to your patient in order to find out whether he can, for instance, assimilate the starch of oatmeal better than that of bread, or whether levulose is better borne than dextrose. You will see that to obtain a correct picture of the patient whom you are treating it is necessary to take a good deal of trouble and to give the patient a good deal of trouble, for the collection of the 24 hours' total urine is, in ordinary life, an inconvenient business. It is sometimes impossible to have it collected on consecutive days. In that case samples are taken at the week-end, when the patient has leisure. The ideal plan would be for every patient to be carefully observed for at least a month with different diets and different kinds of carbohydrate. After such an investigation we should be in a much better position to advise than after one or two examinations of the urine. But this is seldom possible in mild cases, and you will often have to extend your observations over a longer period with considerable intervals between each. When you have found out how much carbohydrate can be assimilated you will order a diet containing rather less than this quantity.

The success of dietetic treatment depends very largely upon the skill in cooking which is at the disposal of the patient, and particularly upon the varieties of appetising dishes which can be made from the foods in List 1 with the help of the starchless flour and the various sugar-free jams and cakes which are provided by the manufacturers. If the patient is on a fixed allowance of carbohydrate it is a good plan to supply him with a list of the various ways with which he can supply that amount. With the aid of the analyses which I have given above this is quite easy to do.

In my next lecture I shall speak of the treatment of cases in which diacetic acid is present in the urine.

ON POST-NASAL CATARRH IN CHILDREN AND SOME OF ITS CONSEQUENCES.

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OF late years I have been in the habit of examining the fauces of all children who have been brought to me suffering from loss of appetite, gastric derangements, spasmodic conditions of the air-tubes, and obstinate coughs. In a very large number of these cases I have found the patient to be suffering from a more or less intense post-nasal catarrh. This catarrh is often confined strictly to the naso-pharynx, and does not pass into the nasal passages. While thus limited it may give rise to none of the usual signs of "a cold" in the nose, such as snuffling, sneezing, and external discharge, or even to a throaty quality in the voice. It may therefore remain latent and escape notice for weeks, or even months, together unless the throat be inspected in a good light. I have often been surprised at the intensity of the catarrh which an examination has shown can be fixed in the naso-pharynx without giving rise to a single local symptom to make its presence known. But whether or not it be associated with the ordinary symptoms of coryza, post-nasal

catarrh may be the source of widespread disturbances. These at first sight may not be of such a nature as to suggest a relationship with the state of the pharynx; but that the connexion, however obscure, is a very real one is seen in the successful results of treatment founded upon that assumption. When the catarrh goes on for months together it is, no doubt, being continually renewed; and the symptoms may be noticed to wax and wane according to the varying severity of the pharyngeal derangement. This rarely ceases completely, but if in a fairly long spell of genial dry weather the catarrh for a time comes to an end, it often returns at once when the weather again becomes changeable and damp. Some of these children suffer from a certain amount of adenoid overgrowth in the naso-pharynx, but in many the adenoids have been already removed. In the latter it is common for a return of the vegetations to be suspected on account of signs of obstruction to the posterior nasal openings arising from the thickened and swollen mucous membrane. But adenoids rarely return if their extirpation has been complete, and most of the cases of suspected renewal are of this kind.

The appearance of the fauces varies according to the intensity and duration of the catarrh. In cases of long standing the mucous membrane at the back of the pharynx is thickened and red like red velvet, and is bathed in secretion. In less severe cases the posterior wall is thickened and reddened and often uneven from shallow projections of the surface. These are redder than the mucous membrane around them. The surface is moist and is often covered with thick yellowish mucus, which may be seen flowing down from above. In bad cases enormous quantities of this mucus may be secreted, and as it is all swallowed and passed down into the stomach the gastric irritation set up by this continual inflow of acrid and often highly septic matter is not difficult to understand. A bacteriological examination of the mucous discharge taken from the pharynx was made for me in several cases by my house physician, Dr. G. Walker. The secretion contained, as might be expected, a great excess of the micrococcus catarrhalis, but mixed with these in the various specimens were Friedländer's bacillus, the bacillus septus, and more or less numerous staphylococci. In one case Dr. Walker found three Klebs-Loeffler bacilli of involution forms and a few pneumococci. Sometimes the uvula and soft palate are thick-looking and congested, but the tonsils are not necessarily enlarged. This state of derangement, I may again repeat, may remain unsuspected for months together if it be not associated with signs of coryza, for while it remains limited strictly to the fauces there is no pain in swallowing or other symptom pointing to the naso-pharynx. It is only by actual inspection of the throat that the existence of any morbid condition can be ascertained. Even after the inflammation proper is at an end its ill consequences remain as long as the free secretion of mucus persists. Therefore, if the posterior wall of the pharynx be found to look pale, thick, flabby, and moist, active treatment with astringent applications should be adopted without unnecessary delay.

One of the commonest consequences of this persistent post-nasal catarrh is complete loss of appetite. This is shown, not by a mere indifference to food, but by an active dislike to it, which is very striking and difficult to overcome. The children are generally pale, but show little sign of illness, and are cheerful and active in their games. As the mother remarks, "there does not seem to be much the matter with the child, but he will not eat." At every meal the same difficulty occurs, and much strategy may have to be employed to get him to swallow even a small quantity of food. It has often surprised me to notice that the subjects of so much perplexity and concern are not necessarily thin or obviously ill-nourished. This is probably owing to the fact that a child who will not eat can often be made to drink, and, indeed, may be ready enough to do so without any persuasion. He consequently takes large quantities of milk in the course of the day, and the deficiency in his regular meals may be thus more or less completely repaired. This absolute loss of appetite is a very common symptom in children between the ages of 4 or 5 and 9 or 10 years, although in other respects they may seem to be healthy enough. If the fauces of these children be examined there are very few in whom the pharynx will not be found to be in a state of active catarrh, or to have been left flabby, relaxed, and freely secreting after the acute stage has passed away, although no symptom pointing to the throat may have been noticed; and appropriate treatment of the derangement will rarely fail to restore the child's inclination for food and relieve the anxiety of his friends.

In some of these cases, in addition to the loss of appetite, which is a persistent fault, there may be signs from time to time of active disturbance of the stomach. Not a few examples of the so-called "cyclical vomiting" are of this nature. The child every month or six weeks is taken more or less suddenly with an attack of vomiting in which for 24 hours or more he returns at once everything, even water, which he takes into his stomach. His temperature is high, rising often to 104° or 105° F. at night. In the beginning the vomited matters are sour; later, when he is drinking nothing but water, the fluid is returned as it was taken; but, as a rule, vomiting quickly ceases when food is withheld. When these attacks are associated, as they so often are, with post-nasal catarrh I attribute them to an acute exacerbation of the catarrh in which a fresh secretion of peculiarly acrid mucus, teeming with more or less noxious organisms, is poured out and swallowed. This tainted secretion excites a septic fermentation in the alimentary canal, and the products are immediately absorbed into the circulation. It is possible that there may be a neurotic element in the illness, but that it is not a pure neurosis, as is usually assumed, is proved, I submit, by the fact that the temperature is excessively high, that the vomited matters are sour and offensive and show every sign of digestive derangement, and that the course of the complaint may be shortened, and a further recurrence prevented, by careful diet and early attention to the condition of the throat. At the same time it is, of course, advisable to take steps to put an end to periodical chills, so that the effect of the remedies may not be weakened or annulled by future repetitions of the original disturbance.

But these attacks of vomiting and general depression may not be the only evidence of intestinal intoxication. Such septic infections are capable of giving rise to local as well as general distress, and may be the cause of serious inflammatory mischief in distant tissues and organs. It is not now disputed that to toxæmic conditions many inflammatory diseases which arise without obvious cause may be directly attributed. Meningitis, appendicitis, otitis, iritis, and it has been lately suggested poliomyelitis, may all owe their origin to toxins generated in the bowel by such an incursion of virulent organisms; and cases have come under my own observation in which repeated attacks of retinitis and other obscure inflammatory or semi-inflammatory states of the eye, with threatened failure of sight, have been associated with, and I believe were the direct consequence of, persistent or very frequently recurring naso-pharyngeal catarrh.

To return to the everyday consequences of this functional disturbance of the naso-pharynx, it may be stated that loss of appetite and indigestion arising from this cause are not confined to children. In young adults of both sexes a peculiar susceptibility of the fauces may be left as a consequence of an attack of diphtheria or scarlet fever. These patients are liable to periods of indisposition in which they complain of a loaded tongue, unpleasant breath, and want of all relish for their food. There is seldom mention of sore-throat, but the voice has a nasal quality, and examination shows that there is much post-nasal catarrh with copious secretion, and that the tonsils, although not acutely enlarged, look red and may perhaps show retained yellowish matter in the follicular recesses.

Between post-nasal catarrh and spasm of the air-passages (stridulous laryngitis and laryngismus stridulus) in young children there is a close relationship to which I have drawn attention on many previous occasions. The more I see of these complaints the more convinced I become that post-nasal irritation is the common exciting cause of these attacks when the reflex spasm occurs in children whose glottis is of normal construction and development. But it is not only local spasm which may be excited by post-nasal irritation in early life; general convulsions may be induced by it. The apparently causeless convulsive attacks which sometimes occur in young children of rickety tendencies are often the consequence of this condition of the naso-pharynx—at least, a severe post-nasal catarrh may be the only deviation from a normal state of health which the closest examination can discover.

In young children up to the age of two years, and in children of neurotic tendencies who have passed that age,

the presence of acute and subacute post-nasal catarrh is often sufficient to induce a rise of temperature. This may be curiously erratic and unsettled. In a brief space of time the mercury may shoot up from the level of health to 102° or 103° F., and after an hour or two fall again to its normal point. This rise is especially likely to happen towards the end of digestion, or a couple of hours or so after food, and I am disposed to attribute it to the absorption from the stomach of mildly irritating products of decomposition. The pyrexia thus induced may be a cause of some perplexity for no symptoms may be present to point to the throat, and unless the fauces be examined the origin of the febrile movement must remain a mystery.

A very common consequence of post-nasal catarrh is acute enlargement of the cervical glands. The connexion between the state of the glands and the condition of the throat is, I find, often—indeed commonly—overlooked, although for successful treatment its recognition is a matter of the utmost importance. Whether there be symptoms suggestive of this condition or not, a glandular swelling at the border of the sterno-mastoid should suggest at once a careful inspection of the pharynx; and if the enlargement be recent, prompt treatment of the throat will in a short time cause the swelling to disappear. If the state of the fauces be overlooked or neglected, the enlargement of the glands may persist for months together, the swelling being more or less evident according to the degree of intensity of the pharyngeal disturbance. In such a state the glands have little power of resisting tuberculous infection; and as by their absorbent radicles they are in close connexion with the adenoid tissue in the naso-pharynx they are peculiarly open to invasion by the organism, and defend themselves feebly or not at all. Consequently if the state of the throat be disregarded, the glands may become the seat of tubercle, or possibly suppurate so that surgical measures may have to be resorted to; but the assistance of the surgeon is rarely required if the nature of the complaint be recognised in time. So long as the tumid glands retain their elasticity to the touch, and vary in size from day to day as the catarrh waxes and wanes, we may say positively that they are as yet unaffected by the tubercle organism and are still capable of returning to their original state. In such a case we may confidently expect that judicious treatment of the retro-pharyngeal catarrh will cause them to resume their natural size in the course of a few weeks.

The influence of post-nasal catarrh in promoting otitis by extension upwards of the derangement through the Eustachian tube into the middle ear is so much a matter of common knowledge and observation that this branch of the subject need not be referred to. I may, however, draw attention to the less recognised consequence of a downward spread of the catarrh and the irritation this further development is able to set up in the larynx and upper part of the trachea. The child becomes subject to attacks of violent cough which may come on at any time, but are especially liable to occur at night. He is not free from them during the day, but at night when he is put to bed and later while asleep he will often be roused by an attack of coughing which the domestic remedies employed have little power to restrain. The attack may last for 20 minutes or half an hour, and end in vomiting efforts in which a quantity of mucus is brought up. I have known such attacks to be mistaken for whooping-cough, especially as there may be some slight spasm of the larynx which produces an attempt at a crow, but the complaint is quite different in its symptoms from pertussis and may go on for months at a stretch in wintry weather unless the cause be recognised and appropriate treatment employed. Vomiting is only an occasional incident in the attack, but when it occurs the quantity of mucus which may be brought up by the retching efforts is sometimes surprisingly large. All this mucus has trickled down from the back of the nares and has been swallowed. When secretion is free the child may be noticed at intervals during the day to make swallowing efforts as the thick, tenacious mucus comes within reach of his muscles of deglutition. In most of these cases the patient's appetite is poor or almost completely lost, and this further symptom, itself a cause of disquietude, adds greatly to the concern of his friends. A further cause for alarm may sometimes be discovered in a staining of the mucus with blood or even a discharge of pure blood with or apart from the vomited matters. But there is no real cause for anxiety: the blood, like the mucus, comes from the back of the nose, and is no doubt a consequence of the increased strain upon the vessels set up by the retching efforts themselves. It is important to note that in spite of the urgency of the symptoms examination of the chest shows no sign of pulmonary catarrh or other indication of mischief in the lungs; and it was this absence of physical signs, conflicting as it does so curiously with the prominence of the cough, which first led me to look to the fauces for an explanation of the symptom. In cases where the cough is more than usually violent, especially if it be accompanied by any sign of spasm of the larynx, whooping-cough has to be excluded; but this is done by ascertaining the absence of an epidemic and noting the fact that other children of the family have remained unaffected although living all the time in intimate association with the sufferer.

In the treatment of these various disturbances the condition of the throat to which they all owe their origin must be remedied with as little delay as possible. In addition, the particular symptoms of each individual derangement must be the subject of special treatment.

For the throat affection local applications should be at once employed. These may take the form of drops instilled into the nostrils and allowed to trickle down into the naso-pharynx, or remedies applied directly to the fauces with a throat-brush. If the catarrh be very acute, with great irritability of the mucous membrane, we must be careful not to aggravate this condition by the use of too stimulating remedies. In such a case the throat should be painted several times a day with the glycerine of boric acid; or, if the child be old enough to follow directions, may be sprayed with a weak solution of tartrated antimony in water (gr. ¼ to the ounce) while the patient inspires deeply. By this means the first acuteness of the inflammation is quickly relieved, and the paint may then be made more astringent by combining the glycerine of boric acid with an equal proportion of glycerine of tannin. In cases where the painting cannot be carried out owing to the resistance of the patient and (especially) the want of determination on the part of the operator, some drops of a mild antiseptic solution may be instilled into the nostrils several times a day as the child lies on his back with his head supported by a pillow. Any weak antiseptic drug will do for this purpose, such as a solution of resorcin in normal saline (gr. v.–x. to the ounce) or of boric acid (gr. x. to the ounce of water), or of sodium bicarbonate (gr. xv. to the ounce). But any other remedy of this class may be used so long as it is not injurious to the stomach, for it is impossible to prevent a young child from swallowing the fluid when it reaches the fauces. In every case, however, where it can be done the throat-brush should be used, for the instillation of antiseptic drops is a far less efficient remedy than the other. As the redness of the pharynx fades stronger and stronger applications may be employed, for if the case be of long standing the mucous membrane is left flabby and relaxed and freely secreting. For such a condition pure glycerine of tannin may be used, or a paint made of gr. xii. of iodine and gr. xv. of iodide of potassium to the ounce of glycerine. This application may be flavoured by five drops of the oil of cinnamon or peppermint. A good astringent iron paint is made by adding one drachm of the stronger perchloride of iron solution to the ounce of glycerine, but this application should only be used after all trace of redness has disappeared; it is then a very efficient remedy. In cases where the anorexia has been complete the appetite usually returns when the flow of mucus into the stomach has been brought to an end. If, however, this result do not follow the symptoms rarely resists a good iron tonic, especially if this treatment be combined with bracing country air or a stay at the seaside, but change of air alone without special treatment of the throat is powerless to effect an improvement.

When there is active disturbance of the stomach with incessant vomiting no attempt should be made to administer food. All efforts to do so only aggravate the vomiting, however simple the food may be; milk especially in such a condition is an irritant poison whose use, by supplying more material for fermentation, can only prevent the disturbance from subsiding. The patient should be allowed nothing but water swallowed as hot as he can be induced to take it. Even this, however, will probably be returned immediately, especially at first; but this result is to be welcomed as it helps to clear the stomach of objectionable matters and may obviate the necessity of using the stomach tube. If, as may happen,

an odour of acetone can be detected in the breath, a hot solution of sodium bicarbonate may be used instead of the plain water, and six or eight ounces of the same solution may be injected under the loose skin of the back. This is the orthodox treatment and has the advantage, especially the hypodermic injection, of appearing to be an energetic proceeding, but I cannot say that it has seemed to me to be of much practical value. The severe forms of acetonæmia generally end badly and the milder cases usually recover whatever be the treatment adopted.

Other consequences of the catarrh quickly disappear when treatment of the throat is taken briskly in hand. Cough, however violent, soon subsides; spasm of the larynx rarely persists after the acuteness of the pharyngeal catarrh has been reduced; and subacute glandular enlargements in the neck are not slow to decline when the naso-pharyngeal irritation has been detected and subdued.

It is important to remember in the treatment of these complaints that we must not be satisfied by a mere temporary improvement, even if the symptoms completely disappear for the time, for in no case can this be accepted as a sign that the patient is definitely free from his troubles. In the treatment of catarrh affecting any tract of mucous membrane, in order to arrive at a permanent cure it is necessary for the medical attendant to bear in mind during convalescence the special sensitiveness to chills which still remains in the part lately affected. Catarrhs invariably tend to repeat themselves, and therefore relapses may be confidently expected unless special measures are taken to put a stop to this tendency to return. This can only be done by recognising the patient's susceptibility and taking steps to increase his resisting power and provide him with sufficient protection against sudden changes of temperature.

There is a tendency in the present day to make light of chills as a cause of disease, and to attribute all the disturbances which were formerly ascribed to this source not to the exposure but purely and simply to microbic agency. That noxious organisms may take a part in the process I am not prepared to deny, but at the same time I must protest against the doctrine that the influence of damp and cold and abrupt changes of temperature can altogether be left out of account. I have learned as a matter of clinical experience that relapses in these cases will continue to recur as long as a patient is neglected and exposed. If we allow such a child to go about with bare legs and cold feet, as is done so often, he remains weakly and suffers continually from catarrhal disturbances. If his legs are covered up with woollen stockings, if his feet are kept warm and such other precautions are taken as his known susceptibility may suggest, he will cease to suffer from these ailments and get well and strong. It is possible that exposure to cold may be hurtful by rendering the mucous surface a congenial soil for the action of organisms which, without this necessary preparation, would be incapable of harm; but whatever the explanation may be, of the fact I am convinced—viz., that to get and keep such children well we must keep them warm. The necessity of recognising this susceptibility in order to effect a permanent cure is a point upon which I have often insisted, but it is one which is too often overlooked even by the medical attendant. By the public it is invariably ignored; and in consequence when relapse follows relapse in any case of catarrhal derangement the relatives rarely fail to attribute the repeated and disappointing recurrence, not to their own ignorance or neglect, but to an assumed failure of their family adviser to supply a satisfactory remedy. But it is not the treatment which is usually at fault. This may have been judicious enough and successful again and again. The failure lies in the medical attendant's omission to insist upon proper precautions being taken in the matter of dress and general management to protect the patient against unnecessary exposure and the risk of further chills. Until this has been done the cure cannot be regarded as complete.

Queen Anne-street, W.

WINSLEY SANATORIUM FOR CONSUMPTION.—The proposed extensions at the Winsley Sanatorium will, if carried out, greatly improve the administrative block of buildings and provide better accommodation for the staff. It will also increase the beds for the accommodation of patients from 68 to 100.

A FURTHER CONTRIBUTION TO THE STUDY OF RHEUMATISM:

THE EXPERIMENTAL PRODUCTION OF APPENDICITIS BY THE INTRAVENOUS INOCULATION OF THE DIPLOCOCCUS.[1]

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The Source of the Infection.

THE first step in this communication is to indicate accurately the source of the infective agent with which our results were obtained.

A boy, aged 14 years, previously healthy and with a good family history, came to University College Hospital in August, 1911, suffering from a first attack of acute rheumatism of five days' duration. It commenced with pain in both knees and ankles and later in the left shoulder. The temperature was 100·5° F. and the pulse-rate 100 to the minute. Both knee-joints were tender and full of fluid, and the other joints named above were painful. For 24 hours an apical systolic murmur was faintly audible, but this disappeared and the boy made a rapid and complete recovery. He was treated with salicylate of soda. The only point at all unusual in this case was the excess of fluid in both knee-joints, the right one being distended. Mr. C. E. Shattock, acting house physician, tapped the joint for us, and a greenish fluid, which coagulated and contained some fibrinous shreds, was obtained. From this a diplococcus was isolated and grown in pure culture and is the infective agent which we have used for the following experiments.

The Investigation.

The animals used for experimentation were rabbits, and we would lay special stress upon the point that we used consistently for the first time young ones of some six to seven weeks of age. All the injections were made from bouillon cultures into the auricular veins. The first animal injected with a large dose died from general pericarditis. The second was six weeks old and received ½ c.c. of a bouillon culture. Multiple arthritis followed and mucous diarrhœa, the animal dying from an intussusception of some days' duration. In passing, we would comment upon this occurrence of acute intussusception in two animals as a sequel and possibly a result of the infection. A pure culture of the diplococcus taken from the joint of this animal was used for the third rabbit. This was seven weeks old and was inoculated on Sept. 2nd with 1 c.c. of a bouillon culture. Monarthritis of the left knee-joint developed with general illness and diarrhœa, and death occurred on the third day. The post-mortem examination showed that *for 1½ inches in the middle two-fourths of the appendix* there was acute inflammation. The left knee-joint showed the usual early synovitis. The liver showed fatty areas. The spleen was slightly enlarged and firm. The kidneys were not remarkable. There were no petechiæ and no post-mortem staining; the heart was not opened, but there was excess of fluid in the pericardial cavity. The diplococcus was recovered in pure culture from the left knee-joint and the heart's blood. The appendix was clearly inflamed and the mucous membrane was swollen and red. A small piece was excised for histological investigations.

[The rabbit was shown, with histological sections illustrating the diseased condition of the appendix and the presence of the infective agent in the blood-vessels in the submucosa and in the mucosa.]

The details of the histological examination were as follows. The muscular and serous coats of the bowel were healthy, but the mucous and submucous layers showed extensive necrosis. There was destruction of Lieberkühn's follicles and of the lymphoid tissue. The basal vessels of the submucosa were engorged with blood, and numerous diplococci could be seen

[1] A communication read before the Pathological Section of the Royal Society of Medicine on Oct. 17th, 1911.

both in the vessels and in the tissues of the mucous and submucous coats. The bacillus coli had also invaded the necrotic area. Lastly, there was a slight fibrino-cellular exudation into the lumen of the gut.

Although this was the third rabbit alluded to in this paper, four others had been inoculated and had developed multiple arthritis but no appendicitis; but one more in this series—that is, the fourth mentioned here—developed in addition to multiple arthritis in both elbow-, knee-, and carpal joints some diarrhœa, and was killed when *in extremis* on the fifth day.

The *middle two-fourths of the appendix* showed small opaque areas, deep-seated in the substance of the wall, and this part was swollen and firm to the touch. The blood-vessels in this situation were engorged. On opening the appendix a mucoid fæcal-stained fluid escaped, and at one spot on the inner surface a reddened depressed area of the size of a hempseed was visible. The opaque areas seen from the external aspect were still more obvious from within. At the junction of the appendix with the cæcum there was an enlarged lymphatic gland, and there was excess of fluid in the peritoneal cavity. The spleen was slightly enlarged but not soft, the liver was dark and firm, and the kidneys were pale. The heart was dilated and full of blood; there was no pericarditis or endocarditis. The lungs were congested, and there was excess of fluid in the pericardial cavity. A pure culture of the diplococcus was recovered from a knee-joint. The depressed area in the appendix proved to be an acute ulcer, a section of which is under the microscope and the histology of which was as follows:—

The chief changes are visible in the mucous and submucous coats These are of two kinds; in some places there is disappearance of the lymphoid tissue with a tendency to necrosis, in others a proliferation of the connective tissue elements pointing to the first stage towards a fibrosis. Diplococci were not demonstrated in the portion of the tissue examined, in which reparative processes were just commencing.

In the area of ulceration there is local necrosis of the mucosa and submucosa with destruction of the epithelium of Lieberkühn's follicles and the lymphoid tissue. The muscular and serous coats are not involved and form the base of the ulcer. The connective tissues bounding the necrotic area show commencing proliferation.

Another series of inoculations was made from the culture taken from the first rabbit that had suffered from acute appendicitis, and one of this series was killed when *in extremis* on the third day. During life arthritis of both knee-joints had shown itself and there was some diarrhœa with general illness, the result of the inoculation. On opening the abdomen a condition was observed the nature of which we must ask to be accepted from our description because in the process of preservation it could not be produced. The *middle two-fourths of the appendix was ballooned* and in the walls were small opaque areas not so extensive as in the preceding case, and situated chiefly along the mesenteric attachment. The viscera showed no noteworthy features and both knee-joints were in a condition of early arthritis. The diplococcus was recovered from one of these in pure culture.

The histology of this condition shows the earliest stage of an infection by the blood-stream. The first changes appear in the mucous and submucous layers, but chiefly in the lymphoid follicles of the latter. Small foci of polynuclear cells can be seen here and there surrounding the minute blood capillaries, and every stage of inflammatory change can be traced up to complete destruction of the normal tissue, ending either as necrosis or connective-tissue proliferation. Diplococci are visible in various stages of destruction within the phagocytic cells, according to the stage of inflammatory reaction.

The last series that has been inoculated consisted of three young rabbits, seven weeks old, which were injected intravenously on Oct. 6th with very small doses (0·25 and 0·1 c.c.) of a bouillon culture from the knee-joint of the preceding rabbit with appendicitis. All developed arthritis and one diarrhœa; this one died on the ninth day. There was marked arthritis of the left carpal joint and slight arthritis of both knee-joints, the synovial membranes of which were red and congested. About half an ounce of turbid fluid was removed from the peritoneal cavity, and the serous membrane showed early inflammatory changes. *The appendix at the junction of the last one-fourth with the first three-fourths* showed an opaque area deeply seated in its wall. The blood-vessels were congested. As regards the other viscera, there was no noticeable feature, except that the spleen appeared to be unusually small. Cultures from the left carpal joint and peritoneal fluid gave a pure growth and films also showed that the diplococcus cultures from the blood were negative. We would emphasise the absence of the bacillus coli in the films and cultures of the peritoneal fluid. Thus it will be recognised that in this case, which had lasted nine days, some peritonitis occurred and living diplococci were present in the peritoneal fluid.

Summary of Histological Details.

To summarise our histological results we would point out the occurrence, first, of a very early appendicitis; secondly, of a severe appendicitis; thirdly, the formation of an ulcer; and fourthly, the occurrence of peritonitis as the result of local deposits of the diplococcus intravenously injected. We would also express our belief that in human appendicitis, apart from the complicating event of a concretion which we know is not a constant occurrence, the histological changes might be well explained by our results. The early cases with their focal deposits in the submucosa and mucosa, showing cell proliferation and little necrosis, might well if they had been more prolonged in duration have produced sclerosis of the wall such as occurs in chronic human appendicitis. The acute case with much necrosis would represent the virulent human condition. Lastly, the ulcer, had it healed and been rather more extensive, would have produced the stricture so often seen in man.

The occurrence of an early peritonitis without perforation throws light upon malignant human appendicitis.

The rapid destruction of the diplococci by the tissues is a most interesting event, fully bearing out our previous experiences as to this micrococcus, which have led us so repeatedly to explain the difficulty of its isolation during life.

The enlargement of the lymphatic gland at the base of the appendix is paralleled in human appendicitis.

In none of these cases nor in the 24 rabbits inoculated in this research was there a single abscess on the viscera.

Adrian's Researches.

In so far as these results are the outcome of infection with a micro-organism obtained during life from rheumatic arthritis, and a micro-organism, too, capable of reproducing a similar arthritis, they are, we believe, a new contribution to the subject of experimental medicine, and a new fact in the pathology of the important condition of appendicitis. If, however, we were to claim that the wider question of the possibility of appendicitis arising as a local result of a general blood infection had not been realised and experimentally investigated before, then we should do a gross injustice to others. Absolutely independent as these investigations of ours have been, we must refer to Adrian's paper published ten years ago[2] upon the occurrence of appendicitis, both clinical and experimental, as a result of general infection. This author in a masterly investigation refers to this production of appendicitis in rabbits by the intravenous injection, not only of streptococci, but also staphylococci, typhoid bacilli, pneumococci, and the bacillus coli. In the pneumococcal investigation he demonstrated the micrococcus in the wall of the appendix, and his microscopic section of the inflamed appendix resulting from a streptococcus infection is in accord with the histological results that we have shown. He gave no details of an ulcer formation or of another lesion such as arthritis, or of the condition of the peritoneal fluid, nor does he mention the source of the streptococcus, but these points are of secondary importance compared to the general question with which his contribution was concerned.

In his paper Adrian gives many references to the work of others upon the general question of the origin of appendicitis from a general blood infection or local injury. Roux and Josué Roger, Beauserrat de Rouville, Gouget, and others have investigated in various ways upon this question, and Adrian's paper reviews this work.

Concluding Observations.

We would make the following concluding observations:—

1. There seems to us no doubt that in these cases acute appendicitis resulted directly from an intravenous inoculation of a diplococcus obtained during life from an acute rheumatic arthritis, and it appeals to us as interesting that it was the only obvious alimentary lesion, a point which Adrian noted in his cases.

[2] Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie 1901, p. 407.

2. The conditions that were produced were of varying severity.

3. In each case the animal was young; heretofore we have not observed such a condition in the older animals. This may or may not prove to be an accurate observation.

4. The condition arises without the presence of any concretion or foreign body in the appendix, and commences deep in the wall of the appendix. This later point militates, in our opinion, against the view held by Aschoff that in human appendicitis the disease starts from within the lumen of the appendix.

5. It is interesting that the middle part of the length of the appendix is affected, a position in which a stricture is so often found in man.

6. In one case early peritonitis with living diplococci in the peritoneal fluid occurred, although there was no perforation—a point of much importance in its bearing upon the pathology of human appendicitis.

7. The ballooning of the affected area of the appendix in one case suggests the probability that in man some such loss of tone favours stagnation of secretions and contents and the formation of a concretion.

8. The association of arthritis, mucous diarrhœa, and appendicitis is of interest in its bearing upon the difficult question of auto-intoxication from the bowel in the human subject as a cause of arthritis. It suggests that rather than this being the primary factor, the probability is that all the lesions may be the result of some primary cause circulating in the blood stream and determining to these various positions.

9. We do not assert for one moment that the only cause of appendicitis is this diplococcus. Adrian's investigations and those of others are sufficient evidence, quite apart from clinical experience, to prevent us falling into this error.

10. Whether or not these results favour the widely held view of a relationship between acute rheumatism and appendicitis must depend upon the significance that is attached to this diplococcus and the degree of parallelism that exists between human disease and experimental infection.

NOTES ON THE ETIOLOGY OF SCARLET FEVER.

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IN these notes no attempt will be made to deal exhaustively with the etiology of scarlet fever, but a short description will be given of a series of cases admitted to the Guildford Joint Isolation Hospital, which tend to confirm the opinion I have long held, that a fair proportion of the patients admitted into our fever hospitals as suffering from scarlet fever, although presenting signs which are indistinguisable from those of true scarlet fever, have not in fact necessarily contracted the infection from a previous case of the disease.

It has been asserted by medical officers of health for urban districts that as, perhaps, 70 per cent. of cases of scarlet fever reported were traceable to previous cases, it followed that the remaining 30 per cent. originated in a similar manner. This reasoning may be more or less justifiable in a congested area where the possibility of infection by direct or indirect contact is difficult to exclude, but it cannot logically be applied to sparsely populated districts, where such contact can often be excluded with every degree of probability. Moreover, in such districts the accumulated evidence of the remaining 30 per cent. is so strong as to force the conclusion that sporadic cases of scarlet fever arise without reference to a previous case. It is obviously only in thinly populated districts, if at all, that this possible mode of origin of scarlet fever can be proved. If a single origin for scarlet fever is insisted upon it would be illogical to deny to such infectious diseases as erysipelas, pneumonia, and cerebro-spinal fever an origin apart from previous cases.

It may, of course, be objected that cases notified as scarlet fever, in which there has presumably been no direct or indirect contact with a previous case, are either not cases of scarlet fever at all, or that the previous case did exist but was not traced. The first objection carries with it the responsibility of laying down the pathognomonic signs of scarlet fever. My contention is that sporadic cases of an exanthematous disease arise in which an origin from previous cases may resonably be excluded, but which present signs which are indistinguishable from those of true scarlet fever. In view of the well-known ambiguous character of many attacks of this disease, it would probably be a relief to most medical officers of isolation hospitals to have cases sent in which showed a puncto-erythematous rash, a congested throat, and elevation of temperature, followed by a distinct peeling of the tongue, and subsequently of the hands and feet. The following two cases exhibited these signs, and yet contracted second attacks after admission to hospital.

CASES 1 AND 2.—The patient in Case 1, a boy, aged 5 years, was admitted into hospital on April 17th, 1911, with a temperature of 100·4° F. and a pulse of 104, a peeled tongue, congested throat, and what seemed to be the remains of a puncto-erythematous rash on the trunk, and especially in the groins and upper part of the thighs, but which was scanty on the limbs. He had impetiginous sores on the cheek and left ear. The onset was stated to have occurred with malaise on the 14th, sore throat on the 15th, and rash on the 16th. He was said to have had the sores on the face for two months, and a baby brother had had impetigo of the scalp for about the same time. No previous cases had been reported in the locality for eight months, and then only one isolated case. On April 19th a note was made that the tongue had a distinctly peeled appearance, and that the rash was still present in the groins. On May 3rd—i.e., in the third week—there was definite peeling on the hands. The soles of the feet showed dry powdering only.

On the same date (April 17th) was admitted his brother, aged 13 years (Case 2), who showed on admission a flushed face and a puncto-erythematous rash on the trunk, a very congested throat with punctation of the soft palate, temperature 101° F., and pulse 104. The date of onset was given as the 15th (one day after his brother); there were sore throat and headache on the 16th, and a rash on the 17th. On the 19th the throat was very congested and swollen, the rash was well out, chiefly on the trunk, but extending to a slight extent on to the backs of the hands and feet. The tongue was peeling distinctly. On the 20th the rash, which was now mostly punctate, was still well out on the trunk, and especially in the groins. There was pinhole peeling on the trunk, and at the end of the second week marked peeling of the palms.

The boys had been placed in the scarlet fever ward with only one other patient. Up to this time no doubt had been entertained but that both were suffering from mild attacks of scarlet fever. On May 1st, however, the elder boy, after an onset with sickness, headache, and sore throat, developed a still more general and typical rash, the hands distinctly peeling at the same time from the first attack. His temperature rose to 101·8° on May 2nd, and did not become normal until the 11th. On May 4th the tongue had peeled and was raw-looking, and it subsequently became ulcerated. On the 8th there were rheumatic pains in the wrists, which extended to the elbows. The second attack was altogether more severe and typical than the first, but in spite of this it was considered to be one of the relapses which occasionally occur. On this account, and the ward being practically empty, the younger brother was not removed.

The next thing that happened was that the latter on May 23rd developed a very typical attack of scarlet fever, with a temperature of 103·8°, followed by general peeling, double otorrhœa, and some albuminuria. On June 12th the hands had finished peeling, and the feet about half-finished, for the second time, both being more copious than on the first occasion. The ward had been empty of other patients since May 13th, so that it is highly probable that his secondary infection was contracted from the elder brother.

There is no doubt that the second attack in both cases was true scarlet fever, and as it would have been an extraordinary coincidence that both were relapses, it is probable that the first attacks were due to a systemic infection, possibly by streptococci from the impetiginous sores.

The following series of cases point to the same conclusion. The notes taken were not very complete, as there was no intention at the time of publishing them. All were sporadic cases without known antecedent or subsequent cases in the several localities:—

CASES 3-6.—The patient in Case 3, a girl, aged 12 years, was admitted from an isolated cottage on Jan. 9th, 1911, with a temperature of 103·4° F., which fell gradually to normal by the 16th. There was a history of an onset on the 7th with sore-throat; sickness all day on the 8th and rash on the morning of the 9th. The case was typically scarlet fever in respect of the rash and the red and swollen throat. On the 13th the rash was fading from the trunk, but was still very visible on the hands and feet. The tongue had peeled. On the 19th there was pinhole peeling above the pubes. On Feb. 14th the hands had not finished peeling, the toes had commenced to peel, and the soles had not completed peeling on Feb. 29th. This child had not been out of the house since Jan. 1st. On inquiry at the home two other children were found to be affected with impetigo of the face.

On Jan. 25th the mother and two children were admitted to hospital. The mother on admission had no temperature and no rash. There was history of an onset with malaise on the 17th and a scarlatiniform rash, mainly confined to the trunk, on the 18th.

One of the children, aged 2 years, had impetigo and a discharging ear, and the second child, aged 12 months, had on admission swollen submaxillary glands, a temperature of 103·4°, which gradually declined to 99° on the 30th and then rose, with morning remissions, to 102·4° by the evening of Feb. 4th.

Neither the mother nor the two young children showed more than powdery peeling. It appeared that these two children had a slight rash within two or three days of each other during the last week of the year, and that another child was sent home from school with impetigo before Christmas and also had a general rash.

In this series of cases, again, there is a strong presumption that they were all associated with the impetigo, as no previous cases had occurred in the school or locality. All the four cases notified were probably of the same nature, as they were together during the six weeks' detention, and the first case at any rate was indistinguishable from a typical attack of scarlet fever.

Another similar case follows:—

CASE 7.—The patient, aged 9 years, was admitted on April 3rd, 1911, with a temperature of 102·2° F., which gradually fell to normal on the 6th. There was a history of onset on the 1st, and a rash next morning. On admission there was a good puncto-erythematous rash, a red and swollen throat, and a whitish furred tongue. On April 4th there was a deposit of albumin in the urine, and on the 5th the tongue had peeled, and there was glandular swelling on one side of the neck. On the 19th he was powdering freely on the trunk, and the palms and soles had finished peeling by May 9th. It was found that a child at home had at the time of admission impetigo of the scalp and that the mother had whitlows on both hands.

Another isolated and similar case is next given:—

CASE 8.—The patient, aged three years, admitted on Dec. 6th, 1907, with a history of onset on the 3rd, sickness and sore throat on the 4th, and a rash on the 5th on the chest extending to the legs and arms. On Dec. 28th his hands were peeling distinctly. This child had not recently been outside the premises, and there were no other children in the home. He had, however, communicated through the palings at the back with the next door children, who were at the time affected with impetigo.

One more similar example may be cited:—

CASES 9 AND 10.—A patient, aged 3 years, was admitted on Sept. 3rd, 1908, with a temperature of 99·5° F., which became normal next day. There had been sickness on August 30th, and a rash and sore throat on Sept. 1st. A sister, aged 7 years, was admitted at the same time with an identical history. On admission there was a fading punctate rash on the body and limbs, but none on the hands and feet. The tongue had a peeled appearance. The throat was a little congested and there was some exudation on the tonsils. On Sept. 12th there was peeling on the trunk and early peeling on the hands.

The patients' home was an isolated keeper's cottage. There were four other children, and three if not all four of these were at the time suffering from impetigo contagiosa. The children were detained in hospital for eight and 11 weeks respectively, the latter on account of rhinorrhœa.

Some cases found associated with purulent conditions other than impetigo contagiosa may now be mentioned.

CASE 11.—The patient, aged 21 years, who stated she had had scarlet fever when five years of age, was admitted to the isolation hospital on Feb. 16th, 1910. The onset was on the 14th with nausea; a rash appeared on the 16th. She was suckling a four months old child. On admission the rash was scarlatiniform and was general, including the backs of the hands and feet. The throat was very red, the tongue furred but cleaning at the edges. One breast was very tender and swollen. On the 18th the rash was more out on the thighs and fading from the trunk. The breast was incised on the 23rd and a quantity of pus found. On March 22nd the palms were noted to have peeled over half their extent, and there was peeling on the toes.

CASES 12 AND 13.—A patient, aged 11 years, was admitted on May 27th, 1911, with a copious scarlatiniform rash, slight throat symptoms and temperature, and with an abrasion on the arm from a fall, which was suppurating and had been poulticed by the mother. She subsequently developed superficial abscesses in the armpits.

The girl's twin sister was taken ill four days after the other, and was admitted with similar signs on May 28th, and a temperature of 103° F., which did not become normal until June 5th.

On both these children the peeling was exceptionally marked and early, as there was pinhole peeling over the pubes on May 27th and June 2nd respectively; free peeling on the hands on June 2nd and 3rd, and by June 8th and 9th the hands had finished peeling in large thick sheets; and by June 10th and 11th the feet had finished in a similar manner. In these two cases the amount of rash and peeling was out of proportion to the throat condition and the constitutional disturbance.

CASE 14.—The patient, aged 3 years, was notified on April 23rd, 1909, and nursed at home. The child had a good scarlatiniform rash, but did not complain of sore throat, which only showed slight congestion. She had a suppurating sore on the heel. She was feverish and drowsy on the 22nd, and a very irritable rash appeared on the trunk the same day, and on the legs and arms on the 23rd. The subsequent peeling was definite on the hands, and there was suppuration in both ears.

CASE 15.—The patient, aged 3 years, living in a large house, had an onset on June 13th, 1910, with sickness. There was a dirty congested throat, and a scarlatiniform rash appeared on the 14th. The child had an abrasion of the chin on the 11th, which suppurated. There was subsequently a troublesome purulent vaginitis. There was extensive peeling. She had not been out except with the nurse. The mother looked after the patient at home and herself fell with similar symptoms on June 25th, which ran the usual course.

CASE 16.—The patient, aged 12 years, was admitted on August 27th, 1909, with a temperature of 101° F. which became normal on Sept. 1st. There was a history of having been confined to bed for three days with a painful stump of leg which was suppurating. There had been malaise and sore-throat on the 26th and rash on the 27th. On admission the tongue was furred, the throat a little red, the rash general except on the hands and arms, fairly profuse on the trunk and thighs, none on the face. On the 29th there was still rash on the trunk, which was now punctate, very little on the arms and legs, and a few specks only on the backs of the hands and feet. The boy, who had been admitted into the scarlet fever ward, developed a typical attack of that disease on Sept. 5th, the rash and the throat symptoms being more marked than on the first occasion.

Dr. J. C. Thresh, in his annual report for the Chelmsford rural district for 1910, refers, in connexion with some cases of scarlet fever, to an interesting observation by Mr. H. Cardin of Stock, which tended to throw light upon the origin of sporadic cases. One of his cases was associated with a suppurating gland and another with a suppurating scald, and Dr. Thresh states that he himself has also noted some sporadic cases in which an examination revealed some purulent condition.

In view of the fact that the streptococcus of Fehleisen has been isolated from the sores of impetigo, it is not improbable that if some of the exudation finds access to the tonsil it should set up there an inflammation with systemic absorption corresponding to that which occurs in epidemic scarlet fever. Conversely, we may argue that if streptococcal organisms are capable, when introduced into the throat, of giving rise to an illness indistinguishable from the true or common scarlet fever, the latter disease is probably due to a streptococcus. Judging from the first two cases mentioned and Case 16, the one variety does not confer immunity against the other. Cases, however, of a simulating disease may often survive the usual detention in a well ventilated and managed scarlet fever ward without contracting the true disease, so that their freedom from a second attack is no proof of the genuineness of the first.

Another disease which is usually streptococcal, and which is supposed to induce special liability to an attack of scarlet fever, is puerperal fever. The occurrence of many of these cases without exposure to a previous case of scarlet fever suggests an autogenous origin.

Similarly the cases of so-called surgical scarlet fever following burns and other wounds in hospital wards, where there have been no previous cases of the disease, could be accounted for in the same manner. Cases not infrequently occur following tonsillotomy, the patients on admission to the isolation hospital showing a sloughing surface to the tonsil and the signs of a mild attack of scarlet fever. Of two cases of this character recently admitted to the isolation hospital neither developed a second attack during the usual detention in the scarlet fever ward.

The most important thing to decide in connexion with these cases is whether they are infectious. Apparently they are, though to a less extent than in the case of the common epidemic form.

Besides the groups of cases already dealt with in which there were obvious sources of pyogenic organisms, other sporadic cases frequently occur in rural districts in which there is no such source obvious, but which may still possibly be accounted for in a similar manner, such sources being more common than those of the infective agent of epidemic scarlet fever. In any event, the numbers of these cases is so considerable as to warrant the conclusion that a previous case of scarlet fever is not a necessary antecedent, although they present all the symptoms, usually in a modified degree, of the true disease.

If we recognise only the usual epidemic type as true scarlet fever, then it is unsafe definitely to diagnose as scarlet fever cases which present peeling of the tongue a few days following the appearance of a rash and sore-throat, and which shows marked peeling of the hands in the third week—signs which are generally considered pathognomonic of the disease.

The occurrence of associated purulent conditions in the cases mentioned is in all probability more than a coincidence, because their frequency is much greater than in the case of epidemic scarlet fever, and, moreover, no other likely origin could be traced for the cases. To make the proof complete it would no doubt be necessary to show that the percentage of these cases which arise in patients either suffering themselves, or who have been in contact with those suffering from some purulent condition, is greater than that of the accidental association of these conditions with ordinary scarlet fever.

Guildford.

DEVIZES COTTAGE HOSPITAL.—At Devizes on Oct. 18th Lord Radnor formally laid the foundation stone of the "King Edward VII. Hospital Extension," which is to be added to the Devizes Hospital. There was a large attendance, and the ceremony was carried out with full Masonic ritual. The extension will comprise the addition of a children's ward, and the practical reconstruction of the present administrative block, an operating theatre fitted up to modern requirements, and an X ray room.

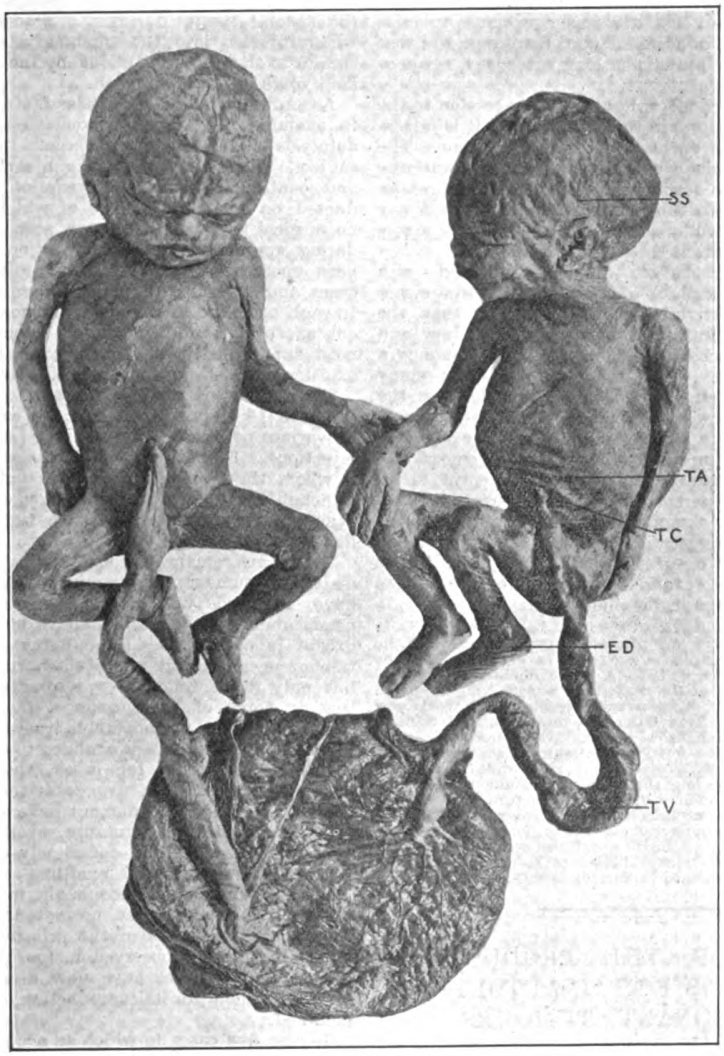
TORSION OF THE FUNIS AS A CAUSE OF DEATH OF TWINS.

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AMONG the causes of death of the fœtus torsion of the cord is always named, but it seems that Martin, Ruge, Schauta, and most modern observers regard exaggerated torsion of the umbilical cord as a post-mortem occurrence, resulting from the great mobility within the uterine cavity of a fœtus that has died from the fifth to the seventh month of pregnancy.[1] According to Tarnier and Budin (1886), torsion of the cord generally has no bad effect, but they admit that there are cases recorded where the vessels were completely obliterated. It is at the umbilical extremity of the cord that exaggerated torsion is found most frequently, and it is much more rare at the placental insertion; but sometimes it is placed in the centre or middle of the cord. The old view was that in the majority of cases exaggerated torsion caused death of the fœtus, but the modern text-book seems to regard torsion of the cord as a matter of small concern, so that there is but little to extract when information on the subject is sought for.

The example now published is fairly complete in the details required for enabling judgment to be formed, because as soon as the pregnant woman lost the sense of movement she reported the occurrence, and ten days later the twins were expelled. Galabin and Blacker[2] state that torsion of the funis may be produced either after the death of the fœtus or during its life, but they admit that by causing obstruction of the vessels it may lead to the death of the fœtus. "In individual cases it is difficult to determine whether torsion is the consequence or the cause of the death of the fœtus."

The case shows that twins (females) were equally advanced in development up to the sixth month, that the death of one took place a short time before the death of the other, and that the fœtus dying first had the cord twisted at the umbilical insertion up to obliteration. The mother had had two living children previously and was familiar with the sensations of pregnancy. She counted from June 3rd, and felt movement up to the night of Nov. 12th. She was occupied in "ironing" on the 10th, and felt tired after, and on the 16th (the day she was seen) she stated that she felt the abdomen "heavy," "much heavier" than it had been. No movement was detected with the examining hands and no sound was heard with the stethoscope. There was no vaginal discharge. Several examinations confirmed the probability of a dead fœtus, and it was agreed that the womb should be cleared out. On Nov. 23rd a large dilator was inserted into the cervix, followed up by a finger, and the amnion was ruptured. Some hours later (about eight) twins (both dead) were easily and spontaneously expelled.



Reproduction of a photograph showing the difference between the twin fœtuses. SS, Shrunken scalp TA, Torsion of abdominal wall following TC, torsion of cord. ED, Epidermis detached from leg and foot. TV, Thrombosis of vessels of cord and distension of cord; colour dark.

The twins were both female and presented different appearances. It was seen that the cord of one fœtus was twisted close to the body in such a way that it was reduced to the size of a pencil. The cord beyond was swollen to a considerable size in comparison with that of the other fœtus. The fœtus with the twisted cord was somewhat smaller than the other, the skin was peeling, and death had taken place not long before expulsion. Both fœtuses were in the first stage of decomposition—viz., peeling of the epidermis—but the fœtus with the twisted cord was more advanced in the process than the other. The scalp was looser and the body and limbs were of a darker colour. The skin of the abdomen at the umbilicus showed wrinkles and an attempt to follow the torsion of the cord. The skin of the other fœtus at the same spot was without wrinkles.

The inference drawn is that both fœtuses were developing equally, but that one began to turn and the cord became strangulated at the navel; circulation being cut off the fœtus died. The death of the first was not noticed by the mother, because the movements of the second fœtus continued. Then the placental circulation became interrupted and the second fœtus died, possibly from thrombosis, on Nov. 12th. There was probably not more than seven to ten days' interval between the death of the one and that of the other, judging by the appearance of the fœtus which died last.

There seems to be no other obvious cause for the death of the twin fœtuses except the torsion of the cord of one. There was no syphilis in question, and the parents were healthy. There had been a miscarriage at five months eight years

[1] Hirst, 1909.
[2] The Practice of Midwifery, 1910, p. 538.

previously. A girl born later had died from tuberculous peritonitis, but a boy aged 5 was alive, though frail looking.

The photograph taken shortly after the expulsion shows the cords of the twins inserted at opposite points in the placenta, the distension of the cord of the fœtus and the sharp twist at the navel, and the wall of the abdomen wrinkled. Comparison of the bodies shows the skin of the scalp and body more lax than the skin and scalp of the other fœtus, but the skins of both are seen in peeling stage. The appearances are consistent with the story of the mother, and it would hardly be expected that decomposition would be further advanced at the end of 11 days after cessation of movement in utero. If, therefore, the putrefactive changes were not widely different in the twins and were only a degree more in one than in the other, and one had a twisted cord while the other had not, it seems reasonable to infer that the fœtus with the obliterated cord died first, and that the death of the other followed not long after, say, seven or eight days or even less.

Tyler Smith and indeed all writers attribute torsion to the movements of the fœtus, and in the case of twins it is fair to suppose that there might be less space for movement. The exact position of the twist would depend upon intra-uterine conditions impossible to formulate. The cord may get an obliterating twist close to the body of the fœtus, or it may become equally obliterated by a twist somewhere in its course away from the fixed points at the placenta and navel.

The silence of text-books on torsion of the cord—with the exception of those authors quoted—suggests that either the question is too trivial for mention, or that the cases of death from intra-uterine torsion are few and far between. Then comes the statement that torsion is a post-mortem occurrence. That this may be so in many cases no one would question, but I do not consider that the case now recorded belongs to that class. Possibly few cases are on record where twin fœtuses grew equally for a certain time, and then one dying with a twisted cord caused the other to die also. I had a few years ago a twin birth, one child living and apparently healthy, whereas the small dead fœtus was quite black and shrunken. Syphilis was the reason, because the living child was the object of much anxiety and throve well on grey powder. The twins in the case recorded were not examined post mortem, and the appearances are those seen in the photograph.

Bibliography.—Transactions of the Obstetrical Society, vol. x., p. 94: "Dr. Rasch exhibited a fœtus and placenta (5 months?) in which the cord was obliterated by twisting. Close to the navel of the fœtus the funis had the appearance of firmly twisted, thin cord of the thickness of a crow quill." Transactions of the Obstetrical Society, vol. xli., p. 51: "Dr. Westmacott exhibited a remarkable specimen of 'corkscrew funis'" (no details given). Transactions of the Obstetrical Society, vol. xxxi., p. 164: "Dr. M. Handfield-Jones showed specimens of curious twistings of the cords around fœtal limbs lashing them together, the funis in one case being dragged out into a thin, ribbed-like ligature, and it was a matter for surprise how the circulation could possibly have been carried out through such a flattened structure." Tarnier et Budin, vol. ii., p. 362: "The labours of Martin, of Ruge, and of Schauta show that in the great majority of cases it is not the exaggerated torsion of the cord which has brought about the death of the fœtus." The quotation from Hirst already alluded to seems somewhat too sweeping in view of the reference to Tarnier and Budin.

Carlisle.

THE ACTION OF THE PRODUCTS OF HOMOGENEOUS FŒTAL AUTOLYSIS ON MALIGNANT TUMOURS IN MAN.

PRELIMINARY NOTE.

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THE study of the biology of embryonic and neoplastic inoculations, which I undertook some time ago, has afforded me various results on which are founded the researches here detailed.

1. The observation of the extreme rarity of spontaneous malignant tumours in young rats. This fact recalls the absence, or the very exceptional occurrence, of simple neoplasms or specific tumours, as epitheliomas and sarcomas, in the newly born and young subjects, and leads one to believe that, in the early epochs of life, the factors necessary for the genesis of malignant tumours do not exist.[1]

2. The fact of the noteworthy and frequent resistance to the inoculation of neoplasms which rats acquire by previous injections of embryonic or fœtal tissues. Such a fact suggests the existence of some substances contained in, or originating from, the inoculated fœtal tissues which, on diffusion, render the subject immune to subsequent attempt to reproduce malignant growths.

3. The demonstration that homogeneous embryonic or fœtal tissues, when subjected to autolysis, by hypodermic injection or by local application, bring about the involution of the inoculated neoplastic elements, which always reproduce themselves and prove fatal. This fact strengthens a belief in the existence of substances which are generated by the special tissues during the process of autolysis, which when injected into the organism act on tumours in a way similar to that brought about by the preventive injection of embryonic or fœtal emulsion.

Accordingly, guided by these facts, I have deemed it well to examine the effect of homogeneous products of fœtal autolysis in cases of malignant tumours in the human subject. The observations, begun early in September, 1909, and continued without interruption, have been all conducted on inoperable cases, of which only 7 had received no surgical treatment, although seen by the ablest and most daring surgeons, when no operation was possible; 29 had been operated upon, even repeatedly, including recurrent cases and several with multiple and voluminous metastases. In each case the histological diagnosis was confirmed without exception, and the clinical evolution was followed up, both anatomically and microscopically, by means of the excision of small portions, repeated even eight times.

The number of cases submitted to the injections was 36. Of these, 14 stopped the treatment early by their own desire for various personal reasons, having received from three to ten injections. From the other 22 cases we must subtract four, in whom the treatment has been only recently begun, and, although in three of these the first subjective and objective symptoms of improvement have begun, one cannot as yet depend on any result.

There thus remain for consideration 18 patients affected by malignant tumours, varying in substance and position, who have followed up the treatment with regularity and perseverance. Of these, eight have derived no marked benefit, except in a few cases some delay in the progress of the tumour or an initial improvement of the general condition, but only to be followed by a progressive deterioration, so that in three of these cases a fatal result occurred, an inevitable event in inoperable tumours, and considered as imminent in all the cases confided to me.

As for the other ten cases, the beneficial effects are evident; and while in five cases the treatment is still proceeding, because the tumours have neither disappeared nor become modified in structure, in the other five cases the neoplastic tissues have completely disappeared, or in the residual tissue repeated excisions have demonstrated the complete transition of neoplastic into sclerotic connective tissue. Of these, three presented metastases which had degenerated sooner than the primary tumour in a manner analogous to that observed in four other cases in which the glandular metastases have now disappeared, although the original tumour, or its reproduction, still exists, more or less modified.

In the five cases in which an accurate and repeated histological examination of various portions of the neoplasms has abundantly proved the benefit of the treatment, we have to deal with three cancers of the breast, with multiple metastases, one cancer of the lower end of the rectum, and one adeno-carcinoma of the thyroid. The first case treated is omitted from this group, the only one in which a preliminary excision was not made. This case was diagnosed as epithelioma of the soft palate, with cervical metastasis. As soon as the injections were begun the various manifestations disappeared, and that quickly. In waiting for the result the pieces excised, examined when the involution was well advanced, yielded the typical histological appearance, by this time found to be constant, of a change of formation now no more recognisable by the finest methods; hence the doubt as to its nature.

In all the cases the process of cure was similar; the same

[1] THE LANCET, Oct. 15th, 1910, p. 1151.

leading phases were gone through, and the same definite structure attained. The local treatment by injection into the parenchyma provoked hæmorrhagic, necrobiotic, or necrotic areas around, which were rather more numerous and more extensive than those occasioned by the remote injections, of which the main feature was cytolysis with a moderate degree of substitutive connective tissue.

Except for this difference, constant microscopic results were successively found—viz., a diffuse cytolysis of the neoplastic cells, gradually more pronounced till the morphological entity was lost, and the elements had broken up; intense infiltration, especially among the smaller cells, more marked around the vessels of various sizes; the penetration of numerous phagocytes, small and great, and of cell plasma; the active proliferation of connective and vascular tissues, invading, in fact, the whole region, some with giant cells; the transformation of the tumour substance into adult connective tissue, both fibrillary and sclerotic, with a cessation, briefly, of all reaction and production of infiltration and multiplication.

In some cases there was intense vascular stimulation of a lymphatic type; whence came a turgidity of the neoplastic tissues, and a marked increase of volume, with a change of consistency, amounting to clear fluctuation. By aspiration, in such cases, a limpid lemon-yellow liquid is obtained, having the characteristics of a transudation, containing whitish particles in suspension.

After the fluid or the infiltration had been absorbed, the substitution of tissue already affected by degeneration and by cytolysis happens as usual, which process, in its complexity, forms a picture perfectly analogous to that described by me in the case of malignant sarcomas in rats treated by homogeneous fœtal "autolysates"; it is a condition, therefore, comparable to that of sarcomas and epitheliomas engrafted on rats, previously immunised by embryonic or fœtal inoculation. From which circumstance, in short, there is a resemblance to the spontaneous evolution displayed by tumours only slightly virulent, and to the embryonic graftings in the second period of the cycle—viz., in the state of regression and disappearance.

There is no need to insist in this short notice on the importance of this uniformity of course and of results, a proof of the existence of physio-pathological phenomena, explicable by general laws, revealing themselves with the greater intensity and diffusion according to the measure and coöperation of complex factors.

One must here pause to call attention to the analogy of the structural characters, as above explained, with those noted by various authors, especially of the school of Orth, in the very rare cases of spontaneous involution of tumours in the human subject, in which may be found "zones," more or less restricted or extensive, which are affected, as I believe, by products of limited autogenetic neoplastic cytolysis, due to partial breaking down from defective nutrition or from the formation of hæmorrhagic patches. Generally speaking, one meets also in such cases with the same phenomena and the same conditions, by means of which the organism in its various changes, with only its inherent powers of cure or aided by treatment, succeeds in substituting a pathological tissue, structurally and biologically hurtful, by a common cicatricial tissue, biologically innocent.

During the treatment I have succeeded in making some remarkable observations, and have studied the anatomy, histology, and pathology of the process. In the first place, I have been able to prove that the modifications in volume are not proportionate to those of structure, so much so, that the criterion of the dimensions or of the consistency is not always a safe guide to the estimate of the therapeutic effects. In fact, in some cases there are notable differences relating specially to the original size of the neoplasm, as also to the time occupied in the cure and its methods. For example, the cases of metastasis, which even if relatively large, may not assume excessive dimensions, and are often decidedly influenced by the products of autolysis, may disappear without leaving a trace. Voluminous tumours, on the other hand, especially if treated locally, require much time for their change of substance, particularly by reason of the formation, by direct and intense action, of hæmorrhagic, necrobiotic, or necrotic patches around which the process of disintegration is long and slow, and an excess of connective tissue is formed.

A typical example of such a course was displayed by a large cancer of the breast with metastasis, in which, after a preliminary course of general treatment, a slight diminution having taken place, an excision was performed in March, 1910. The microscopic examination showed the existence of an alveolar carcinoma, with zones of neoplastic cytolysis, infiltration of leucocytes, and proliferation of connective tissue. Owing to the bulk of the neoplasm, and in order to act more directly upon it, local injections were undertaken. In May the dimensions seemed increased, on which account the previously existing metastasis, above and below the clavicle, having disappeared, an operation was decided upon. The breast having been removed and the axilla cleared out, it was found that both the main mass of the tumour and the small axillary swellings were extensively composed of abundant sclerotic connective tissue, in which here and there were found the evidence of spaces with contained cells in such a condition of cytolysis as to be unrecognisable in their minute characters, having the appearance of coloured soil, suspended *in vacuo*, only here and there outlined by fine lines like cellular membranes. Although the operation could not be considered as radical, from examination of the piece removed, and although from the extensive destruction of the parts it was not possible to suture, at the first, the whole line of incision, by continuing the injections a regular granulation and formation of epithelium was obtained without proliferation of the neoplastic elements, as proved by histological examination.

Another case also noteworthy was the adeno-carcinoma of the thyroid, which at first by general treatment disappeared, apparently by cytolysis, and a slight production of fibroplastic material, so much so that the cure was somewhat prematurely stopped, no trace being found by palpation. In the recurrence local treatment led, by the usual stages, to the subsidence of the neoplastic tissue, and to its replacement by a quantity of sclerotic connective tissue.

Another remarkable observation proves the inherent differences in the methods of cure. In fact, while normal doses, injected under the skin in the most varied parts of the body, do not produce local or general phenomena of special interest, or, at least, in some cases treated by rather strong doses, only slight redness, temporary œdema, and a momentary rise of temperature, merely a fraction of a degree, the same doses, on the other hand, provoke intense and exaggerated phenomena of the same kind when injected into the neoplastic tissues. Individuals who have had several courses of ten doses each of general injections without disturbance, when the same doses are given into the parenchyma of the neoplasm readily showed a reaction, with fever up to 39° or 40° C., with rigors and headache, followed in a few hours by a cessation of such symptoms and profuse sweating. In a few days a redness appears over the neoplasm, at times fairly extensive, with swelling and hardness. If the injections be now continued, sometimes the extent of the parts so affected increases, distension and fluctuation are felt, due to the formation of the clear lemon-coloured fluid formerly referred to, which may be at times blood-stained, as the result of aspiration, and may rapidly re-accumulate and persist. It is well in such cases to make an incision and give vent to the fluid, which goes on flowing several days, and gives place to granulation and cicatrisation of the wound, and to the substitution of the neoplastic tissues. This process is rendered difficult, at first, by the distension and infiltration obstructing the more remote superficial lymph supplies, on which the newly formed cicatrix chiefly depends. In four cases at an advanced stage of the treatment a free incision of the neoplastic parenchyma, treated by simple dressing, resulted in a good cicatrix by granulation.

The difference in the general effects of the two methods of treatment was exhibited, with a variable frequency, by all the patients, to whom they were applied indifferently. And yet, while awaiting the report of the histological examination in order to confirm the clinical diagnosis, the latter (diagnosis) is assisted and anticipated by the fact that the strongest innocuous subcutaneous dose, at once and in a marked degree, gave rise to the above group of symptoms.

To elucidate the origin of this fact I experimented on rats and guinea-pigs, injecting varied doses of neoplastic and fœtal autolysates, and of fluid taken by aspiration from effusions formed locally by the treatment. The examination of symptoms, the result of necropsies, the microscopical changes, which were common to all the substances injected, have led me to a definite conclusion.

The principal lesions of the hyperæmic and hæmorrhagic

type, subsequently degenerative, which are only obtained by doses equivalent, relatively to the weight of the body, to 400, 700, or even 900 times that usually employed in the human body, are found in the excretory organs, the liver and kidneys, and in the internal protective secretory organs, as the pituitary and thyroid glands, and the suprarenal capsules, these last organs, indeed, being those most frequently and most seriously attacked by hæmorrhages. Such an anatomical and pathological condition, both naked-eye and microscopic, has been detected also, in the case of doses incapable of causing it in healthy guinea-pigs, in four which were accidentally found to be tuberculous at the necropsy, while the others of the same group showed no special alteration.

I have, therefore, come to regard the transitory group of symptoms as a slight, but complex, toxic phenomenon, favoured at first, in the case of local injections, by peculiar structural conditions, especially as regards the vascularity of the surrounding parts and the friability of the blood-vessels, leading to a more abundant and more rapid absorption by the blood; and, in the second place, increased by the excessive action due to the contemporaneous penetration of the products of cytolysis of the neoplasm, if such have already been formed. Such an explanation is confirmed by the fact that, on the disappearance of the neoplastic tissue, the effects of the local injections in no way differ from those of the general treatment.

The mechanism of the action of the autolysates requires diligent study before it can be defined with certainty and accuracy.

On a hypothesis based on somewhat similar work I have endeavoured to prove that, if we have to deal with an enzymatic process, it is most decidedly due to the combined action of all the enzymatic powers of the fœtal organism. I have, therefore, made numerous tests on films of the serum of coagulated blood, which were easily dissolved by even weak solutions of trypsin. The autolytic products from five sections of tumours of rats and from seven neoplasms from the human subject have afforded me on two occasions, and only one quite distinctly, zones of digestion. But out of 11 fœtal autolysates tested, differing as to the age of the fœtus and as to the stage of the experiment, none has dissolved the albumin subjected to the test. In the same way the fluid aspirated from the fluctuating parts produced by local treatment has given a negative result in two cases and a positive result in one, which was not trustworthy by reason of contamination of the material.

These tests on coagulated albumin and on extra-corporeal tissues are not proofs of the enzymatic property of fœtal autolysates. More numerous and more delicate researches are certainly necessary for such conclusions. It seems to me, however, fair to form some conclusion on the direct and elective actions of these autolysates.

The direct action in the living subject between the products of fœtal autolysis and neoplastic cells is proved by the following considerations:—

(*a*) The failure to immunise rats against the inoculation of homogeneous sarcoma, after preventive treatment, even much prolonged; their receptivity was not modified by the progressively increased injections of autolysates.

(*b*) There was no effect on the pulp of sarcoma produced by the serum of rats prepared with injections of homogeneous fœtal autolysates; the pulp thus employed acted like fresh pulp.

(*c*) The transitory resistance acquired by rats against tumours by preliminary inoculations of embryonic or fœtal tissues; this immunity ceases after a short time.

(*d*) The fact that if the treatment be suspended when no lumps are to be felt exceptionally a case may again develop the neoplasm from the residual elements, which are not apparently under the influence of hurtful substances produced by the organism for some time after the treatment.

(*e*) The readiness with which the changes in the parenchyma of the neoplasm are produced by local injections before the formation of antitoxins is possible.

(*f*) The persistence of the therapeutic action with local and general reaction, after even a fairly long period of treatment and numerous injections; there is, therefore, no evidence of immunisation.

The elective action is proved by the effects obtained by general injections in rats and in the human subject—e.g., in the case of a cancer of the rectum and in the early treatment of the adeno-carcinoma of the thyroid, as also in six out of seven cases of relapsing metastasis—by the fact that in the normal tissues there is no evident reaction; in fact, only during a few days a slight hyperæmia is met with at the point of injection, and sometimes a small zone adherent to the subcutaneous tissue which shows under the microscope a very fine structure with a fibrinous network and a few scattered leucocytes, whereas, in contrast to this condition, in the tissues under treatment the changes already described are found; by the clearly marked lesions which, soon after the injection into the substance of the neoplasm, appear along the line of puncture, such as are not found in normal tissues.

This double proof of the direct and elective action of the autolysates on the effect of the treatment points to the relation between the dose of the substance injected and the volume of the tumour. In practice it happens that, as we must not exceed certain fixed doses, if the tumours be unusually large the autolysates injected at a distance destroy a less amount of the neoplastic tissues than that formed in the same period of time. It is, accordingly, only possible to obtain a delay in the morbid process, which will become less and less important the more the disproportion will increase between the continued employment of the maximum dose adopted and the progressive increase of the volume of the tumour. In such cases one must have recourse to the most energetic local treatment, taking care in the case of marked œdema or evident effusions to aspirate, or in other ways to get rid of the products of neoplastic cytolysis.

Moreover, in such conditions of volume and rapid growth of the neoplasm, and of action of the autolysate both limited and proportionate to its dose, it increases the chance of success in destroying the neoplasm and in restoring the patient's health to excise or destroy freely in order to act on any possible residual cells, and on the metastasis, only by general treatment. Individuals with inoperable tumours can thus undergo the treatment without the risks due to the absorption of toxic products, especially such as are of neoplastic origin, and will exhibit, as early signs of improvement, marked modifications of their general condition, and especially of the blood.

This varied effect of one and the same treatment has suggested the hypothesis brought forward by Bagnami at a recent meeting of the Academy of Medicine of Rome, of the complexity of the substances contained in fœtal autolysates. Of such one group may have a stimulating action on the healthy tissues, and especially on the hæmopoietic organs; and another group may be responsible for the cytolytic action on the neoplastic tissues. One may also admit the existence of a single series of active principles, which would act successfuly, in different ways, according to whether they had to deal with normal cellular elements or neoplastic elements; hence a double favourable result.

The same mechanism of elective cytolytic action, without which the tumour would not otherwise disappear, forms a contra-indication to the treatment in cases with cachexia, in which, by all means, if a cure be undertaken, we must try to prevent the increase of intoxication. The toxic action inherent to the constitution and biology of malignant tumours discourages the use of their autolysates in experimental therapeutics, because there would result an excessive action, more intense and more serious than with other methods. It is necessary, in fact, to employ homogeneous embryonic or fœtal autolysates. In my cases I have employed embryos and fœtuses of from two to six months of intra-uterine life, adopting the products of *fœtal* autolysis more frequently and for a longer period.

It cannot be denied that autolysates from adult organisms may possess a similar action, although it must be reckoned less efficacious, to judge from the less potency and the less frequency with which they confer an immunity against tumours as appears from numerous experiments. It seems to be rather more difficult to admit the same beneficial power in the case of heterogeneous autolysates, especially as on the basis of modern researches on tumours the laws of biological selection appear to be distinctly confirmed under the most varied aspects.

The homogeneous fœtal autolysates are prepared by ordinary methods, observing the strictest rules of asepsis. The fragments, or the pabulum, of the fœtus are placed in a physiological solution, of an average strength of 1 grm. to 20 cgrm., a suitable quantity of thymol or phenic acid being

added, and covered by a layer of sterilised oil or toluol. The mixture remains in the incubator at 37° C. for about two months, and prior to use its sterility is tested.

The injections vary in dose from 2 to 3 c.c. twice to four times a week, according to the patient's age, condition, individual tolerance, the bulk of the tumour, the seat of the injection, and the specific gravity of the autolysates, which latter ought to be, at the moment of their employment, a homogeneous emulsion, and not a clear superjacent mixture. The treatment extends to a variable number of months, according to the local and general conditions.

While in this article I limit myself to describe the action of autolysates on malignant tumours in the human subject, and to make a general statement as to their therapeutic effect, I have at the same time arrived at conclusions of some statistical value, which prove the exactitude of all I have stated, but do not admit the conception of a statistical comparison. Such could only be made after a study of numerous cases, and only when time, rather than repeated excisions and numerous histological controls, shall have proved that even the last neoplastic cells have been destroyed, and consequently all danger of recurrence eliminated. All the more the fact remains that, without proof of an immunisation, there remains in every individual the possibility of the development of blastomic cells, on which account, if all the conditions requisite for the formation of a neoplasm be again present, the subject in question is always liable to, and helpless against, such a contingency.

The observations, however, made on both men and animals have so far proved that, if the treatment be persisted in for some time after its evolution and disappearance, the tumour does not recur. And if, as an exception, a case in the human subject relapse on account of a premature suspension of the injections, if the latter be resumed their effects are again manifest. Time only will permit of the collective study of cases submitted to this treatment in more favourable conditions than were hitherto possible, when one may be able to supervise and study the process in every detail, with fresh material, and, by this original method, deal with inoperable cases of voluminous tumours and their metastases.

Finally, I desire to add that I have indicated the method and its results in detail, because, as may be readily understood, in relating the clinical researches, which are indispensable for a fair conclusion, one has to bear in mind the relative number of cases treated and the long time of trial necessary for a satisfactory judgment.

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Rome.

UNIVERSITY OF LONDON.—The Graham scholarship in pathology of the value of £200 a year, tenable at University College Hospital Medical School, was awarded for the sessions 1911–12 and 1912–13 to Mr. H. G. Butterfield, M.A., B.M., B.Ch., of Wadham College, Oxford, and University College Hospital.—The Brown Animal Sanatory Institution Committee have appointed Sir William Church as their chairman, and the members of the Senate Committee have appointed as chairman Dr. Frederick Taylor.—In response to the appeal to raise £15,000 as a building fund for the Galton Laboratory for National Eugenics, sums amounting to a total of £2260 have already been given, promised, or promised conditionally on the buildings being commenced within two years.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE RESULTS OF OPERATION IN A CASE OF HAMMER NOSE.

BY F. B. JEFFERISS, F.R.C.S. EDIN., M.R.C.S. ENG., L.R.C.P. LOND.

As the effects of operative interference in cases of rhinophyma, or hammer nose, are not often seen the accompanying photographs of a case of this kind may be of interest. This distressing condition first appeared when the patient was

FIG. 1.



26 years of age, and grew steadily worse, making his life a misery and his nose a constant source of annoyance to himself on account of the attention and ridicule it evoked.

The patient at the time of operation was 64 years of age. He was, and had always been, temperate. With

FIG. 2.



the exception of a faint aortic bruit he was a healthy man and had had no serious illness. Under chloroform anæsthesia the whole of the superfluous tissue was removed

in one piece by two lateral incisions in a wedge-shape, leaving a V-shaped shallow cavity with the incision extending down to the cartilage. The "flaps" were then trimmed somewhat and brought together by three or four catgut stitches. There was considerable hæmorrhage, necessitating ligature of several small vessels. The wound healed rapidly, and the result is in every way satisfactory, little scar remaining.

The marked improvement in the man's features and general bearing is shown in the photograph, and the satisfaction derived by him from the fact that his personal appearance is no longer a subject of notice or comment is an ample reward for undergoing so simple an operation.

Chatham.

NOTES ON A CASE OF OPERATION FOR RUPTURED MENINGO-ENCEPHALOCELE.

BY WILLIAM EDMOND, F.R.C.S. ENG.,
RESIDENT MEDICAL OFFICER, LONDON TEMPERANCE HOSPITAL.

IT is not often that one is suddenly called upon to deal with a case of meningo-encephalocele, so that the publication of the following case may be of interest to the profession, particularly as regards the severity of the operation and the somewhat unexpected recovery of the patient.

A newly born infant was brought to the London Temperance Hospital by the midwife in attendance at the labour on account of a large swelling at the back of the head. It appeared that the labour had been protracted and difficult owing to a mass which presented at the side of the head. Whilst the head was being delivered the swelling burst, which alarmed her so much that she wrapped the baby in a blanket and hurried with it to the hospital.

The child, who weighed 7 lb., appeared healthy, was of a good colour, and cried lustily when handled. The pulse-rate was 145. Over the posterior fontanelle was a large swelling. The skin covering it was thin and flaccid and showed a few dark hairs. At the most prominent part the skin had evidently been subjected to prolonged pressure; it was dark red, almost black in places, and had given way, so that there was a ragged tear 2½ inches long from which blood-stained cerebro-spinal fluid was dripping and portions of brain material protruding. When the child cried there was a marked impulse. There did not appear to be any hydrocephalus associated with the condition. It was clearly a case that called for some radical measure if the child's life was to be prolonged. The sloughing condition of the coverings of the hernia precluded the possibility of repairing the rent by suture, nor was there any pedicle which might have been tied. An attempt at partial reduction by sponge pressure sent the child into convulsions. Under the circumstances I decided to operate.

The child was first quieted by a few drops of chloroform. The head was prepared as carefully as possible and covered with sterile gauze. An attempt was made to apply a cranial tourniquet, but owing to the shape and the yielding nature of the head this was unsuccessful. Under a stream of warm normal saline solution two flaps of healthy skin were cut—one from the upper, and one from the under surface of the hernia. The underlying dura mater was found to be very adherent, and had to be dissected off the skin flaps. Two lateral flaps of dura were then formed, during which the superior longitudinal sinus had to be sutured. The contents of the sac appeared to be loose, spongy connective tissue, but at the base there was a considerable protrusion of brain substance on either side of the exposed falx cerebri. It was found necessary to remove this portion of the brain, and after the vessels had been tied the dura was brought together, the edges overlapped and sutured to each other, and to the falx cerebri. This secured an almost watertight union. The skin flaps were then united by a continuous silk suture and a firm pad was applied. When sutured the incision, which was transverse, measured 2 inches. The child was convulsed during the removal of the brain substance and the opposing of the flaps of dura.

For the first 24 hours there was some leakage of cerebro-spinal fluid—in all, about one ounce—through the right extremity of the incision. This point was touched with the cautery, and from that time the wound kept dry. The sutures were removed on the ninth day. There was no motor paralysis, nor, as far as I could determine, any visual defect, which is surprising in view of the fact that the portions of lacerated brain removed must have come from the neighbourhood of the occipital poles. The child was discharged from hospital at the end of the third week.

NOTES OF A CASE OF STRANGULATED *LEFT* INGUINAL HERNIA WHOSE SAC CONTAINED THE APPENDIX VERMIFORMIS (INFLAMED), THE CÆCUM, AND THE ILEO-CÆCAL VALVE.

BY DOUGLAS GORDON CHEYNE, M.B., CH.B. ABERD.,
RESIDENT MEDICAL OFFICER, ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.

THE condition presented in the following case is, I think, so unusual as to justify publication.

The patient, a male child aged 2 years, was admitted to the Royal Waterloo Hospital on May 7th, 1911, at 7 P.M. The history obtained from the mother was as follows. The patient had had a rupture on the left side since soon after birth. For five days previous to admission the child had had a cough. During this time the rupture had gradually increased in size, and for two days it had been irreducible, a complication which had not occurred before. Since the rupture had become irreducible the bowels had been absolutely constipated. The child had vomited once shortly before admission.

On admission the child was seen to be well nourished. Temperature, 99·8° F.; pulse, 140; respirations, 25. There was evidence of bronchitis on auscultation. The legs were held in the position of flexion, with the abdomen rigid. The left half of the scrotum was occupied by an oval swelling of the size of a turkey's egg. It was tender on palpation, dull on percussion, and absolutely irreducible even after a hot bath and an enema.

Mr. Ivor Back, whom I have to thank for allowing me to publish this case, operated at 10 P.M. An incision was made over the swelling; the sac was exposed and opened. Two to three ounces of yellow fluid escaped. Intestine then came into view; this consisted of the cæcum, the appendix, and 2 or 3 inches of ileum. The constriction, which was at the internal ring, was divided. Strangulation was just beginning, the gut being congested and purplish in colour at the point of constriction. The appendix was large and reddened. It was removed in the ordinary manner. The pathological report was: "Acute diffuse inflammation." The intestine was then returned to the abdomen, and an ordinary radical cure (Bassini) was performed. Convalescence was uneventful.

The unusual interest of the case lies in the fact that not only was the appendix in the sac of a *left* inguinal hernia, but that it was also definitely inflamed. I should add that I have examined the child and can find no evidence of any inversion of the viscera.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Slight Strokes.

A MEETING of this section was held on Oct. 24th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. S. T. PRUEN read a paper on Slight Strokes. He said that some years ago, having been called to see an old lady, who mentioned amongst other matters that she had been worried with a feeling of pins and needles which had occurred simultaneously in the right arm and leg, which feeling had come on quite suddenly and had passed off, though not completely, in the course of a few hours, he had been driven to the conclusion that the cause must have been cerebral in origin and might have been a stroke. Within a month this old lady had a stroke affecting the right leg, and within a year an attack of right hemiplegia which caused her death a few days later. This case caused Dr. Pruen to watch all his elderly patients and to inquire into the antecedents of all those who had obvious strokes; with the result that it was found that

many of them could give histories of previous slight attacks of most varied kinds. In this way Dr. Pruen collected 18 or 20 symptoms or groups of symptoms. In his opinion, more than three-fourths of the classical strokes have these symptoms as a prelude once or twice repeated. Dr. Pruen quoted the description of a first stroke from Dr. Samuel Gee's "Clinical Aphorisms," which says: "The first thing you observe is that his speech is indistinct in consequence of defective articulation. He complains of a feeling of numbness in the right arm and leg, especially in the hand; and, on further examination, you discover that he is suffering from a slight hemiplegia on the right side, affecting arm, leg, and face." Dr. Pruen said that his own observations led him to believe that this stroke was probably not the first from which the particular patient suffered, but that it was more likely to have been the second and might have been the third. In describing the symptoms which in his opinion constitute slight strokes Dr. Pruen premised that the patient is over 50 years old; the attack is a unique experience as far as the patient is aware; the attack comes on with absolute suddenness; and that the symptoms disappear very slowly but with a steady progress. The symptoms he had observed were: (1) Pins and needles in the arm and leg simultaneously; (2) stumbling with obviously no cause; (3) giddiness; (4) nausea; (5) palpitation; (6) faintness; (7) sudden weakness; (8) confusion of ideas; (9) change of character; (10) headache; (11) sleepiness; (12) feeling of deadness in the abdomen; (13) paresis of one vocal cord; (14) wasting; (15) dysphagia; (16) odd feeling. Frequently there was a combination of one or more of these symptoms, but in almost every case one symptom predominated. Dr. Pruen had been much struck with the large part the vagus (and presumably the sympathetic) plays in the condition of a patient who has had a stroke. He considered that degeneration of the vascular system and some local increase of tension were the probable accompaniments, if not the determining causes, of slight strokes; and he thought that the vascular changes were of a more insidious nature than those usually associated with strokes. The causes which above all others seemed to produce them were mental ones, either sudden shock or prolonged worry. Dr. Pruen, summing up his paper, said that slight strokes almost always preceded ordinary ones, that slight strokes were always followed by ordinary ones, that the nervous implication in strokes was always more widespread than was generally recognised, that the predisposing causes of strokes were not the gross lesions generally associated with them, and that molecular, rather than molar, movement was the determining factor.

Dr. J. W. CARR said that the practical outcome of the paper was the help it afforded not only in recognising the symptoms of slight strokes and the dangers which they implied but also in taking precautions to ward off any future attacks. He commented on the difficulties in diagnosing cerebral hæmorrhage and thrombosis.

Dr. F. PARKES WEBER, alluding to the dilatation of the bladder and constipation referred to by Dr. Pruen as due to some dulling of sensibility, suggested that in some cases in elderly persons it was due rather to dulling of muscular sensibility than to dulling of the sensitiveness of mucous membrane.

Dr. MICHAEL G. FOSTER described instances in which transient aphasia with partial paresis had occurred in parturient women.

Dr. ROBERT HUTCHISON declared that the paper was valuable because it was based on the experience in general practice by a man who saw a great number of elderly patients, and the members of the section would like to hear more papers of the kind. He referred to the transient hemiplegia which may take place in the course of migraine.

After Dr. PRUEN had replied the meeting came to an end.

PATHOLOGICAL SECTION.

President's Opening Remarks.—Experimental Production of Appendicitis by Intravenous Inoculation of a Diplococcus.—Sarcoma-producing Mouse Carcinoma.—Muci-carmine Staining Method.—Carcinoma of the Uterus in a Rabbit.

A MEETING of this section was held on Oct. 17th, Dr. R. T. HEWLETT, the President, being in the chair.

The PRESIDENT, in the course of his Opening Remarks, said that on looking back over the progress of pathology during the last 20 years he was more and more struck with the wide range of knowledge required if the pathologist was to follow, even in outline, the output of pathological work. Reference was made to the importance of chemical and physical applications in biology and pathology. As regarded physical factors, he referred to Professor D'Arcy Thompson's address at the British Association on the influence of physical forces in moulding the form of living organisms. The similarity of organic forms and those which physical forces were competent to produce had revived the idea of the possibility of spontaneous generation, and the work of Burke, Leduc, and others suggested that this problem, which had been worked at persistently by Bastian for so many years, could not be dismissed so contemptuously as formerly, and was worthy of critical work in order to elucidate it. Reference was made to the value and limitations of biometrical methods in experimental work, and, finally, the President pointed out the advantage which the society offered to those who contributed papers—viz., speedy publication.

Dr. F. J. POYNTON and Dr. ALEXANDER PAINE read a paper entitled "A Further Contribution to the Study of Rheumatism, the Experimental Production of Appendicitis by the Intravenous Inoculation of the Diplococcus," which is published in full in this issue of THE LANCET, p. 1189.

Mr. S. G. SHATTOCK and Dr. L. S. DUDGEON communicated the result of an experiment made with a Sarcoma-producing Mouse Carcinoma. The observations of Ehrlich and Apolant, that certain mouse carcinomata on being grafted into a further series of mice were replaced by sarcomatous formations, had been amply confirmed by Dr. B. R G. Russell. The theoretical difficulty of explaining such a result on the assumption that the epithelial cells of the grafted carcinoma furnish the cells of the sarcoma was so insuperable that the only way of evading it would be to regard the grafted tumour as an endothelioma in place of a proper carcinoma. The transformation of epithelial cells into connective tissue was a phenomenon unknown, at least after the conclusion of embryonic development, whereas the same transformation of endothelium, seeing that the latter tissue was of mesoblastic source, did not present the same difficulty; the fibroblasts produced in the organisation of an intravascular thrombus were derived from the proliferated endothelium of the vessel. The apparent transformation, however, offered no histological anomaly, for the simple reason that the process was one not of transformation but of substitution; the sarcomatous growth arose from the connective tissue of the host. The experiment of the authors consisted in the repeated subcutaneous insertion of the particular tumour worked at by Dr. Russell, but after the cells had been rapidly killed by drying the pulp in the layers at 37° C. In the group of cases, six mice received four subcutaneous injections of the dried material after it had been re-made into a pulp by moistening it with salt solution. The injections were made weekly in the same region. No growth of any kind ensued. The experiments showed that for the incitement of the sarcomatous growth in the host, the action of the living carcinoma cells was necessary, and that the access to the circumjacent tissue of the materials extractable from the dead cells was not sufficient.

Mr. P. P. COLE gave a demonstration illustrating the use and value of Muci-carmine as a Staining Reagent. He showed that the results obtained with this stain were constant and accurate, provided the stain was made properly. He described the method of making the stain and advocated as a fixative a saturated solution of perchloride of mercury with the addition of 5 per cent. of glacial acetic acid. He referred to the adoption of this stain by Mr. W. Sampson Handley in the investigation of cancer of the large bowel, and indicated that the merest traces of mucus were picked out with the utmost accuracy, leaving other tissues unstained.

Dr. A. LEITCH read a paper on Carcinoma of the Uterus in a Rabbit.

OPHTHALMOLOGICAL SOCIETY.

Presidential Address.—Hereditary Cataract.—Hereditary Night-blindness.—Exhibition of Cases and Specimen.

A MEETING of this society was held on Oct. 19th, Mr. J. BOWRING LAWFORD, the President, being in the chair.

After the formal presentation of vol. xxxi. of the Transactions the PRESIDENT delivered his Introductory Address.

Having referred to his election as President in a few graceful and grateful phrases Mr. Lawford proceeded to deal, in considerable detail, with the subject of vaccine therapy, passing in review the work of many continental and British investigators, and then went on to refer to their bearing on the treatment of eye diseases. He concluded by a reference to immunity, active and passive, and to the prospect of success in eye diseases. Sympathetically appreciative allusion was made by the President to the decease of Dr. Hughlings Jackson, one of the original members of the society, and to the fact that he was one of the earliest physicians to insist on the importance of ophthalmoscopic examination in diseases of the nervous system.

Mr. E. NETTLESHIP communicated, for Dr. J. S. Manson of Warrington, a paper entitled "A Case of Hereditary Cataract." It was a case of hereditary lamellar cataract occurring in four consecutive generations, affecting 13 persons (6 males and 7 females), and transmitted in all cases by females who were themselves affected. Three members of the pedigree, in three different generations, had a congenital deformity of the little fingers, which appeared to have been independent of the cataract, for only one individual showed both the digital and lenticular abnormality.

Mr. NETTLESHIP also contributed a paper entitled, "A New Case of Hereditary Night-blindness." It was the form without opthalmoscopic changes, in which the abnormality was associated with myopia, and descended, as in colour-blindness and several other conditions, through females themselves normal. Twenty cases had been discovered in this extensive genealogy. Photometric records and field measurements of several were recorded; in one there was a partial ring scotoma. Several members of the pedigree were myopic without being night-blind, and several (some of them night-blind, others with normal sight) were mentally affected. There was only one consanguineous marriage in the entire pedigree.

The following cases and specimen were shown:—

Mr. GEORGE COATS: Two cases showing a Small Superficial Opaque Ring in the Cornea. Mr. Coats thought that if it was not a deposit it must be a congenital opacity. He had seen another case of the same kind.

Mr. N. BISHOP HARMAN demonstrated a new Photometer for school doctors, a portable and simple instrument whereby an exact knowledge of the amount of light existing in schools, without relying on the uncertainties of personal estimates, could be obtained in candle-power—that of the ordinary London sperm candle.

Lieutenant-Colonel L. J. PISANI, I.M.S.: A case of Cyst of the Iris.

Major W. T. MOULD, R.A.M.C.: A case of Vaccine Pustule in the Eyelid.

Mr. R. A. GREEVES: A case of Tumour of the Ciliary Body in which there was recurrence after removal. Neither caustics nor the application of CO_2 checked its growth.

Dr. D. G. GREENFIELD: A case of Unilateral Optic Neuritis in a case of Disseminated Sclerosis.

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.

Eclampsia.

A MEETING of this society was held on Oct. 13th, Mr. J. M. ACKLAND, the President, being in the chair.

Dr. G. P. D. HAWKER showed a case of Extensive Osteoma of the Tibia in a middle-aged woman. He then read a paper, illustrated by a case recently under his care, to open a discussion on Eclampsia. The patient was a primipara, aged 25 years, whose family history showed an unstable nervous equilibrium, the woman herself being distinctly of the nervous type. There was a history of scanty urine, with a heavy deposit of "sand." During the later months her legs had swelled. In the course of the last few weeks she had had what the neighbours called hysterical fits, in which there was no history of loss of consciousness or of biting of the tongue. She had cried out freely during the attacks and had never fallen. When summoned at 11.30 A.M. on Jan. 27th Dr. Hawker found labour pains, which had been established for 12 hours, now vigorous and recurring every five minutes. The os was the size of half a crown and the presentation and pains appeared to be normal. The general condition was satisfactory. A little urine had been passed at 9 A.M. Fifteen grains of chloral were given. At 3 P.M. Dr. Hawker found the os fully dilated and the pains strong; ten minutes later there was a general convulsive fit lasting three minutes. Chloroform was at once administered and a catheter passed, bloody urine being drawn off. A colleague was sent for and instrumental delivery carried out. Immediately the forceps was applied a fit occurred, followed by two others at rapid intervals. With the third fit delivery was effected, but with considerable laceration of the perineum. The placenta gave little trouble, but two or three smaller fits occurred during the repair of the perineum. One drachm of bromide was given by the rectum. At 7.30 P.M. she had had seven fits in all and was unconscious, with widely dilated pupils and arched back. Slight fits continued up to 10 P.M., when the bromide was repeated. At 11.30 P.M. the pulse was 124 and the temperature 103° F. During the night 11 fits occurred in spite of bromide every three hours and a hot pack. On the 28th a pint of urine was drawn off by catheter and found to be of specific gravity 1020 and to contain one-third albumin. The fits now lessened both in frequency and violence, but she was still unconscious. The knee-jerks were exaggerated and Babinski's sign was present. On the 29th there had been no fits since 9 P.M. the previous night, and albumin had fallen to one-tenth. Blood cells and casts were present. On the 30th she was semi-conscious; she had passed urine. The discs, examined on this day, were found to be blurred, but no hæmorrhages were noted. The plantar reflex was now flexor. On the 31st there was incontinence of urine and fæces. Bromides were stopped. Further progress was gradual, but in the main satisfactory. She was quite rational on Feb. 3rd, and there was no incontinence. The temperature, never high save on the day of delivery, now reached the normal. The urine still contained a trace of albumin, but no casts were noted. On March 10th she was convalescent and allowed to get up. The urine was found free of albumin and no casts were noted. Dr. Hawker emphasised the fact that this patient had had symptoms for two months before delivery, but as there had been concomitant indigestion she had subsisted mainly on a milk diet, and thus unconsciously had adopted the right diet for her condition. The fits which occurred prior to labour appeared to have been really hysterical. The actual eclamptic convulsions did not occur until labour was well advanced, and were well controlled by chloroform. He attributed recovery in this case to the good nursing, the constant alteration of position, thereby avoiding pulmonary œdema, and to the diminution of toxins by copious saline enemata and frequent hot packs. A notable point was the absence of albumin or casts in the urine at the end of six months. Dr. Hawker felt somewhat at a loss for an explanation of the presence of Babinski's sign on the second day. His hospital experience had not impressed him with the value of morphine in the treatment, more especially in relation to pulmonary complications—œdema of the lung being the rule where this drug had been employed. The number of fits seemed to have no bearing on prognosis, but he considered that the inception of convulsions after labour was a bad sign. Dr. Hawker referred briefly to the pathology of eclampsia and mentioned Albec's and Lotze's injection experiments with liquor amnii.[1] Animals so injected showed the same changes in the liver as patients dying from the disorder. Normal liquor used as a control was innocuous. Disintegration of the placenta would be the primary cause. As regards treatment, a recent meeting of the Obstetrical Section of the Royal Society of Medicine seemed to be in favour of emptying the uterus. Out of 36 cases reported by Dr. W. Alexander,[2] of Liverpool Workhouse Hospital 7 cases were hastened, with 2 deaths, a mortality of 28·5 per cent.; whereas 29 were delivered naturally, with a mortality of 9—i.e., 31 per cent. Dr. Alexander's treatment consisted of saline purgatives, diuretics, and saline injections, together with nerve sedatives such as bromide, chloral, and morphia. He also cited Dr. Hastings Tweedy's report of 30 cases of eclampsia at the Rotunda Hospital.[3]

Dr. A. W. F. SAYRES mentioned a severe case he had recently met with in his own practice. Dilatation, version, and instrumental delivery were performed, but the subsequent condition became one of deepening coma. Dr. Sayres

[1] British Journal of Obstetrics, August, 1905.
[2] THE LANCET, Jan. 28th, 1911, p. 217.
[3] THE LANCET, Feb. 4th, 1911, p. 306.

attributed the eventual recovery to the agency of hot packs. The woman became maniacal during the first week, but at the end of one month convalescence was well established.

Dr. C. J. VLIELAND reported two cases, in one of which he had performed version and accelerated delivery. Severe fits followed, but when the patient was almost *in extremis* recovery followed promptly on venesection. The urine subsequently cleared of albumin. In the second case delivery was not hurried, and the woman did well. His experience of these cases gained from 30 years of private practice was against violent emptying of the uterus.

Dr. HENRY DAVY did not think that the placental theory was proved. In his experience post-partum cases were the most serious; the majority he had seen had proved fatal. He always dreaded a case of eclampsia in which the convulsions did not appear until after labour had been completed. He spoke only as a physician.

Dr. R. V. SOLLY spoke in support of the placental theory in the pathology of the disease. Taking into account the post-mortem changes in the liver and kidneys, chloroform was not justifiable in the treatment. Bleeding and subsequent substitution by saline solution were more practical. He had seen Dr. Hawker's case with him, and testified to the value of the packs.

Mr. RUSSELL COOMBE commented on the weakness of the soda solution (30 grains to the pint) advocated by Dr. Tweedy.

Dr. SHIRLEY STEELE PERKINS quoted two of his own cases in one of which the convulsions arose post partum and death occurred in six hours, no treatment having the slightest influence. In the second case, convulsions were established when the cervix admitted but two fingers. He dilated and delivered. Recovery was complete. These cases supported the relation of onset of fits to prognosis enunciated by Dr. Davy and Dr. Hawker. As regards treatment, Dr. Perkins advocated delivery, and subsequent pilocarpine subcutaneous injections, with hot packs.

Mr. C. E. BELL mentioned a severe case of eclampsia where chloroform inhalations were long maintained without disastrous after-effects. His own experience of chloroform was favourable and he had recently seen a case in which recovery followed salines alone. His experience of post-partum eclampsia was a most melancholy one.

Mr. G. L. THORNTON recollected a case some 14 years ago where convulsions and albuminuria came on at the sixth month in a previously healthy multipara. The fits recurred at short intervals, and chloroform was required for the passage of a catheter. Coma being imminent the emptying of the uterus was discussed, but on the advice of a practitioner of some 50 years' experience bromide and chloral were given, with the result that the fits gradually ceased and albuminuria diminished. The woman was subsequently delivered of twins at full term and made a good recovery. There was no recurrence of the eclampsia, but some albuminuria remained. Mr. Thornton also briefly referred to a recent case of a multipara who had enjoyed good health prior to a molar pregnancy. When summoned to her he found general anasarca, œdema of the lungs, and a high degree of albuminuria, with numerous casts. After delivery albuminuria and anasarca rapidly disappeared. There were no convulsions, but the patient was at times extremely drowsy. This case, though perhaps not quite comparable with those previously cited, supported the intra-uterine auto-intoxication theory with regard to the production of the nephritis.

Dr. HAWKER replied.

OXFORD MEDICAL SOCIETY.—The first meeting of the session of this society was held in the Radcliffe Infirmary on Oct. 13th, Mr. R. H. A. Whitelocke, the President, being in the chair.—Dr. H. G. Frean related the history of an Indian, aged 20, of a quiet studious temperament, who was found at 6.30 one morning in bed deeply unconscious. The breathing was deep and stertorous and the dejecta had been passed into the bed. The pulse was full, 84 per minute. The limbs were flaccid; there was only a slight corneal reflex. The pupils were moderate in size and the temperature was raised. There was a gradual but slow return of consciousness within the next 48 hours. The patient remembered nothing of the previous two days. The evening before the attack he had dined quietly with his tutor. There was no history of any excess and no previous history of epilepsy.—Mr. P. E. H. Adams gave the history of a case of Double Proptosis in a male aged 50. This began suddenly with an irritation in the right eye, which became puffy and later definitely proptosed, and the vision deficient. No inflammatory trouble could be detected by puncture of the orbital tissues on two occasions. Proptosis and chemosis followed in the left eye. The temperature rose, and the patient died in 48 hours from the beginning of the symptoms. At the necropsy the right sphenoidal sinus was inflamed and contained muco-pus. The inflammation had spread to the right cavernous sinus, from which it had tracked over to the left, and there was early acute meningitis.—Dr. E. Mallam showed a case of Crossed Paralysis in a woman aged 56. The history began in 1906, when the eyesight became impaired. At the present time she had a nuclear or nerve lesion of the third, fourth, and sixth nerves of the left side. On the right side there was a supra-nuclear lesion of the seventh nerve, hemiplegia of the right side of the body, and blindness in the right field of vision, the left halves of both retinæ being insensitive. There were no signs of intracranial pressure and there had only been occasional, though at times severe, headache. The condition was thought to be one of gummatous meningitis, and the patient was improving on potassium iodide.—Mr. E. W. M. Higgs described a case of a woman, aged 23, in whom Eclampsia began at full time. Chloroform was given, the membranes were ruptured, and internal version was performed. The child was born without difficulty. In removing a slightly delayed placenta it was found that the uterus had been torn from the vagina and the omentum was projecting through. The patient was in such a critical condition that it was deemed advisable to do nothing but give an ordinary vaginal douche. The unconsciousness, with occasional convulsions, persisted for four days, and the temperature was raised. In the fourth week the patient was normal except for white leg. In the seventh week the patient was able to get up, and since that time she has been in very good health.

THE NEW LONDON DERMATOLOGICAL SOCIETY.—A meeting of this society was held on Oct. 12th, Dr. Phineas S. Abraham, the President, being in the chair.—Dr. W. Knowsley Sibley showed: (1) A woman with Leucoderma, treated by hyperæmia and by cataphoresis with corrosive sublimate solution; (2) a young woman with Bazin's Disease, associated with Scrofulodermia, in whom the von Pirquet reaction was positive; (3) a man with Popliteal Eczema of 14 years' duration, cured by X rays; (4) a man, aged 56, with Chronic Urticaria associated with Pyorrhœa Alveolaris, who had been treated successfully by a vaccine, with the result that the insomnia, as well as the eruption, had now disappeared; (5) a woman, exhibited at a previous meeting of the society, with Dermatitis Herpetiformis, to show the improvement that had taken place as a result of the administration of a vaccine; and (6) a man with severe Tinea Sycosis.—Dr. G. Norman Meachen showed: (1) A child with Urticaria Pigmentosa; (2) a boy, aged 8, with Parapsoriasis of Brocq; and (3) a boy, aged 11, with Late Hæmorrhage occurring in the Telangiectases after X ray treatment for enlarged tuberculous glands in the neck; no exposures had been given for two years.—Dr. Harry Samuel showed a man with a Roseolar as well as a Maculo-Papular Secondary Syphilitic Eruption.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. Norman Porritt, L.R.C.P. Lond., M.R.C.S. Eng., was presented at the annual dinner of the Huddersfield Medical Society on Oct. 18th with two pairs of silver candlesticks. In making the presentation Dr. J. Irving said that Mr. Porritt, who was retiring from practice, would carry with him the affectionate regard of all his patients and the good will and esteem of every member of the medical profession who had been brought into contact with him. The presentation included two silver vases for Mrs. Porritt.—At the annual meeting of the Bristol Centre of the St. John Ambulance Association, held recently, Mr. Cyril Claude Lavington, M.B., B.S. Durh., was presented with a vellum vote of thanks conferred by his Royal Highness the Grand Prior and the Chapter-General of the Order of St. John of Jerusalem, in recognition of his special services in connexion with ambulance work in Bristol.

Reviews and Notices of Books.

A Traveller's Study of Health and Empire. By FRANCIS FREMANTLE, County Medical Officer of Health. London: John Ouseley, Limited. 1911. Pp. 369. Price 7*s.* 6*d.* net.

THE author of this volume has had within the last few years the opportunity of extended travel undertaken with the object of studying the problems of public health in relation to various peoples and races and systems of government. His aim is to persuade the public of the significance of these problems, and to secure a due attention to their solution in the future administration of the British Empire. In a series of papers he presents the results of his experiences in an attractive form, designed, as he says, for the general, rather than the professional, reader.

The first chapter is a graphic account of anti-plague measures in India—as carried out by Mr. Fremantle himself in 1903-04 in the Lahore district of the Punjab. The methods employed were inoculation and evacuation. He considers that cats are useless for the destruction of rats in fighting plague, as they contract plague themselves; but we think that the experience of Lieutenant-Colonel Andrew Buchanan, I.M.S., shows that in several instances they have been of real value. With regard to evacuation of infected villages, if this be relied on as an effective measure or half-measure, the author rightly urges that it should be carried out with vigour; and that it is a mistake for it to be dependent upon local funds. If anything is to be supported by the general exchequer, surely it is the taking of measures for stamping out or preventing so terrible an epidemic. It cannot be said that anti-plague operations in India have increased in vigour during the last few years, and many will agree with Mr. Fremantle that more active measures are needed.

The beneficent effects of scientific research when practically applied are exemplified in chapters describing the work of the Pasteur Institute at Kasauli, owing to which hydrophobia in India has lost its terrors; of the institute at Parel, near Bombay, where cholera and plague prophylactics are prepared; and of the similar institute at Kuála Lumpúr, in the Federated Malay States, where the work of Hamilton Wright, Daniels, Fraser, and Stanton in regard to beri-beri is briefly referred to. Proceeding further east, Mr. Fremantle visited the Pasteur Institute at Saigon, in Cochin China, the municipal laboratory at Shanghai, and the Japanese Government Institute at Tokyo. At the last-named the work of Kitasato and Shiga was studied. The author cannot forbear a comparison between the progress achieved by direct government action in disease prevention in Japan during the last 35 years (due to a wise and liberal expenditure of public money) and the position of affairs in wealthy Britain.

The next subject dealt with is town-planning. An instance of development with a view to the future is adduced from Kuála Lumpúr, where the president of the sanitary board had, 25 years earlier, when sanitary engineer, laid out streets of 120 feet broad, thus showing considerable foresight and perseverance in the face of very natural opposition. Other instances adduced from the author's experience are Krupp's laying-out of Essen in Rhenish Prussia; Winnipeg, the great junction between Eastern and Western Canada, expected to become the largest city in the Dominion; and several of the greater American cities. The formation of garden cities and industrial villages is advocated rather than of residential suburbs, the idea being to check the inordinate growth of huge towns, and to promote the "colonisation" of the country.

In the chapter on the Aftermath of the Russo-Japanese War Mr. Fremantle gives an appreciation of the aims and international rank of Japan. He then advocates a Five-Power League of France, Russia, the United States, Japan, and Great Britain, in the interests of peace and progress; and he draws attention to the extraordinary development of China, and her inevitable expansion in the near future. In his concluding chapter, taking his text from Ross's dictum that it is "best to approach the prevention of disease, not so much from its humanitarian as from the economic point of view," the author states that it has been the aim of his book "to prove that health is a matter of business efficiency in imperial welfare." The establishment of an intelligence department and the issue of weekly bulletins, somewhat on the lines of those of the United States Marine Hospital Service, are proposed; also the formation of a permanent Advisory Council in London, to consist of experienced medical officers of health, one from each of the Dominion governments, together with "medical officers representing the several departments in Whitehall," and an equal number of lay administrators, permanently responsible for the consideration of health matters in their respective governments.

We congratulate Mr. Fremantle, and commend this book to all interested in the progress of the world, and more particularly of the Anglo-Saxon race. The story is extremely interesting. Numerous photographic reproductions add to its attractiveness. The only fault we have to find is that there is no index.

Differential Diagnosis Presented through an Analysis of 381 Cases. By RICHARD C. CABOT, M.D., Assistant Professor of Clinical Medicine, Harvard University Medical School, Boston. Profusely illustrated. London and Philadelphia: W. B. Saunders Company. 1911. Pp. 753. Price 24*s.* net.

ACCURATE diagnosis of medical cases upon rational and scientific lines is perhaps one of the most difficult subjects that the student has to master. It demands correct observation, a knowledge of symptoms, physical signs, and clinical methods, and considerable practice in marshalling in their due perspective the facts collected. The books on differential diagnosis are many and varied in scope and mode of treatment, since the subject seems to be a popular one for teachers of medicine to write upon. Many of these books consist of detailed descriptions of clinical methods and of their indications, while others are simply text-books of practical medicine. An original and suggestive treatment of the subject is therefore welcome.

Dr. Cabot, in his interesting book, gives instructive illustrations of the methods of diagnosis as they are used in actual practice. In his introductory chapter he says that his book is an attempt to study medicine from the point of view of the presenting symptom—that is to say, of the sign or symptom which the patient presents most forcibly to the examining physician. He goes on to explain: "We begin with the chief complaint and work inward and backward to the causes, the organic lesions, the evolution, probable outcome, and rational treatment of the case. Cases do not often come to us systematically arranged like the account of typhoid in a text-book of practice of medicine. They are generally presented to us from an angle, and with one symptom, often a misleading one, in the foreground." Dr. Cabot has taken 12 symptoms—viz., pain, fever, chills, coma, convulsions, weakness, cough, vomiting, hæmaturia, dyspnœa, jaundice, and nervousness—as the basis of his study of differential diagnosis. He admits there are many others which might have been discussed if space had permitted. The application of the methods of differential diagnosis is illustrated practically by a

study of 383 cases selected from his hospital and private practice, all of them being cases in which the diagnosis was not obvious and required careful working out. Each case is described in sufficient detail to enable the clinical picture to be realised clearly. The diagnosis is then discussed, and possible errors are referred to. The means used to confirm the diagnosis are described, and post-mortem appearances are referred to in some of the fatal cases.

An interesting and original feature of the book is the attempt to express in diagrammatic form the relative frequency of the common causes of each symptom discussed. The basis upon which these diagrams are constructed is an enumeration of the total number of cases of every disease treated at the Massachusetts General Hospital during the last six years. By this means about 180,000 cases were classified according to diagnosis, and the relative frequency of each disease in this material was thus roughly computed. In order to obtain the relative frequency of the symptoms studied in his book Dr. Cabot referred to the statistical articles available in the literature, and also investigated the frequency of the occurrence of the particular symptom in 250 cases of the disease under consideration. In addition to these diagrams a table is appended to most of the chapters summarising the chief features of the principal diseases of which the particular symptom under consideration is the prominent characteristic.

The distinctive feature of this book, which renders it especially noteworthy, is the discussion or commentary upon each case described. This is invariably clear, logical, and characterised by sound common sense. Mistakes are frankly acknowledged, and the lessons to be derived from them are pointedly emphasised. If we have any criticism to offer it is simply to regret that Dr. Cabot has not been able to deal in similar fashion with the other symptoms which he enumerates in his introduction. His book should be very useful to the senior student and to the practitioner in the elucidation of obscure and difficult cases.

Text book of Operative Surgery. By Dr. THEODOR KOCHER, Professor of Surgery and Director of the Surgical Clinic in the University of Bern. Third English edition. Authorised translation from the fifth German edition by HAROLD J. STILES, M.B. Edin., F.R.C.S. Edin., Surgeon to the Chalmers Hospital, Edinburgh; and C. BALFOUR PAUL, M.B Edin., F.R.C.S Edin., Assistant Surgeon, Royal Edinburgh Hospital for Sick Children. With 415 illustrations. London: Adam and Charles Black. 1911. Pp. 723. Price 30*s.* net.

THE world-wide recognition of the value of Professor Kocher's text-book on Operative Surgery rendered it essential that it should appear in an English version, and Mr. Stiles in 1895 performed a good work in translating the book into English. Now the third edition of the English version has appeared and it is based on the fifth German edition, so that the English reader has in his hands the latest ideas of the author. The characteristic of Professor Kocher's surgery has always been that it represents the personal opinion and the personal practice of the author, and that it does not attempt to describe all the methods and operations which have been, or now are, employed. This restriction has tended to keep the book of a reasonable size, though even now it has more than 700 pages. The style of the book is pleasing, and the author, in order to avoid the charge of egotism, has not employed the first person singular, which practice has been followed in the translation.

The book is divided into five parts. In the first the preparation of the patient, the disinfection of the hands of the surgeon and his assistants, the methods of sterilisation, the treatment of wounds, and the methods of anæsthesia are fully dealt with. In the second section the surgery of the heart and arteries is considered, and it may be mentioned that no less than 106 operations on the arteries are here described. The third section deals with the surgery of the nervous system. Section IV. is concerned with the surgery of the arm and leg, and Section V. with that of the head and trunk. The illustrations are exceedingly good. They show clearly what they are meant to portray, and colour is used where necessary. As the book is limited to the practice of one surgeon there are necessarily many points on which a discussion might be based. We prefer, however, to welcome whole-heartedly this account of the methods employed by a famous surgeon. To the two translators, Mr. Stiles and Mr. Paul, the thanks of English surgeons are due.

Die Röntgenstrahlen in der Gynäkologie. (*The Roentgen Rays in Gynæcology.*) By Dr. MANFRED FRAENKEL, Charlottenburg. With 14 tables and 46 illustrations in the text. Berlin: Richard Schoetz. 1911. Pp. 256. Price, paper, 7 50 marks; bound, 8.50 marks.

THE use of the X rays in gynæcology is rapidly becoming of considerable importance, and it appears that the time is not far distant when their employment will become more general in this branch of medicine than it is at the present day, and when the question of their routine employment in, for instance, the treatment of fibroid tumours will become a question for gynæcologists to come to some definite decision upon.

In this book Dr. Fraenkel has given a very full account of all the problems connected with this subject and has brought forward a mass of information of considerable value. After a preliminary chapter dealing with some experiments on animals the author gives an account of the results he has obtained in the treatment of a number of gynæcological affections. Out of 23 cases of myoma of the uterus some 75 per cent. showed a definite result, in some cases a marked diminution in the size of the tumour, and in all of these there was also a marked improvement in the duration and amount of the bleeding at the menstrual periods. This improvement was further associated with a marked amelioration of the general health. In 25 per cent. of the cases no result was obtained, and the patients did not react to the treatment. Dr Fraenkel's experience does not corroborate the view held by some, that the use of the rays increases the bleeding in some cases, and he does not exclude as unsuitable submucous fibroids. Further, he holds that the treatment should be applied early, before the tumours have attained any size, so that complications and the need of any operation may be prevented; if this is done, he maintains that the growth of most of these tumours can be arrested and the necessity for any operative interference in the future obviated. The effect on the growth of the myomata and the hæmorrhage from the uterus is no doubt to be explained by the action of the rays on the ovaries, and in this view the author is in agreement with practically all writers on this subject.

In succeeding chapters the effect of the rays on the ovaries is very fully considered, and a number of illustrations are given of both the macroscopic and microscopic appearances of ovaries which have been subjected to this treatment. The author recommends this mode of treatment also in cases of osteomalacia, dysmenorrhœa, and endometritis, while a chapter is devoted to an account of the effect it produces in cases of cancer. Dr. Fraenkel rightly prohibits its use in any but cases quite unfit for operative surgery, and he strongly condemns the practice of attempting to cure cases of malignant disease with the X rays instead of handing them over to the surgeon for immediate operative treatment. The necessity for accurate dosage and technique in this mode of treatment is very great, and this question is fully

discussed, with an account of numerous experiments carried out on animals for the purpose of obtaining accurate data as a guide in its clinical application.

The facts that the X rays produce a very definite effect upon both the maturation and the development of the ova in the ovary, and that they may lead to degeneration of the follicles, corpora lutea, and interstitial cells, lead the author to suggest that they might play some part in the determination of sex. By the use of the X rays it would be possible so to diminish the power of development of the ovum that the female pronucleus would always be the weaker and the male pronucleus would have the predominance, and if we accept the theory that the stronger cell produces its opposite as regards sex we might have the power, according to Dr. Fraenkel, of influencing the sex of the child. The question is much too wide a one to be discussed here, but the most recent views on the determination of sex would seem to show that the characters of both sexes are present in an ovum or spermatozoon, and so it would have to be assumed that any effect the X rays had on the ovary would be exerted on the one character and not on the other. It is a little difficult to believe in any such selective action.

There are many other points of interest in this work, such as the influence of the X rays in producing abortion and in causing sterility, and a consideration of the production of the latter condition by their means from both the medico-legal and the social aspects. The author also discusses their effect in the treatment of various nervous conditions of sexual origin.

Anyone interested in this subject should certainly refer to this work, which gives a very good account of the present position of this branch of therapeutics.

Hygiene and Public Health. By L. C. PARKES and H. R. KENWOOD. Fourth edition. With two plates and 86 illustrations. London: H. K. Lewis. 1911. Pp. 691. Price 12*s.* 6*d.* net.

THIS well-known text-book has now appeared in its fourth edition under the joint authorship of Dr. Louis Parkes and Dr. H. R. Kenwood, and has been revised and added to since the third edition was issued in 1907. In its new form it succeeds as well as its predecessors, both in presenting within moderate compass a review of the essential matters with which the present-day student for public health examinations should be acquainted, and in forming a useful handbook for reference by those who are actively engaged in public health work. At a time when medical officers of health are so often pressed to give all their energies and attention to problems of personal hygiene and administrative measures dependent on control over the individual, it is sometimes necessary to insist upon the importance of that aspect of public medicine which relates to the conditions of human environment that affect the community as a whole. It is essential to the student and to the practitioner of public health that he should be accurately informed on such matters as the requirements necessary for healthy housing, efficient sewerage and sewage disposal, and the means of securing pure air, water, and food. For this purpose the information imparted by text-books must be based on the broad principles aimed at, and must press into service physics, chemistry, mathematics, and any other branch of scientific inquiry that bears on the subject at issue. From such point of view this volume can in the main be cordially recommended. The chapters on water-supply, air and ventilation, and disinfection can be especially commended, and there is a capital statistical section. The summary of English sanitary law and administration is also well arranged and comprehensive, though it might with advantage have included a better account of the numerous statutory and other duties of a county medical officer of health. Perhaps the least satisfactory portion of the book is that which deals with food adulteration. This might very well be revised on the next opportunity, with special reference both to the inquiries of recent Government Commissions on food questions, and to the valuable series of special food reports which the Local Government Board has issued during the last few years. The table of common adulterations and adopted "standards" in particular needs to be brought up to date. On the other hand, there is an excellent chapter on school hygiene, containing much new matter concisely and practically arranged, which forms a valuable guide to the work required of school medical officers and the objects which they should seek to attain. The new edition deserves to be received with favour equal to that with which its forerunners met.

Nouveau Traité de Chirurgie. (*New Treatise on Surgery.*) Publié sous la direction de A. LE DENTU et PIERRE DELBET. *Affections Chirurgicales des Artères.* (*Surgical Affections of the Arteries.*) Par PIERRE DELBET et PIERRE MOCQUOT. Paris: J. B. Baillière et Fils. 1911. Pp. 348. Price, paper, 8 francs; boards, 9.50 francs.

THE treatise on surgery of which this is one section promises to be most important and valuable. The surgery of the arteries has of late increased greatly in importance since it has become recognised that they are less resistant to treatment than used to be thought. Formerly the application of a ligature to an artery was the utmost that a surgeon dared to do, but now it is known that it is possible to suture arteries and to perform a satisfactory anastomosis without a necessary liability to subsequent thrombosis or to the formation of an aneurysm. The risk of gangrene of the limb, when a large artery such as the femoral or the popliteal is wounded and the vessel is tied, justified the attempts made to suture the wounded artery, and the success which has in several cases followed this treatment shows that suture should always be attempted if it is any way possible. The method of treating aneurysm originally brought forward by Matas is fully described and discussed, and the great difficulties with which it is accompanied are set forth. The lesions of the several arteries are described in turn, and references to the literature of the subject are freely given. This volume is a very definite addition to an important branch of surgery and deserves careful study.

Vorlesungen über Harnkrankheiten für Aerzte und Studirende. (*Lectures on Urinary Diseases for Practitioners and Students.*) Von Dr. C. POSNER, a.o. Professor an der Kgl. Friedrich Wilhelms-Universität zu Berlin, Berlin: August Hirschwald. 1911. Pp. 355. Price 9 marks.

THESE lectures are intended rather for the general practitioner than for the specialist, for, as the author points out, the result of any disease of the urinary organs depends in great measure on the knowledge of the medical man who first sees the case, exactly as the result of a wound depends largely on the first dressing. He urges that those in general practice may usefully study special departments of surgery, though they will not have the opportunity of obtaining the operative skill of the specialist. The book is, we are told, based on the author's own experience, and it is clearly the product of a mind well versed in this branch of surgery, and capable of expressing clearly and simply the knowledge it possesses. Although the book has no illustrations, their absence is little noticeable, for the text is so clearly descriptive that the reader hardly feels the need for figures. The entire surgery of the urinary system is described, and the book is divided into a general part and a special part. In the former part the author deals with the general questions of etiology, diagnosis, and treatment, and with the methods of examination, including cystoscopy. In the

special part the inflammations of the various portions of the urinary apparatus are dealt with; then come tuberculosis, calculus, new growths, and nervous disturbances of the organs. The general practitioner by reading this book will get a better idea of the present state of the surgery of the urinary system than by studying the more elaborate and systematic treatises.

Dental Materia Medica, Pharmacology, and Therapeutics. By CHARLES W. GLASSINGTON. Second edition. London: J. and A. Churchill. 1911. Pp. 287. Price 6*s*.

THE author of this work deals with his subject in a clear and concise manner, and has succeeded in producing a most useful book for the dental practitioner. Special sections are devoted to local anæsthesia, the mummification of the dental pulp, and the application of bacterio-therapeutics to dentistry. The last section is written by Dr. D. W. Carmalt-Jones, who expresses the opinion that the streptococcus brevis is the principal initial cause of pyorrhœa. This organism in normal mouths is a harmless parasite, but he considers that it may become pathogenic in the same way as the bacillus coli communis does. Dr. Carmalt-Jones expresses a favourable opinion of vaccine treatment for periodontal disease.

We think that the value of the book for teaching purposes would possibly be enhanced if such expressions as "sponginess of the gums," and "harden the gums," were replaced by more appropriate pathological expressions. There are a few omissions; for example, we do not notice any reference to that useful drug calcium lactate. The author testifies to the therapeutical value of formamint, but clinical experience suggests that the use of this drug in the mouth may be attended with disastrous consequences to the teeth.

Die Morphologie der Missbildungen des Menschen und der Tiere. Herausgegeben von Dr. ERNST SCHWALBE. III. Teil. *Die Einzelmissbildungen.* VI. Lieferung. *Entwicklungsstörungen des Postfötalen Lebens.* Von Professor Dr. A. DIETRICH. Jena: Gustav Fischer. 1911. Pp. 50. Price 1.60 marks.

THIS is the sixth section of Part III. of a large work on the Morphology of Malformations, of which Part I. was published in 1906, Part II. in 1907, and the five previous sections of Part III. at various intervals from 1907 onwards. This short section deals with Disturbances of Development in Post-Fœtal Life, and treats first of infantilism (including Anton's classification) in its various forms; some forms of disturbance of development of the whole body, including dwarfs, cretins, and acromegalics, being associated with the state of certain ductless glands. Variations in individual organs are considered—e.g., malformations of the skull, including artificial deformities and deformities due to growth from too early closing of the sutures, microcephaly, deformities or malformations of the facial part of the skull, particularly of the jaws, and hyperostosis. Then follow deformities of the upper aperture of the thorax, deformities of the sternum, spinal column, and pelvis, hyperplasia of the vascular system, including abnormal narrowness of the aorta, and lastly, malformation of the genital apparatus due to various causes. The little brochure is an appendix to subjects dealt with in the parts of the work already published. It is an interesting and suggestive summary of a not too well-known department of morphology.

LIBRARY TABLE.

Reports from the Laboratory of the Royal College of Physicians of Edinburgh. Vols. X. and XI. Edited by Sir JOHN BATTY TUKE, M.D. Edin., and JAMES RITCHIE, M.D. Edin. Edinburgh: Oliver and Boyd. 1911.—Volume X. of this series contains the papers of workers in the laboratory of the Royal College of Physicians of Edinburgh published up to April, 1907. A tribute is paid to Dr. Noel Paton for the debt which the laboratory owes to him during his 16 years' tenure of office as superintendent. Volume XI. contains the contributions of workers up to the end of 1910. The College acknowledges the continued assistance of the Carnegie Trust. This volume, from the number of communications on neurological subjects, shows the advantages offered by the action of the laboratory committee in 1908 in setting apart a special room for the investigation of neurological problems. The papers have all been previously published in various scientific journals, but many will be glad thus to have them collected into book form.

Enteric Fever in the Tropics. By B. N. GHOSH, L.M.S. Cal. Univ., Lecturer on Materia Medica and Therapeutics, Calcutta Medical School and College of Physicians and Surgeons of Bengal. Calcutta: Hilton and Co. 1911. Pp. 40. Price 12 annas, or 1*s*.—This is a reprint of the author's papers published in various Indian and American medical journals. It contains some useful material of text-book type. The author speaks highly from personal experience of hydrochloric acid and oil of cinnamon as internal remedies in typhoid fever.

The Irish Motor Directory and Motor Annual, 1911-12. A Reference Handbook for Motorists. Edited by HENRY G. TEMPEST. Dublin and Dundalk: W. Tempest. Price 2*s*. 6*d*., post free 2*s*. 9*d*.—This book may prove a useful volume for Irish motorists, for it contains extracts from the laws governing motors, lists of hotels, repairers, and so forth. It contains, however, two features open to objection. Firstly, the stories and anecdotes, which are very numerous, are useless after they are once read, and make the book bulky instead of handy as a work of reference. Secondly, the publication of the list of car owners with their addresses seems a mistake, for it will enable anyone to find the name and address of the owner of any car and possibly to annoy him with some trivial complaint. In England this information can only be obtained by referring the number of the car to the police, which of itself is in some sort a protection for the much-maligned motorist against mere vexatious complaints.

JOURNALS AND MAGAZINES.

Journal of Pathology and Bacteriology. (Official Organ of the Pathological Society of Great Britain and Ireland.) Vol. XVI., No. 1. Published from the Department of Pathology, University of Cambridge. Price 7*s*. 6*d*. Yearly subscription £1 1*s*.—Dr. T. McCririck of London, describing the streptococco-opsonic index in scarlet fever, erysipelas, and puerperal fever, notes that in scarlet fever the opsonic index to streptococcus pyogenes is low (about 0·7) during the first week of the disease, rising to normal or above normal as the temperature falls and the symptoms subside. During the second week the index on the average is 1·1, during the third week 1·2. At the onset of renal complications the index falls, and it is markedly below normal (0·5–0·7) in fatal cases. In erysipelas and in streptococcal puerperal fever the index varies in the same way as in scarlet fever. Further, Dr. J. M. Anderson of Glasgow records that the opsonic index towards streptococci in scarlet fever is low (about 0·7) at the beginning of the attack, gradually rising as symptoms abate and reaching normal about the third week of illness. In fatal cases the index is always low, and in most cases a fall accompanies the appearance of albumin in the urine. In cases treated with serum the index rises to, or above, the normal level more rapidly. Dr. C. J. Lewis of Birmingham, in a paper on the Micro-organisms present in Suppuration of

the Accessory Sinuses of the Nose, gives a profound study of the organisms found in 145 cases of suppuration in the accessory nasal sinuses. The numerous kinds found are described under the heads—(1) staphylococci, (2) streptococci, (3) pneumococcus, (4) M. catarrhalis and allies, (5) B. coli and Similar organisms, (6) B. diphtheriæ and diphtheroid organisms, (7) putrefactive group, proteus, &c., (8) B. mesentericus, (9) dental organisms, (10) anaerobes, and (11) spirilla, streptothrices, &c. Professor A. R. Ferguson of Cairo describes bilharziasis and malignant disease of the bladder as they occur in Egypt. He finds that bilharzia infection of the male bladder is found in 76 per cent. of the post-mortem examinations made by him in Egypt. Malignant disease of the bladder is also exceptionally common, the author having examined 40 cases during six years. All these were associated with bilharziasis, and were doubtless due to the chronic irritation set up in this condition. Of the 40 cases, only one was in a female; 34 were cases of epithelioma and 6 of sarcoma. Secondary growths in the heart muscle were present in five of these cases. Bilharziasis of the rectum is very common, but does not appear to lead to malignant disease. Dr. W. Henwood Harvey of Cambridge writes on auto-intoxication and experimental nephritis in rabbits. By repeated administration to rabbits of para-hydroxyphenylethylamine, either by the mouth or by subcutaneous injection over long periods, the author produced definite renal disease in 20 out of 33 animals. The changes are believed to begin with sclerosis of the renal arterioles, which is followed by definite degeneration of the glomeruli and tubules, leading to an increase of connective tissue. The whole kidney is a good deal enlarged, and the condition produced resembles some forms of chronic nephritis in man. Dr. W. K. Macdonald of Edinburgh, in a paper on Fat Removal in Peripheral Nerve Degenerated after Section, states that the fat which arises from the medullary sheath of a peripheral nerve after section is taken up by cells and carried away along the perivascular lymphatics. These cells resemble the compound granular corpuscles which carry away degenerated remains of fibres in the spinal cord. Dr. F. B. Gurd of New Orleans, in a paper on the Cytology of the Leprous Lesion, points out that the local lesion of leprosy begins with an accumulation of lymphoid and plasma cells; mast cells and eosinophile leucocytes are generally also present, and in some cases in which the leprosy bacillus is alone present neutrophile leucocytes are found in large numbers. Proliferation of endothelial cells then follows. Giant cells of the Langhans type, usually present, commonly show characteristic rounded vacuoles. Practically all the bacilli are inside tissue cells, especially in the endothelial and giant cells, also in lymphoid, plasma, and connective-tissue cells. The spherical masses of bacilli found in scrapings from leprous lesions are due to the accumulation of bacilli in the vacuoles, from which they are set free when the cell is ruptured. Dr. C. Price-Jones of London describes the Changes in the Blood and Bone Marrow produced by Hæmorrhage and Blood Destruction, and shows that the subcutaneous injection of phenylhydrazin produces in rabbits an anæmia characterised by a marked rise in the colour index and an increase in the diameter of the red cells. After bleedings of equal severity the colour index is also raised, though not to the same degree, and the increase in the size of red cells is only slight. These experiments, therefore, do not support the view that the raised colour index, which is characteristic of pernicious anæmia in man, is due to the fact that the stromata of the destroyed red cells remain in the body and form a stimulus to marrow activity. A careful study of the marrow indicates that phenylhydrazin has a direct tonic action on the hæmopoietic system as well as a destructive action on red corpuscles. This number also contains the Proceedings of the Pathological Society of Great Britain and Ireland at the meeting held at Oxford, July 7th–9th, 1911.

Paludism, No. 3, July, 1911.—This number of *Paludism*, the last to reach our hands, is full of valuable and interesting matter. The journal has increased in size, the present number comprising some 130 printed pages, with five full-page illustrations and a map. Major S. R. Christophers, I.M.S., who is in charge of the Central Malaria Bureau, Kasauli, has now joined Major S. P. James, I.M.S., as joint editor. The first item is an appreciative obituary notice of the late Sanitary Commissioner with the Government of India, Lieutenant-Colonel J. T. W. Leslie, C.I E., I.M.S., whose untimely death, on his way home on sick leave from India, the Indian Medical Service still continues to mourn. An editorial record, dealing with the newly established Indian Research Fund, we have already commented upon in our columns of Oct. 7th. Major James, the joint editor, contributes a note on some of the measures that have been taken to make quinine available to the poor in India, and his colleague, Major Christophers, follows with a short paper on the Selection of Unit Areas for Recording Data Concerning Malaria in India (with map). He also gives other articles on: (1) Aids to the Identification of Culicides other than Anopheles, with Special Reference to Indian Species, with plate; (2) An Investigation into the Prevalence of Kala-azar in Part of Upper Assam; and (3) Observations (with charts) on Graphs of the Spleen. rate and Average Spleens. Major W. H. Kenrick, I.M.S., Special Malaria Officer, Central Provinces, writes on the effect of endemic malaria upon the birth- and death-rate. Lieutenant-Colonel J. R. Adie, I.M.S., Special Malaria Officer, Punjab, contributes two papers, the first being some notes on infection among troops and native children at Delhi, and the second on a handy method of collecting adult anopheles (with plate). Major E. L. Perry, on special malaria duty, also contributes two articles, one being observations regarding malaria in the Jeypore hill tract and adjoining coast, the other being on the relation of the endemic index to the splenic index in epidemic areas in the Punjab. The Central Malaria Bureau describes (with plate) a system of mounting, examining, and preserving mosquitoes. A number of notes on mosquitoes (with plates) and a digest of recent literature connected with malaria, the latter extending over 26 pages, complete this most informing and helpful third number of *Paludism*. We understand that this publication will not in future be issued quarterly as hitherto, but at irregular intervals as occasion arises and material accumulates.

Jahreskurse für Ärztliche Fortbildung. (*Annual Post-Graduate Medical Course.*) Munich: Lehmann. Price 16 marks per annum.—The July number is devoted to gynæcology and obstetrics. Professor Winter contributes an article on placenta prævia, the teaching of which is very much on the lines of English text-books. Version and the de Ribes bag are regarded as the methods of widest application; *accouchement forcé* is condemned, and a limited field of usefulness is conceded to the various kinds of Cæsarean section. Dr. E. Sachs gives a most interesting article on the bacteriology of the parturient state. The methods of recognition of the presence of various germs in the genital canal and the relative importance of each, the great importance of the hæmolytic streptococcus, the possibility of prevention of infection, the avoidance of all operative measures in the presence of this organism, are some of his most important points. The serum treatment of puerperal infection appears to have given little prospects of success. Professor Martin deals with genital prolapse. He emphasises the very great importance of the muscles and fascia of the pelvic floor as the main support of the pelvic viscera, and

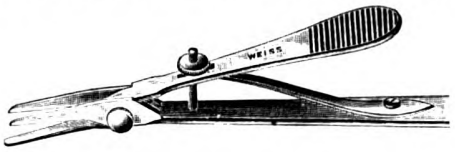
insists that all kinds of genital prolapse are to be regarded and treated in the same way as other abdominal hernias—i.e., by making good the defect in the muscular and fascial layers of the hernial orifice, which, in the case of genital prolapse, are the levatores ani and the visceral layers of the pelvic fascia. The use of pessaries is condemned, and it is held that the more complicated operations which aim at fixing the uterus from above are seldom required. The same author gives a short account of the use of the X rays in gynæcology, especially in the treatment of menorrhagia and myomata. He concludes with a very interesting discussion of the relative advantages of attacking uterine disease respectively by the abdominal and vaginal routes. Recent statistics by Wertheim and Schauta in relation to the radical operation for cancer of the uterus—in which the former uses the abdominal, the latter the vaginal route—are compared, with the astonishing result that the vaginal method gives as good remote results as the new or abdominal route, with fewer deaths from the operation.

The August number is occupied with the wide range of subjects included under the head of therapeutics. It is really an epitome of the more modern methods of treatment, and is, therefore, filled with matters of practical interest. Professor Kionka deals with the mode of action of the various purgative drugs in the light of recent observations by means of the X rays after feeding with bismuth. The influence of the drugs on the various movements of the different parts of the intestine and their effect in diminishing absorption or increasing secretion are described and discussed. The same author gives a short account of the uses of the carbonic acid baths, and analyses the various chemical and physical factors which bring about their action. Professor Strasser deals with the subject of hydrotherapy in special relation to the treatment of phthisis. He explains the hardening effect of cold bathing upon the system, which makes it of such great value in prophylaxis. The different kinds of baths and douches, together with the methods of their application, are given in some detail. A very important section of this article deals with the varying conditions of the patients which require special modifications of the baths. Dr. Determann contributes a short article on climatology, which reviews in a very concise manner the different factors that go to make a "climate," and the influence that each factor has upon different diseases, and he adds a most useful list of the special climates suitable for special diseases. Professor Strauss discusses the dietetic treatment of arterio-sclerosis with special regard to the questions of meat, milk, alcohol, and chlorides. A few pages of a somewhat condensed *résumé* of progress in nursing and nursing appliances are contributed by Professor Salzwedel. Professor Frankenhauser gives a highly technical article on electro-therapy, in which he explains the action of the different forms of currents on the body tissues. Dr. Holzknecht describes the recent advances in the diagnosis of diseases of the stomach by means of the X rays. He considers that this new method will render unnecessary the use of exploratory operations for diagnostic purposes. By a series of typical cases he shows how certainly the diagnosis was established in various patients who afterwards were submitted to operation. Dr. L. Freund deals with aspects of light therapy, some of the most interesting of these being the subjects of sunburn and of the sterilisation of drinking-water by exposure to the ultra-violet rays. Dr. Gudzent explains the physical properties of radium emanations, and discusses their influence in increasing ferment action, stimulating purin metabolism and leucocytosis. He concludes by showing the practical value of these actions in the treatment of various diseases—e.g., rheumatism, gout, and neuralgia. The whole of this number is full of facts of practical value.

New Inventions.

IMPROVED TWIN SCISSORS FOR SCLERECTOMY.

THE twin scissors devised for the purpose of making the essential part of Herbert's small-flap sclerectomy operation for chronic glaucoma, and described by me in THE LANCET of March 4th, 1911, were found capable of useful work, but they had certain defects in their working. The lateral hinge of the first pattern necessarily allowed sufficient play for the male blade to engage one or other of the female blades unequally, so that the cutting action was checked. The male or female blades were not always engaged, or, to use a term applied to motor-gears, not always in mesh, so that the cutting was jerky. Also there was no means of limiting the opening of the scissors. In the improved pattern here figured it is believed that these defects are completely



remedied. At the suggestion of Mr. W. G. Laws of Nottingham the lateral hinge has been changed to a central hinge which gives perfect stability. The male blade is now always in gear betwixt the female blades, and the female blades have been given a lateral spring, so that in cutting the sharp edges cling to, and shear along, the cutting edge of the male blade, just as the slight twist of the fingers causes the blades of an ordinary scissors to grip and shear along each other. A stop screw has been attached, so that the play of the jaws can be adjusted to a nicety and undue recoil of the spring checked. In the illustration the handle is cut off. The new twin scissors have been used already in several operations and the improvement is manifest. The new pattern is made by Messrs. John Weiss of Oxford-street, London, W.

N. BISHOP HARMAN, M.B. Cantab., F.R.C.S. Eng.

ALL-METAL SPINAL ANALGESIA SYRINGE.

THE All-Metal syringe for local analgesia which was devised by me a few years ago, and manufactured by Messrs. Allen and Hanburys, Limited, has been recently adapted for spinal analgesia, as depicted in the accompanying illustration. This syringe was originally based on the lines of Mr. A. E. Barker's well-known syringe, the great feature being the tightly fitting piston and its practical indestructibility. A



SCALE 1/3

large number of these instruments has been ordered by the War Office. The spinal needles (fitted with cannulæ which extend right to the tip) are carried in clips in the lid of the box. A hollow needle is also supplied through which the solution can be drawn into the barrel of the syringe and by means of which air can be expelled. A triangular-edged knife for puncturing the skin is included in the outfit. The needles and knife have been copied from Mr. Canny Ryall's spinal syringe.

Cosham, Hants. F. J. W. PORTER, Major, R.A.M.C.

THE LANCET.

LONDON: SATURDAY, OCTOBER 28, 1911.

The Lunacy Commission.

FOR several years past it has been generally recognised that the enormous increase in the work devolving on the Commissioners in Lunacy has made it imperative that their number should be augmented by the appointment of additional medical members. Since the passing of Lord ASHLEY'S Act, which established the Board of Commissioners on its present basis in 1845, the number of persons officially recognised as insane in England and Wales has increased fourfold, and now reaches the formidable figure of 130,000, but the number of medical Commissioners responsible for the supervision of this host of the insane and for the inspection of the establishments in which they are housed is still limited to three. It is no reflection on the distinguished physicians who have held these offices to say that the work imposed upon them under these conditions has been beyond their powers. So intolerable, indeed, has the position become within the last few years that it has been necessary to find an immediate remedy without waiting for that entire recasting of the machinery for the supervision of the mentally defective which we have been promised since the publication of the report of the Royal Commission on the Care and Control of the Feeble-Minded. Legislation has accordingly been initiated, and the Lunacy Bill which was before Parliament this year provides for the appointment of two additional Commissioners. It does not, however, expressly require that they should be medical men, and we understand that in certain quarters efforts are being made to secure that one of them shall be a legal representative, thus giving four lawyers and four medical men as paid members of the Board.

It is hardly conceivable that the authorities in whose hands these appointments rest should entertain so extraordinary and reactionary a proposal, but the very fact that it should have been put forward at all makes it desirable that medical opinion should be expressed very explicitly on the matter. It is not a question of securing positions of patronage for the members of a particular profession; if it were merely that, the general public at all events might be content to take a detached view of the issue, satisfied from past experience that the claims of the legal profession are not likely to be under-stated. The question goes much deeper: it not only concerns the welfare of a very large number of sick persons, but also affects the consideration of a bio-social problem which is of vital importance to the community. The demand for further legal representation on the Lunacy Commission is in effect the reaffirming of the tradition which separates insanity from disease and regards the lunatic somewhat in the light of a wrong-doer to be punished and not as a patient to be treated. The medical profession has consistently striven to combat this bad tradition, and thanks to its strenuous efforts the whole tendency of public opinion and legislative action from the days of PINEL has been in the direction of extending to the insane the privileges which an enlightened humanity accords to the sufferers from more patently physical diseases. And if this change of attitude has immeasurably alleviated the lot of these unfortunate invalids, it has had an indirect influence of even greater ultimate importance in stimulating that scientific study of insanity by which, and by which alone, we may hope to discover, and hence to counteract, the causes of a malady that constitutes at once a heavy burden on the community and a danger to its vitality. The recognition of this truth that insanity is a disease inspires the whole system of asylum treatment which it is the special function of the Commissioners in Lunacy to supervise; the statutory duties imposed on the Commissioners by the Lunacy Acts are chiefly concerned with medical questions; the annual reports in which they render an account to the public of their performance of these duties deal mainly with matters of strictly medical science, with the discussion of problems of etiology, with the investigation of zymotic diseases specially prevalent amongst the inmates of asylums, and with kindred topics.

It is hard to imagine in what manner the discharge of these functions could be promoted by an addition to the already large legal element on the Board, but it is not at all hard to conceive that such a deplorable step must react injuriously on the scientific position of English psychiatry, and might tend to revive in the public mind the unfortunate errors and prejudices which formerly prevailed with reference to the insane. With the addition of two medical Commissioners, the medical representation on the Board will still be quite inadequate, as may be seen by comparison, we will not say with continental countries, but even with Scotland and Ireland. In Scotland, where the insane number some 20,000, there are two senior and two junior medical Commissioners in Lunacy, and in Ireland the supervision of the 25,000 lunatics is entrusted to two medical inspectors. It can hardly be suggested that there is any extravagance in the arrangement by which in this country five medical men are expected to discharge the same functions for 130,000 patients. And in this connexion we may remark that the anomalous position of England with regard to the medical supervision of the insane is of comparatively recent origin; the Metropolitan Commissioners, who, prior to Lord ASHLEY'S Act, exercised the powers vested by that Act in the Commissioners in Lunacy, included five physicians originally, and by subsequent legislation the number was raised to seven; and at a still earlier period, under GEORGE III., no less than five physicians were deemed necessary for the inspection of the insane in the metropolis of that day. Some of our contemporary politicians do lip-service to the ideas and the spirit of modern science: they have now an opportunity of showing whether in their appreciation of the fact that insanity is a disease they are at least as enlightened as were their predecessors of the Georgian era.

The Battle of Monism and Dualism.

THE prominence given in recent years to investigations by the psycho-physical school has led to the belief that just as "sensation" and "memory" can be expressed in terms of logarithms, so in the long run all mental phenomena might be reduced to arithmetical processes; whilst the more advanced advocates, of whom TITCHENER and KÜLPE are prominent exponents, have maintained that there is no necessity for any theory of an "activity-process," such as the conation forces of will and attention, but that mind and brain are practically the same thing, the former being just the necessary result of the action of the latter. But this interpretation does not satisfy those who, from introspection, and after consideration of the objective statements of experience by a large number of individuals, feel that the physical school is not quite convincing, that it does not fill up the gap between metaphysics and physiology, and that there is a realm of spiritual as well as of corporal body which has not so far been found capable of scientific exposition, though it may be accepted as a continuation of the line of evolution which, starting with the potentialities of living protoplasm, has not yet completed its course. The epithets of Atheism and Agnosticism which have been hurled by some over-strenuous religious corporations against the so-called materialist school have been unjust, because the upholders of the latter have declared themselves open to conviction, whilst merely affirming that present knowledge did not authorise belief in what is, so far, incapable of scientific demonstration. However, in those departments of biology which deal with actual facts, and draw up theories afterwards, there has been of late the exhibition of a tolerant attitude towards inquirers who, finding themselves face to face with what they cannot explain, are willing to weigh the feasibility of theoretical considerations which might, if they could be proved to be realities, show the real connexion between the psychical and the physical. There are inquirers, in other words, who, whilst believing in the authority given by the balance and the microscope, are ready to conceive that there are processes which for their demonstration require finer adjustments, perhaps even means of an order different from those which we at present recognise.

Professor J. S. MACDONALD, in his admirable presidential address to the Physiological Section of the British Association at Portsmouth, has recently thrown his considerable weight into the scale on the side of Dualism. He pointed out that there was no scientific evidence to support or to rebut the doctrine that, whilst the brain was possibly affected by influences other than those which reached it from the sense organs and from the different receptive surfaces of the body, it was still possible that it was an instrument traversed freely by an unknown influence which found resonance within it; and it is clear that an instrument, shaped in the embryo by a certain set of conditions, might in course of time respond to the play of some new influence which had taken no immediate part in fashioning it. The essential point for the moment was, Professor MACDONALD allowed, that there was some loophole for the view that mind was not directly associated with life or living matter, but only indirectly with certain dispositions of dynamic state that were sometimes present within certain parts of it. Where there was evidence of mind the view was that it represented a force acting from without upon what was still no more than matter involved in certain chemical and physical states. He put forward this view as an expression of belief rather than of opinion, and not as based on evidence or in any way a statement of demonstrated or demonstrable fact. Professor C. S. SHERRINGTON and Professor WILLIAM STIRLING intimated their acceptance of an address so full of suggestions for further valuable research in the field of physiology—and this acknowledgment of the intimate connexion between physiology and psychology is a proof that the expositors of the most exact scientific methods are willing to admit the possibility of the ultimate inclusion within the realms of experiment and demonstration of what has up to now been treated as a domain merely for dialectics and empiricism.

In a lecture "On the Occult," given at the Medical Graduates' College and Polyclinic in June, 1910, Dr. CLAYE SHAW expressed some ideas which are strikingly in harmony with those of Professor MACDONALD. The lecturer put forward the proposition of an external agency, a world of force which requires for its display the human mechanisms. If there are external forces which are able to affect the human mechanism it is surely not possible to deny that an individual may be moved to speak or to act in a way unknown to himself by some influence of which he is the appropriate medium. If the body and the brain are but instruments for the working of this force, then our actions denote that some changes may be going on in this force for which there is in us no responsibility—we are just puppets, as it were the keyboard of an electric installation. Viewed thus man is a necessary complement of this force, and one object of his creation is merely that of a force terminal, an Æolian harp which discloses the motion of winds which cannot be seen. It may be urged that all this is pure spiritism, that it gives us no more solid base than have the spiritualists and mediums of the "occult" performances of recent and ancient times. This may be conceded; but the great point is that followers of the exact sciences of to-day find themselves now in the position of being able to acknowledge the validity of agencies other than those at present at their command and under their control, and, having taken stand on a new platform, they are ready to investigate the existence of this Soul, Mind, Force, or whatever name be given to it. They are prepared to discover the laws under which it acts, and to devise experiments (possibly of an order very different from the means now employed) with the hope of attaining nearer to final truth. If such an achievement is beyond our present resources we must still go on in the hope that by constant attention to, and familiarity with, the processes observed we may ultimately develop a condition which enables us to see clearly what just now is no more than acceptable speculation. Just as we observe to-day a greater tolerance in the teachers of spiritual truths towards the exponents of scientific facts and theories, so do we welcome the *rapprochement* between the adherents of the psychical and the physical,

as shown by the agreement that the gap between the two may be bridged across, if not even actually filled up and obliterated.

The Medical Profession in India.

ON several occasions recently attention has been drawn in our columns to the dissatisfaction that exists in the Indian Medical Service at the present time; this prevails not only in regard to the pecuniary emoluments offered, but also in a considerable degree to the conditions of employment generally. The high traditions of this service, the record of pioneer work accomplished in many branches of medical science, the long roll of distinguished physicians and surgeons who have worked, often through a life-time, in our great dependency, have combined to place it in the first rank amongst the spheres of occupation open to the young medical man when he is choosing his career. Within the last few years, unfortunately, various circumstances have combined to diminish its attractiveness, as has been evidenced by the falling-off in competition for admission to its ranks; and it is clear that if the ruling authorities desire to have the best class of medical practitioner in their service, as until lately has undoubtedly been the case, they must increase the emoluments and render the service more attractive.

To pass, however, from the individual aspect, or personal point of view, if we regard the matter from an administrative standpoint, it is a fair subject for discussion whether the time has not now arrived for comprehensive reorganisation. As at present constituted, the Indian Medical Service is officially and primarily a military service; all its members enter through the military portal, undergo military training, and possess military rank and titles. One section of these officers remain in military employ for the greater part of their career; the other and larger section form the main body of the profession throughout the country, either as medical practitioners or as health officers. The arrangement had its origin in the conditions of the birth and development of British rule in India; this began as a trading venture, but by circumstances was compelled to advance by force of arms. It is still absolutely necessary to maintain a large armed force in the country, though happily our relations with the various populations and their native rulers are most friendly. It has always been, and still is, considered necessary that the medical service of the army should be capable of immediate expansion in the event of warlike operations being undertaken, that part of the medical establishment that is employed in civil duties being regarded as the reserve from which any required increase in *personnel* might be drawn. The condition of things is not, however, satisfactory. For those medical officers who have chosen military employ and look forward to promotion to administrative rank in natural course it often happens that disappointment is in store, owing to the return to military duty over their heads in the administrative grades of senior officers who have passed most of their time in civil employ. More serious than this is the risk of inefficient medico-military administration when it is placed in the hands of officers, however able they may be, who have been spending their best years in civil practice. It cannot be said that a college professor or the able governor of a jail is necessarily or naturally an efficient army medical administrator in these days of advanced military medical requirements. On the other hand, the medical officers who are employed on military duty find themselves "associated with an archaic system of regimental service, characterised by a total absence of opportunity for acquiring initiative, experience, or responsibility, and for keeping up a reasonable standard of professional knowledge."

These are the words of a well-informed writer in the *Allahabad Pioneer* for July 6th, 1911. In the opinion of this writer another problem, and one of an extremely delicate nature, is the presence of an increasing number of Indians in the service, and he goes so far as to say that the Indian is not a suitable element on the military side of the Indian Medical Service. The same writer considers that the fundamental defects of this service consist in (1) attempting too much by doing both civil and military duties; (2) the present system of recruitment, which is not suited to the military side of its functions, and is paralysed by the top weight of the civil side; and (3) the present regimental system which is inconsistent with either military or professional efficiency. His remedy would be to divorce the civil side absolutely from the military, and to recruit the latter entirely from Europeans. He inclines to the formation of an Imperial Medical Service (in preference to any local *cadre*), as in the case of the Royal Engineers, who have men on the permanent Indian establishment and yet belong to an Imperial service. As for the civil side, which in this event would be the true Indian Medical Service, it should be a purely civil *cadre;* the argument that it is required as a military reserve the writer (who pessimistically signs himself *Mene*) does not think applicable at the present time. Any number of men could be obtained from England in three weeks, if occasion required, as was shown at the time of the South African war. The civil side could recruit freely from Indians. This writer is, however, not in favour of maintaining the present monopoly of the Indian Medical Service in regard to civil surgeoncies. He would gradually reduce these in number, thereby fostering an independent medical profession "presumably European." The reorganised civil medical service should be a true public health service, with activities in preventive as well as in clinical work, forming part of a secretariat on the lines of the Local Government Board. Such are the views of the Allahabad correspondent. We understand, and can readily believe, that, with the greatly increased communication between East and West, the large numbers of Indians who come to Europe for their professional education (a substantial proportion of these being students of medicine), and the increased opportunities for education generally, there has arisen a great desire on the part of the cultivated and intellectual youth of India to enter on a medical career on the same terms of equality with Europeans, as they have long had in the legal profession. They demand equality of opportunity—a fair and open opportunity for practice. No one believes that this can be denied them for ever. But we have to consider the large population of our own countrymen whose lot is cast in that "Land of Regrets"; for them, and especially for

their wives and families, whose interests cannot be ignored, there are the weightiest reasons for the maintenance of a numerous body of British-born medical practitioners, in the civil as well as in the military service, distributed throughout the country. So long as it is good for India to be governed by Britain, so long must precedence be given to every condition which inevitably arises from that fact. As pointed out by another correspondent of the *Pioneer* (July 26th, 1911)—not himself a medical man—the reasons for the necessity of this presence of British medical men "rest on the highest moral foundations, before which reasons the private ambition of any limited class of practitioners must give way." Moreover, for positions of the principal responsibility, needing long experience and matured judgment, and, more than all, that ability to deal with emergencies which is certainly not characteristic of the literary and cultivated, as distinct from the warlike, native of India, we still need, and shall need for long, the services of our own countrymen in the important grades of civil administration. With these reserves we should welcome the gradual development of a medical service of Indians for Indians.

In one line of practice we should like to see more rapid progress—viz., in the development of female medical education. The scope for the work of the woman doctor is enormous; this is a field in which we think Government might move more quickly than they have been doing up to now. There is no question here of comparative fitness for administrative duties and responsibility. Throughout India there are some 150 million women and girls, for a large proportion of whom medical aid under present circumstances is non-existent or inefficient; this is the crying need of the country, and to supply this the medical education of suitable women of native races should be largely developed. For general medical practice the field is already open to the native born Indian, but we are of opinion that careful selection should be exercised in regard to the education of Indian students for the medical profession. It is not all who are fitted for it at present; the conditions of a public service demand more than ability to pass examinations, and apparently such ability among the Indians is even less a testimony of real fitness than in the case of Europeans. Nevertheless, the development of a native medical profession is proceeding, but it must advance gradually for the results to be of permanent value. There remains to be mentioned the case of the British or European medical men practising in India on their own account; they are practically limited to the Presidency towns, one or two other large centres of population, and a few districts where there is a considerable number of unofficial British residents. We are not aware of any widespread desire on their part for any interference with their freedom of contract or conditions of practice.

BANGOR DISTRICT NURSING SOCIETY.—At the annual meeting of this society held in Bangor, co. Down, on Oct. 19th, Lady Hermione Blackwood gave an address, illustrated with limelight views of "district nursing." The slides represented religious nursing orders in early times, Chaucer's Doctor of Physicke, the Knights of St. John, and nurses going their rounds in the west coast of Ireland. The lecture was greatly enjoyed.

Annotations.

"Ne quid nimis."

THE EXPERIMENTAL PRODUCTION OF APPENDICITIS.

WE publish in another column of this week's issue of THE LANCET an interesting paper which was communicated to the Pathological Section of the Royal Society of Medicine on Oct. 17th by Dr. F. J. Poynton and Dr. Alexander Paine. It is well known that these observers have in a series of researches isolated from the lesions of cases of acute rheumatism and some of its complications a diplococcus to which the name of diplococcus rheumaticus has been applied, and by the agency of which they have produced experimentally in rabbits arthritis and cardiac lesions. In the present research they have used a diplococcus isolated from the fluid drawn from the knee-joint of a boy suffering from a first attack of acute rheumatism, and they have invariably employed young rabbits for the intravenous inoculations carried out with it. In a certain number of the rabbits, in addition to the arthritis and the cardiac lesions when these were present, they found evidence of inflammation of the vermiform appendix, the histological features of which seemed to demonstrate that it was the result of an infection from the blood stream. In some of the cases the diplococci were demonstrated in these lesions, while in one case in which reparative processes were in progress they were not found. The characters of the appendicitis varied somewhat in the individual cases; in one a very early inflammation was found, in another a severe degree, while in a third an ulcer was noticed. In one case the middle part of the appendix was ballooned, while in another there was early peritonitis without perforation. It is interesting to note that in some of the rabbits a mucous diarrhœa occurred as a result of the injection of the diplococcus, and in two intussusception was found post mortem. Dr. Poynton and Dr. Paine disclaim any priority in regard to the demonstration of the occurrence of appendicitis as a local result of a general blood infection, and refer to some observations by Adrian published ten years ago. He showed that in rabbits appendicitis could be produced by the intravenous injection of various organisms such as streptococci, staphylococci, pneumococci, typhoid bacilli, and the colon bacillus. Dr. Poynton and Dr. Paine point out that in their cases there was no concretion or foreign body in the appendix, and that the changes commenced deep in the wall of that structure, facts which they regard as opposed to the view of Aschoff that the disease in man starts from within the lumen. They also suggest that the ordinary lesions in human appendicitis could be explained readily by their results in rabbits. Their observations are of considerable interest in regard to the etiology and pathology of this condition, and they deserve careful consideration. If the organism described is regarded as the causal agent of rheumatic fever, it gains additional interest from the support it affords to the view which has often been expressed that there is a relationship between acute rheumatism and appendicitis; but in order not to confuse the issue in regard to the origin of appendicitis from blood infections, Dr. Poynton and Dr. Paine avoid employing the specific name of the diplococcus with which they have worked.

THE SLOW PULSE OF JAUNDICE.

IN 1864 Bouillaud called attention to the association between bradycardia and icterus which he had noted, especially in cases of catarrhal jaundice. In other forms of jaundice, however, the same phenomenon is occasionally

noted. The pulse-rate rarely falls below 40 in such cases, being usually somewhere between 40 and 60 per minute. At the present time, when so much time and energy are being devoted to the study of bradycardia, this association is of particular interest. We know that a slow pulse may be due either to retardation of the whole heart or to "heart-block"; the form of the latter which has been most thoroughly investigated is that in which the stimuli to contraction are arrested either by organic disease or by exalted vagus tone in their passage through the auriculo-ventricular bundle. A bradycardia of toxic origin, such as that met with in jaundiced persons, is of special interest, because it may possibly afford an answer to the question, Can direct poisoning of the auriculo-ventricular bundle without demonstrable gross lesion interfere with the conduction of impulses? The work of Lewis and Oppenheimer on asphyxial heart-block suggests an affirmative answer to this query. The latest work on icteric bradycardia, by Danielopolu of Bucharest, published in the *Wiener Klinische Wochenschrift*, No. 39, 1911, shows that in the two cases investigated by him there was no question of interrupted conductivity. Both patients were suffering from catarrhal jaundice, and in both the rate of the pulse was about 48 per minute, counted with the patient lying down. In both cases injection of atropine sulphate (2 mg.) was followed by a quickening of the pulse-rate up to 100 or more per minute within three-quarters of an hour. The rhythm was also altered by deep inspiration and by swallowing movements and by changes of posture. More definite proof of the implication of auricle as well as ventricle in the slow rhythm was afforded by polygraph tracings, which showed that the slowing was a disturbance belonging to the class of sinus irregularities in which each ventricular systole was preceded at the normal interval by an auricular systole. It is true that these results, so far as the atropine acceleration is concerned, are in contra-indication to those obtained by certain other investigators, whose work Danielopolu quotes; these, however, are seriously discounted, in his opinion, by the fact that the dose of atropine used in the application of the test was too small. There is, therefore, no sound evidence of a myogenic origin for the bradycardia of jaundice.

FINSEN LIGHT AND TRACHOMA.

TWO interesting papers on the action of Finsen light on trachoma have recently been published in Finland by V. Grönholm and K. A. Heiberg (Finska Läkaresällskapets Handlingar, vol. liii., 1911). Till a few years ago the technical difficulties which this treatment involved seemed to exclude its application to structures in the neighbourhood of the eye. Lundsgaard, however, demonstrated experimentally that the conjunctivæ tolerate considerable exposure to the ultra-violet rays, and that technical details such as screening the eyeball and compressing the diseased tissues so as to render them suitably anæmic could be effectually carried out. These difficulties being overcome, Finsen treatment promised good results in trachoma, as the ultra-violet rays have a selective action on cellular tissue in which trachomatous areas are rich, while connective tissue is relatively immune to these rays. The treatment was begun in 1907 by Lundsgaard. After 12 exposures lasting 10 to 35 minutes each the conjunctiva became pale and smooth without marked cicatrisation. All the trachomatous areas disappeared, and after an interval of three years there was no relapse. The reports of Grönholm and Heiberg deal with 72 patients and 109 trachomatous eyes. There was no selection of cases. All varieties were treated, except such as presented very slight disease or extensive involvement of the cornea. After exclusion of 11 eyes, which were not systematically treated, the immediate result of the treatment showed recovery in 79 (81 per cent.) and improvement in the remaining 19 (19 per cent). Unfortunately, it is at first difficult to decide whether a permanent cure has been effected or not, for the structures about the eye are still so hyperæmic two or three weeks after the treatment that trachomatous tissue may be hidden in a conjunctival crypt or in the walls of the lacrymal canals. Months even may pass before such a focus becomes evident, and a probation period of a year is therefore necessary before a permanent cure can be claimed. After a period of 12 to 17 months 64 eyes were examined and reported on. Thirty-six (56 per cent.) were still healthy, 21 (33 per cent.) had relapsed, and 7 (11 per cent.) were still infected. Of the 19 eyes which were relieved but not cured at the conclusion of the treatment, 9 were subsequently examined, when 6 were found to be radically cured. Although the percentage of relapses is high it is, however, considerably lower than with other forms of treatment, including excision. Probably in a certain number of cases the reappearance of trachoma was due not to relapse but to reinfection either from the patient's other eye or from another patient. In either case the disease ran a mild course on its second appearance. It was found to be rather the nature of the disease than the thoroughness of the treatment upon which recovery depended, for the best results were obtained where the disease was early and associated with considerable hypertrophy of the surrounding structures even when only one exposure was given, whereas relapses were frequent in spite of repeated exposures when there was considerable cicatrisation present. The whole of the conjunctiva can be treated by one exposure of 10 minutes, and its efficacy is increased by a preliminary expression of the trachomatous granules. The reaction which follows expression subsides in a week, after which an exposure is given, the resultant reaction lasting a week or two. In an uncomplicated case, therefore, the period of treatment may be less than one month; but when complications such as hyperæsthesia are present 2 to 5 small tentative exposures are required which prolong the treatment considerably. With bilateral disease 4 to 6 weeks' treatment is necessary. Nine cases which had previously been treated in vain by expression and copper sulphate, in some instances for many years, were treated by expression plus light treatment: there was improvement in all, and permanent recovery in 4. The new treatment is not entirely free from dangers. Pannus or corneal ulceration, which existed in 15 cases before treatment, grew worse, and in seven cases small peripheral ulcers appeared on a previously healthy cornea. In three cases corneal opacities were produced which permanently affected the patient's vision. The treatment is therefore primarily indicated in cases which present a healthy cornea; when this is involved or the eye is inflamed small conjunctival areas must be successively treated, and the reaction induced by one exposure must be allowed to pass off before another is given. The writers conclude that in suitable cases treatment of trachoma by Finsen light is superior to every other method.

TABLE UTENSILS AS A MEANS OF SPREADING INFECTION.

IN an interesting note in the *Münchener Medizinische Wochenschrift* of Oct. 17th Professor A. Ritschl of Freiburg draws attention to a possible factor in the spread of infectious conditions of the mouth, nose, and pharynx, which he believes to be insufficiently recognised in most households—viz., the table utensils, such as the forks, spoons, and glasses, which come into contact with the mouth. He points out that these are usually washed altogether, often very perfunctorily, and then dried upon the same cloth, so

that it is not surprising if the infective agent gets distributed by this means. He states that in his own family the utensils used by any member suffering from an infectious condition are separately sterilised in boiling water. One of his children having contracted mumps at school recovered without communicating the disease to any other member of the family. Professor Ritschl insists upon the importance of strict measures in regard to this matter in restaurants, hotels, and pensions, and he is of opinion that if these precautions were adopted it would be less common than at present for people to complain of "catching cold." We believe that precautions in regard to this matter are generally adopted at sanatoriums for the treatment of pulmonary tuberculosis, where this danger is recognised, and at hospitals and public institutions in this country; but Professor Ritschl's note may serve to draw the attention of the public to this question, since there can be little doubt that the ordinary process of washing, unless carried out thoroughly with very hot water, is not calculated to destroy infective organisms.

THE ABSENCE OF ALTMANN'S GRANULES IN THE DIAGNOSIS OF MALIGNANT DISEASE.

IN most of the living and healthy cells of the body there are certain granules which can be demonstrated by special methods of staining; they were first described by Altmann, and are generally known by his name. In the tenth report of the Cancer Research Laboratories of the Middlesex Hospital four important papers occur dealing with the interesting point that Altmann's granules are not to be found in the cells of malignant growths. As Dr. W. S. Lazarus-Barlow remarks in his article in the same report on the progress of Cancer Research during the last ten years, the discovery of the absence of Altmann's granules in carcinoma and sarcoma has afforded the first indubitable evidence that the cancerous cell differs in its metabolism from its ancestors, the healthy cells, and it has also afforded a means of differentiating between certain conditions hitherto difficult or impossible to differentiate by microscopical examination and a matter of doubt clinically. It is now possible to determine whether a given mass of redundant tissue is sarcomatous or inflammatory, and with a further extension of our knowledge in this direction a still wider application may be hoped for. Altmann's granules are present in the cells of nearly all normal tissues, the chief exceptions being unstriped muscle, squamous epithelium, and the pyramidal portion of the kidney. The first paper on this subject in the report is by Dr. Hector A. Colwell and Dr. Henry Beckton, and it deals with the chemical nature of the Altmann's granules in the kidney. The granules are wanting in the pyramidal portion of the kidney, while they are abundant in the cortex, and the contrast of the two portions is very strikingly made manifest when the granules are stained. The evidence derived from many experiments described in this article goes to show that the granules are protein in character. The same observers have contributed a paper on the effect of various reagents on the demonstrability of Altmann's granules, and the conclusion is formed that operation material placed in moderately thin slices in formalin is available for examination for the granules, provided that it be transferred to formol-Müller solution within a day or two. Dr. Beckton and S. Russ have examined the effects of radium emanation on Altmann's granules. It was found that the emanation caused the disappearance of the granules from all the tissues examined. A note by the late Miss Theresa de G. Miller also is well worthy of mention; it details the effect of many stains on these bodies, and the conclusion is confirmed that the granules are acid in character. Our brief summary does not do justice to these valuable papers, but, useful as they are, they are only as it were the first fruits of a new line of investigation into the nature and diagnosis of malignant disease. We may feel sure that in the near future valuable assistance will be given to the clinician in determining the nature of doubtful growths. As to the significance of the absence of Altmann's granules from malignant tumours it is as yet too early to speak, but this question will no doubt be settled before long.

WALNUTS AND WINE.

To not a few people there is a fascination about walnuts and wine. Walnuts, in fact, are seldom discussed without reference to port, but the association is physiologically unsound, especially as the invariable custom is to eat the walnuts and drink the port after dinner. The food value of walnuts is very high: they are very rich in fat, containing as much as 63 per cent., while the proteins amount to nearly 16 per cent. It has been calculated that 30 large walnut kernels contain as much fat as 2¾ lb. of lean beef, and yet the walnut is used as a supplement to a square meal. Added to this the glass of port, say two fluid ounces, contains besides 180 grains of alcohol 70 grains of grape sugar. In the combination, therefore, we have all the elements which make for a complete diet—viz., fat, protein, carbohydrate, to which may be added mineral salts. Port and walnuts after a meal are therefore, from a nutritive point of view, "ridiculous excess." The digestive disturbance to which this excess may easily lead is, in fact, the price paid for an æsthetic indulgence. The peculiar palatability of a crushed mass of walnuts occasionally moistened with an elegant port is in part attributable to the smooth creamy emulsion which is formed. An emulsion presents elegant flavours in a way which increases their appreciation. It should be added that both walnuts and port wine contain tannin, which is unsuited to some constitutions.

RADIUM IN INOPERABLE CANCER OF THE CERVIX UTERI.

AT a meeting of the Société Médicale des Hôpitaux of Paris on July 28th, M. H. Rubens-Duval and M H. Cheron communicated an important paper on the treatment of inoperable cancer of the cervix uteri by the more penetrating rays of radium. In general great amelioration was obtained, and in some cases the lesions cicatrised and the patient recovered apparently perfect health, which was maintained for several months. Some of the results were possibly cures. In one case radium was last applied on Feb. 17th, 1910, and since that date there have been no signs of the disease. More cogent than the clinical evidence was the microscopic examination of nine specimens. Two were removed post mortem. One was taken from a patient who had died from intercurrent infectious endocarditis and the other from a patient in whom the treatment was suspended when symptoms of generalisation of the disease appeared. The remaining seven specimens were obtained by hysterectomy from patients in whom the disease, at first inoperable, under radium regressed sufficiently to become operable. As soon as the regression, though manifestly partial, was sufficient to allow the cancerous uterus to be removed, the intervention of the surgeon was requested, as it was thought less dangerous to risk hysterectomy than dissemination of the disease while further local regression was being attempted. Hysterectomy was not always rendered possible, for the sclerosed uterus and vagina sometimes remained intimately united to the bladder and rectum. In such cases radium therapy alone is possible and ought to be followed until cicatricial tissues are obtained in which examination no

longer shows epitheliomatous manifestations. Of the seven specimens obtained by operation, four showed zones of epithelioma regressing but sufficiently extensive to be perceptible to the naked eye. This was only to be expected, as the treatment was suspended as soon as the improvement was sufficient to allow operation. These specimens showed destruction of the epitheliomatous cells under the influence of the radium rays. The following case is an example of how an inoperable case may be rendered operable. It was thus described by Dr. Lejars at the Société de Chirurgie on June 8th, 1910: "A woman, aged 47 years, was sent to me at the end of 1908 with a large epithelioma of the cervix extending into the anterior fornix and complicated by peri-uterine infiltration. The case appeared inoperable. Three applications of radium were made at intervals of a month. On each occasion an apparatus containing 5 centigrammes of the radium salt was left in the cervical cavity for 20 hours. A fortnight after the last application the fornices were much more supple and the cervix had diminished in size, and I was able to operate. I performed total abdominal hysterectomy with extensive resection of the vaginal wall on March 25th, 1909, under good conditions. The patient recovered and remained in good health for a year. Then recurrence took place." Of the five remaining specimens two showed complete absence of cancer in the uterus, vagina, and the broad ligaments. In the other three the absence of cancer in the cervix contrasted with the persistence of a focus in the body of the uterus near the isthmus. The possibility of such foci, which in consequence of their distance cannot be influenced by radium, shows that apparent cure of cancer of the cervix by radium must not be relied upon, but that as soon as the case becomes operable hysterectomy should be performed.

PLAGUE IN THE UNITED PROVINCES.

FROM a report on plague administration in the United Provinces of India for the year ending June 30th, 1911, we regret to learn that a very severe recrudescence of the disease has taken place: 314,495 deaths have been returned, a greater number than in any previous year except 1904–05. This is most disheartening in view of the great efforts that have been made to cope with the spread of the disease. Colonel C. C. Manifold, I.M.S., calls attention to two points of interest which are worthy of note, as in the present state of knowledge regarding its epidemiology any facts accurately recorded require to be borne in mind for future guidance. One point is that, although during the 12 months under review more than twice as many deaths occurred as in the 12 months immediately preceding, the mortality from July to October was less than in the corresponding period of the previous year. The explanation suggested is that the severe epidemic of January to May, 1910, may have killed off so many rats that they could not breed up to their usual numbers before October. The second point is that the two severe epidemics of the present and preceding years followed on good harvests, while 1908–09, in which less than 14,000 deaths occurred, was a famine year. The number of rats depends directly on the quantity of food available; within a few months they will "breed up to the food-supply." It is also noted that severe epidemics follow on early and heavy winter rains, leading to increased humidity of the air and a greater number of rat fleas. As to the progress of the epidemic, the deaths rose from 157 in July to 1231 in October and to a maximum of 94,739 in March, falling rapidly to 921 in June. The death-rate from plague for the whole province was 7·23 per 1000; for the towns it was 12·90; for the districts 6·80. The incidence was very unequal, Muzuffarnagar district suffering the most, with a mortality of 31 per 1000, while Dehra Dun, a few miles off, had no cases at all. The small town of Shikarpur had the highest death-rate—120·7; the large cities suffered very much less—e.g., Lucknow, 6·17; Benares, 10·86; and Allahabad, 1·60. It seems clear that the important factors in determining the severity of an epidemic are local. Large numbers of rats were destroyed, but Colonel Manifold states that experience has shown the absolute impossibility of carrying out rat destruction as a general measure, partly because of the expense, and partly because, after a number have been destroyed, the remainder will speedily breed up again in presence of abundant food-supply. In some districts the people refuse to set traps, as they look upon the rat as a friend who gives the first signal of danger, and "by the sacrifice of his own life gives timely warning of the advance of plague." A satisfactory feature is the increase in inoculations—91,065, compared with 76,120 in the previous year; also a great decrease in the deaths of the inoculated, only 83 compared with 442. The chief objection to the operation, which has to be submitted to yearly, is the recurring inconvenience. Evacuation of infected villages, the inhabitants camping out in the open air or in grass huts, is the favourite means of escaping from the disease, and is most efficacious. On the other hand, very little use is made of plague hospitals. Disinfection and railway inspection are assiduously carried out. Five special officers are now employed in the United Provinces to combat plague, Captain H. Ross, I.M.S., being chief plague officer. All possible precautions will be taken against the spread of plague along the lines of communication leading to Delhi. It must be admitted that the authorities of these provinces have a very arduous and responsible task before them in view of the approaching Coronation Durbar.

EMBRYOS OF THE TRICHINA SPIRALIS IN THE BLOOD IN TRICHINOSIS.

IN 1909 two American writers, Herrick and Janeway, announced that they had demonstrated the embryos of the trichina spiralis in the blood of a patient suffering from trichinosis. The discovery was a logical sequence to Staübli's experimental work on the mode of dissemination of the embryos in the guinea-pig. As an aid to the diagnosis its importance is obvious. In the *American Journal of the Medical Sciences* for September Dr. Albert R. Lamb states that at the Presbyterian Hospital, New York, he investigated four cases of trichinosis with reference to the presence of embryos in the blood and found them in two. From the other two several specimens of blood were thoroughly searched with negative result. In one of these cases the existence of trichinosis was proved by the demonstration of the parasites in the muscles; in the other the diagnosis was never definitely settled. The following are the positive cases: A man, aged 29 years, was admitted with a history of malaise and chilliness for nine days. Four days before admission he took to bed with general muscular pains and swelling of the face and hands. His brother was taken ill at the same time, and they both had eaten pork cooked by themselves a short time before the onset. Examination showed only a fine punctate rash over the abdomen, thorax, and arms. For three days the temperature was about 103° F., and then it gradually fell to normal. A blood count showed 10,000 leucocytes, of which 11·5 per cent. were eosinophile. A blood culture was sterile, but from it four embryos were obtained. In the other case an Italian, aged 20 years, was admitted complaining of backache and general malaise for five days and indefinite pains in the bones and joints for three days. At times he suffered from colicky pains. There were slight puffiness of the eyelids and cheeks, a coated tongue, palpable spleen, and a few fine reddish punctate

spots over the abdomen and chest. There was no muscular tenderness. The temperature was 104° and gradually fell to normal in a few days. The blood counts showed leucocytes varying from 12,000 to 15,600, and eosinophiles rising in a week from 3 to 14 per cent. A blood culture taken on admission was sterile; one embryo was recovered from it. Staübli's original method was used, the only modification being that the blood was obtained from the routine blood cultures made at the hospital, 10 cubic centimetres of blood being divided between two Erlenmeyer's flasks of meat infusion broth. After the culture had been reported sterile the clear supernatant broth was decanted and 10 volumes of 3 per cent. acetic acid was added to the sediment. The mixture was thoroughly shaken and centrifuged and the supernatant fluid was poured off. If the resultant sediment was too thick the laking with the acid was continued until a sediment was obtained in which the search was unhampered by numerous blood cells. A drop of the sediment was poured on a large slide and examined under a low power. The embryos appear as cylindrical slightly curved worms with a refractile outline and characteristic granular structure. The anterior end is a little narrower than the rest of the body and ends in a clear homogeneous cap. Foreign substances in the sediment, such as cotton fibres and fungus growths, may cause confusion, but when once seen the embryos are characteristic. In the present case they measured from 0·1225 to 0·1295 millimetre in length. In the few cases which have been recorded the earliest time at which the embryos have been found was on the seventh day of the disease and the latest the twenty-third.

THE PRIVY COUNCIL, THE CENTRAL MIDWIVES BOARD, AND THE ENFIELD MEDICO-ETHICAL SOCIETY.

THE question of the payment of the medical practitioner who is summoned on the advice of a midwife to attend a case in which under the rules for her guidance she is compelled to "advise that a registered medical practitioner be sent for" was recently raised again by the Enfield Medico-Ethical Society in the letter referred to in a report of the proceedings of the Central Midwives Board in THE LANCET of Oct. 21st, p. 1171. Reference to that report will show that the Enfield Medico-Ethical Society informed a midwife that the society had agreed that a midwife calling in a medical practitioner in any stage of a confinement "must guarantee a fee of not less than a guinea and a half and that the case be taken over entirely by the doctor." This letter appears to have been based upon a not uncommon misconception of the midwife's position and duties in the matter. She does not call in a medical man and is not required by the rules which govern her conduct to do so. She is, however, required in certain cases to decline to attend alone and *to advise that a medical practitioner be sent for*, and she is also required to supply the medical man who is so sent for with a document in a prescribed form reporting to him the conditions on account of which medical assistance is required. It is, perhaps, due to this document that her powers and duties are so often misunderstood. It is unfortunate and it is unjust to the medical profession, and also to midwives, that a position should have thus been thrust upon them by the Midwives Act which has inevitably led to difficulties. The position, moreover, is fraught with danger to the patient, whom the midwife must "cease to attend alone." The difficulty, of course, arises out of the fact that the patient has already engaged a midwife, who has absorbed in many cases all that is likely to be forthcoming in the way of a fee, and that (if he be paid at all) the medical man, who is only summoned to difficult cases, is expected to treat them at the same rate that he would charge when taking normal cases as well as those involving heavy responsibility. The remedy, however, must for the present consist in the obtaining of such payments as boards of guardians may decide to make (as they have power to do) in such matters, and in keeping the dissatisfaction of the medical profession before the Legislature whenever the occasion arises. As to the precise legal value of a guarantee obtained from a midwife in the manner proposed by the Enfield Medico-Ethical Society, we believe that its enforcement in a court of law would have been fraught with difficulty. If not so enforceable it would clearly have been useless.

SCLERODERMIA WITH SUBCUTANEOUS CALCAREOUS CONCRETIONS.

IN the September number of the *British Journal of Dermatology* a case of much interest is described by Dr. R. E. Scholefield and Dr. F. Parkes Weber. There exists a group of cases, characterised by the association of sclerodermia, especially of the fingers, with multiple small calcareous nodules, which have sometimes been mistaken for gouty deposits, but which on analysis have been found to consist mainly of calcium carbonate with some calcium phosphate. The disease progresses very slowly, and at first it is confined to the fingers and toes. The calcification appears to be secondary to the sclerosis, and it is largely dependent on degenerative and obliterative changes in the small blood-vessels. The case described in the article was that of a woman 50 years of age who had suffered from chilblains as a child. Later her fingers often went white, and from the age of 35 years the skin and soft parts of the fingers had been gradually becoming harder and stiffer, and from time to time indolent painful ulcers had formed at the finger-tips. When seen the ends of the fingers had the characteristic appearance of sclerodactylia, and that calcification was present was shown by X rays and by excision. The calcification was most marked on the palmar aspect of the terminal phalanges of the fingers, especially of the left hand. The feet appeared to be quite normal. Excellent skiagrams of the hands accompany the article. Apparently no previous case of this disease has been observed in this country. The literature of the subject has been recently collected by G. Thibierge and R. J. Weissenbach in the *Annales de Dermatologie*, 1911, p. 129.

VETERINARY TRAINING AND THE PUBLIC HEALTH SERVICE.

THE vast extension of the domain of pathology in recent years has brought into clear relief the intimate relationship between human and veterinary medicine. Particularly has the new science—bacteriology—contributed to this, not only by making plain the practical identity of many disease processes in the animal and the human being, and rendering possible the study of the one through the other, but also by demonstrating hitherto unsuspected channels of infection. As a consequence of this new science, exacting as it does considerable technical training and the command of adequate laboratory facilities, a specially trained set of medical practitioners has arisen adequately equipped to examine the problems of public health and preventive medicine. When investigating defects in human habitation, clothing, food, and occupation, they are necessarily driven to a consideration of matters affecting the domestic animals that come into relation therewith in various ways. The problem of tuberculous cattle, for instance, is closely interwoven with that of human tuberculosis. The need is continually becoming more obvious, therefore, for a class of veterinary sanitarians, highly trained in scientific research methods, to approach from the animal side the solution of those common problems that are already being vigorously

attacked from the human side by the medical officers of health. This need recently received forcible expression at the hands of the President of the Faculty of Physicians and Surgeons of Glasgow, Dr. David N. Knox, in his address at the opening of the Glasgow Veterinary College. After pointing out that no gulf existed between human and veterinary medicine, for both were based on the same scientific principles and threw light each upon the other, he urged upon the governors of the College, the veterinary profession, and the students the importance of the study of bacteriology. Referring to a feeling that seemed to be growing in the veterinary profession that veterinarians should be appointed meat and milk inspectors, he said that scientific laboratories were an absolute necessity for efficient inspection, and he proposed that there should be evolved a class of veterinary surgeons especially skilled and capable of working in such laboratories. For some time to come he feared that such officials would for the most part have to be sought among medical officers of health, until the veterinary profession awoke to the necessity of providing the scientific training required. Failing the establishment of a veterinary diploma in public health by the Royal College of Veterinary Surgeons, he offered as an alternative suggestion the establishment by the Glasgow Veterinary College of post-graduate courses in public health, which would involve the establishment of a public health laboratory, where special instruction in chemistry and bacteriology might be given with a practical examination at the end of the course. It seems certain that an increasing scientific equipment of veterinary sanitarians would secure valuable coöperation between the medical and veterinary professions in the field of public health.

Dr. Graham Steell will deliver the Bradshaw lecture before the Royal College of Physicians of London, on Intrathoracic Tumours and Aneurysms regarded from the Clinical Standpoint, at the College, on Thursday, Nov. 2nd, at 5 o'clock.

THE fourth Norman Kerr lecture of the Society for the Study of Inebriety will be delivered by Professor G. Sims Woodhead, M.D., professor of pathology in the University of Cambridge, on Tuesday, Nov. 14th, at 5 P.M., in the lecture theatre of the Pathological Department, Medical Schools, Downing-street, Cambridge. The subject will be the Action of Alcohol on Body Temperature and on the Heart, illustrated by diagrams and lantern slides.

MEDICAL MAYOR.—Mr. Hugh Stott, M.R.C.S. Eng., L.R.C.P. Lond., has accepted the unanimous invitation of the Lewes town council to be mayor of the Sussex county town in the coming year.

SUCCESSFUL ACTION BY A MEDICAL MAN IN DEVONSHIRE.—At the Axminster county court on Oct. 17th and 18th, before his honour Judge Beresford and a jury, an action was brought by Dr. E. Tonge of Beer against a resident of Seaton for 15 guineas for professional services rendered to the defendant's child. There was a counter-claim against Dr. Tonge for £24 for damages for alleged want of reasonable medical care in his treatment of the child. The medical man who attended the child after Dr. Tonge had withdrawn from the case, in giving evidence stated in cross-examination that Dr. Tonge's diagnosis might have been perfectly accurate. After hearing this statement Mr. J. E. M. Dummett, defendant's counsel, said that the case would not be further proceeded with, for if they had thought such evidence possible the case would never have been gone on with. His honour remarked that Mr. Dummett had only acted in a way they expected a member of an honourable profession to act, and directed the jury to give a verdict for Dr. Tonge on claim and counter-claim, and he entered judgment for him with special costs.

THE POSITION OF THE MEDICAL PRACTITIONER UNDER THE NATIONAL INSURANCE SCHEME OF GERMANY.

(FROM A CORRESPONDENT.)

THERE have been published in THE LANCET during the past 12 months more than one article dealing with different phases of national insurance in Germany, and in these articles the comparative conditions prevailing in England and Germany have been dealt with as different points have arisen in discussing Mr. Lloyd George's Bill. But in view of the fact that the German example continues to be quoted by responsible speakers as though it held good in all cases for England, I venture to send you a detailed picture of the position of the medical practitioner under the National Insurance Scheme of Germany.

Position of Workers in England and Other Countries.

Over a century has passed since the first Bill designed to safeguard the health of the factory worker was enforced, when England not only set an example to other nations, but inaugurated a new era of social legislation. Great Britain has reason to be proud of the measures provided for the benefit of her industrial workers, and in this respect she still stands pre-eminent, for it may be safely asserted that in no other country is such care taken to safeguard the worker's health and welfare in the performance of his daily task.

Hitherto, attention has been directed more especially to the conditions under which the work in our great hives of industry is conducted; and if other countries, while following British example, have forestalled British politics by including measures designed to make provision for the worker during sickness and incapacity, it must be remembered that in those countries the introduction of compulsory insurance on the mutual system has been made imperative in the interests of the community at large. No country possesses so effective a system on the whole—and with full recollection of its defaults—for the relief of the poor as is to be found in the British Poor-law; while the voluntary and humanitarian institutions created in Great Britain to provide against any diminution in the wage-earner's capacity for work have for many years included within their sphere of activity a relatively considerable proportion of the entire army of industrial workers and have reached a degree of efficiency unapproached in any other country. This fact speaks highly for the thrift and good sense of the British working man. Twenty-five years ago, when Germany introduced compulsory insurance against sickness, the organisations of this kind then in existence in that country could be treated as a *quantité négligeable*; to-day, when Great Britain is about to follow suit, her Friendly Societies are a factor of paramount importance to the success of the scheme.

Comparison of British and German Measures.

Attention has already been drawn in your columns to the fact that the National Insurance Bill differs in many essential particulars from the German measure (see in particular THE LANCET, Sept. 30th, 1911, p. 956), but a detailed consideration of the points at variance will be opportune. Of particular importance to the medical profession is a consideration of the position of the medical practitioner under the German system, the more so since the Bill of the British Chancellor as it now stands shows the same disregard for the interests of the profession as is unfortunately the case in Germany. Moreover, owing to the absence in Great Britain of certain provisions in existence in Germany, the British practitioner will be placed at a greater disadvantage than his German *confrère*, so that there is every reason to study carefully the conditions under which the medical benefits are administered in Germany, in order to profit in time by the bitter experience gained by Continental colleagues. This course is all the more justified since this very subject offers numerous parallels in both countries, even to the extent that the framers of the British Bill appear intent on duplicating the mistakes made in Germany with regard to the position of the medical man in the working of the scheme, with results that are well known to all who have followed the course of events in Germany.

Scope of National Insurance Bill.

The National Insurance Bill includes within the scope of a single measure two distinct branches of industrial insurance—viz., provision during sickness and invalidity assurance. The insured are either to become members of an "approved" society or will be enrolled as Post Office contributors. Although the income limit for compulsory insurance is fixed at £160 per annum, employers and employees will be called upon to pay a uniform contribution, irrespective of the actual salary earned by the insured (except in the case of persons earning under 2*s.* 6*d.* a day, where the employer will be called upon to make good the difference). In addition to the contributions levied from both parties the State will participate financially in the working of the scheme. The insured will be entitled to receive free medical attendance and free medicine during sickness, as well as sick pay amounting to 10*s.* a week during the first 13 weeks, and 5*s.* during the remaining 13 weeks. Like the contributions, the sick pay will not be affected by the wage-earner's actual salary, only in the case of women and minors a lower scale of pay than the above will be granted. The invalidity benefit is fixed at the uniform rate of 5*s.* weekly. That, I think, is a fair summary of the British scheme. Now look at the German scheme.

The German Scheme.

In Germany insurance against sickness and invalidity form two distinct branches, each administered on totally different lines. The income limit for compulsory insurance is £100, and the administration of the sickness benefits provided in the statutes is entrusted to autonomous sick clubs, mostly of a local character. In smaller places a communal sick club embraces all the insured residing within its limits; in larger towns separate sick clubs are formed to include all the workers engaged in a particular trades or crafts. In addition to these organisations, industrial establishments employing at least 50 hands are empowered to form their own clubs for the benefit of their employees. All these sick clubs are entirely self-governing—that is to say, the management is vested in a board of which one-third of the members are representatives of the employers, and the remaining two-thirds of the employees. The State merely reserves to itself the right of supervision, and demands that every club shall possess a reserve fund amounting to an average year's expenses, based on the expenditure of the three preceding years.

As far as the existing Friendly Societies and similar voluntary institutions are concerned, the German law does not interfere in their activity, and as long as they provide their members with the minimum benefits required by the insurance measures, membership of one of these organisations excuses the worker from re-insuring in any other kind of compulsory club. The contributions levied depend upon the wage-earner's salary, and the total amount may not exceed 6 per cent. of his wages. Of this, one-third is paid by the employer and the other two-thirds by the employee; the State does not contribute towards the cost of sickness insurance. The sick pay, too, varies with the worker's salary and legally may not be less than half his usual wage throughout the entire period of 26 weeks, and should the insured undergo treatment in a hospital his dependents are entitled to receive an allowance amounting to half of the sum the breadwinner would be drawing were he to be treated in his own home.

Invalidity insurance is a separate measure with which is included provision for old age. The administration of this branch of social reform differs totally from that adopted in the case of sickness insurance, inasmuch as it is controlled by the State. It forms the subject of a special contribution which employer and employee alike have to pay, this time in equal shares, in addition to the sums levied for sickness insurance. Here, too, the contributions are graded according to the worker's salary, and the invalidity pension to which he is entitled varies with the length of time that he has been insured and with the wage class to which he belongs. In this case the State assumes a portion of the cost of administration and supplements every pension paid out of the funds of the scheme by an annual grant of £2 10*s.* The old age pensions, which become operative at the age of 70, are also subject to the same system of calculation.

Concrete Examples.

A concrete example will best illustrate the difference in the position of the insured under both schemes. The British worker earning 5*s.* a day will be called upon to pay a weekly contribution of 4*d.*, his employer 3*d.*, and the State will add 2*d.*; in all 9*d.* Assuming that the same man goes over to Germany and is insured in a sick club levying a rate of 2½ per cent., with the same salary he will have to pay 6*d.* and his employer 3*d.*, or 9*d.* for both. In addition to this employer and workman each will have to pay a weekly sum of 2¼*d.* towards insurance against invalidity and old age, so that the workman earning 30*s.* a week would, under these circumstances, pay in all for industrial insurance in Germany 8¼*d.*, and his employer 5¼*d.* weekly, or 4¼*d.* and 2¼*d.* more respectively than they will be called upon to pay in Great Britain. Of course, the fact must not be overlooked that in England old age pensions are not contributory, whereas in Germany provision to this end is included in the insurance against invalidity. Further, in England the workman during sickness will receive 10*s.*, and after 13 weeks 5*s.* as sick pay, and the latter amount in the case of invalidity. In Germany, on the contrary, he is entitled to a uniform sick pay of at least 15*s.* a week, and were he forced to go to a hospital his dependents would receive a weekly allowance of 7*s.* 6*d.* Sex and age are not allowed to influence the German rate of sickness benefit. As regards invalidity pensions, it may be mentioned that the lowest figure is £5 16*s.* per annum, and the highest may be given as about £22 10*s.*; as already stated, the sum paid out depends upon the insured person's wage class and the length of time that he has been insured. Old-age pensions range from £5 10*s.* to £11 10*s.*

It is evident from a consideration of the above examples that the German workman pays proportionately more than the British wage-earner will be called upon to contribute. The total contributions for both forms of insurance in Germany amount to 42*s.* 7*d.* per person insured, this figure representing an average weekly charge of 6*d.* on the workman's salary, and a little more than 3¾*d.* weekly to be paid by the employer. Insurance against accidents, as it is non-contributory for the workers, has not been taken into consideration; it has no bearing on the points under discussion.

Position of Medical Man under German Scheme.

Let us now consider the position of the medical practitioner under the German scheme. The insurance laws, otherwise replete with detail, contain no provisions for regulating the remuneration of the medical men whose duty it is to give effect to the medical benefits to which the insured are entitled. This is a most unfortunate omission, and the same mistake is apparently to be repeated in Great Britain. In Germany, however, there are no Health Committees to sanction contracts entered into between doctors and sick clubs, and all arrangements between both parties are made directly, without the intervention of any outside body. The practitioner who assumes the position of club doctor does so by private agreement with the board of the club, and the contract is not subject to ratification by any other person. At the present moment the average rate of remuneration of club doctors amounts to 4*s.* per head of the insured, and in the case of clubs which extend free medical treatment to the member's family the honorarium is about 12*s.* The question of free choice of doctor is usually regulated on the following basis: if the club has arrangements with a number of medical practitioners the insured are called upon annually to select a doctor from the list, and a change of doctor during the course of the same illness is not allowed. For the treatment of the insured living at some distance from the residence of the usual club doctors an arrangement is made whereby the services of the nearest practitioner alone will be available should occasion arise, a very wise provision which saves many a doctor from wasting his time in visiting patients residing at some distance.

With regard to the methods of remuneration in vogue, it is a matter for congratulation to note that the system of paying the club doctor a fixed annual salary in return for indefinite and practically unlimited calls upon his services is gradually dying out. In clubs where the members select their medical attendant for the coming year the total number in each case is multiplied by the *per capita* grant and the amount paid out in full to each doctor, who thus receives a remuneration proportionate in a way to the potential work he may be called upon to perform. Other clubs hand over the total sum provided for medical attendance to the local medical society, and the latter undertakes to divide the amount

among the several club doctors. This is usually done by means of points; each doctor attributes a certain number of points to every case attended, and the whole is examined by a committee of the society which fixes the relative value of the services rendered and divides the money accordingly. Several clubs, however, pay the doctor for each case he attends, payment being based on a scale of fees established in the medical tariff, and this system of remuneration is naturally the fairest to both parties.

Duties of Club Doctors.

A few excerpts from a sick club doctor's contract will best illustrate his duties. He is enjoined not to lose sight of the interests of the club while attending to its members, and to guard against malingerers; sufferers from anæmia, particularly females, are not to be declared unfit for work unless this is really the case. The doctors are at liberty to attend all meetings of the board, and it is requested that they should consult the board with regard to serious cases of illness. Patients who wish to see the doctor in their own home must inform him of their desire before 8 A.M. during the summer months and 8 30 A.M. in winter. Patients who are able to go out should visit the doctor during his consultation hours. Suspected malingerers are to be sent at once to an hospital, also all infectious cases, as well as all patients who are not able to receive adequate care in their own home, or where a speedier recovery seems likely to result from treatment in the hospital. If the doctor thinks it necessary to prescribe for a member expensive articles, such as wine, brandy, special foods, or special treatment (e.g., massage, baths), the consent of the board must first be obtained. As far as possible only inexpensive drugs should be used in prescribing. For the remuneration granted the doctor agrees to attend by day or night to the members of the club, to apply plaster bandages, suture wounds, and perform small operations. For night visits in urgent cases to patients residing outside the doctor's place of abode the latter in some clubs receives a special fee of 3*s*. If the club doctor is prevented from attending to his professional duties for any cause he must provide a substitute at his own cost. For assistance at a birth he receives 10*s*.

Medical Tariff.

It will be seen from the above that the contract club doctor is only called upon to perform what may be termed routine work, and here we come to one of the great differences between the German and the British scheme. In both countries the insured are considered entitled to the best medical attendance, but in the British Bill no mention is made of any provision for major operations, &c. In Germany every sick club makes arrangements with a number of specialists—for instance, with an oculist, a specialist for internal complaints, for diseases of the ear, and of the throat and nose. If the club doctor considers it advisable for a patient to receive special advice or treatment he informs the board, which then gives the member a form authorising him to consult one of the specialists in question. The remuneration of the specialist's work is based on the minimum fees set forth in the official scale of charges for professional services. This is a medical tariff which establishes a maximum and minimum fee for every kind of medical or surgical service, and in the absence of any agreement between patient aud doctor with regard to the latter's fee its provisions become operative. Its minimum charges are applicable in all cases where the cost of treatment is borne by the public funds, including the sick clubs. The figures below give the minimum fees only in illustration of the rate of remuneration for such work done on behalf of the insured (Prussian scale):—

Removal of foreign body from the larynx or œsophagus ...	6*s*.
Removal of nasal polypus	10*s*.
Resection of a joint	30*s*.
Operation for empyema	20*s*.
Operation for phimosis	6*s*.
Removal of foreign body from the cornea	3*s*.
Iridectomy	20*s*.
Removal of the eyeball	30*s*.
Curettage of the uterine cavity	10*s*.

In connexion with the above it may be here mentioned that in distinction to Great Britain, where the hospitals are dependent upon voluntary contributions for their maintenance, these institutions in Germany are either under the control of the municipality or of the State. Each hospital has a regular scale of charges, graded to suit various purses, and those undergoing treatment have to pay accordingly. In the case of sick club patients the lowest rates are usually charged. The accommodation in the hospitals is divided into three classes. First-class patients each have a room to themselves with one bed, and residents in the locality pay 6*s*. a day, non-residents 8*s*. In the case of acute infectious diseases these charges are raised to 8*s*. and 10*s*. respectively. Attendance at a birth is charged at least £2 10*s*. in this class. In the second class each room contains two or three beds, and the daily charges here amount to 3*s*. and 4*s*., or for infectious cases 4*s*. and 6*s*. for residents and non-residents respectively; confinements at least 30*s*. These charges are in force in the town hospital of the capital of one of the German Grand Duchies. In addition to these charges, patients in both classes have to pay 1*s*. a day for medical attendance, while dressings, medicines, wines, special forms of treatment (e.g., X rays), and washing of the body-linen are charged for extra. The third-class patients, which include members of sick clubs, pay at the rate of 2*s*. a day, and the fee for attendance at a birth is here fixed at 12*s*. In this class no extra charge for medicines or operations is made, except, of course, in the case of private patients who, if known to have means, may be called upon to pay. The fees are fixed by the director of the hospital, and in the case of first- and second-class patients who are residents of the town a sum equal to a fortnight's stay may be demanded in advance as security; in the case of non-residents this amount may be doubled to cover a month's treatment. It is apparent that German hospitals take no risks in dealing with well-to-do patients, a singular contrast with British hospital conditions. The third-class patients include all those whose treatment is paid for out of the public funds or by sick clubs, and the respective bodies are simply debited with the amount incurred. The whole is on a sound business footing and the hospital is run in the same manner as any other form of municipal enterprise.

Relations between Doctors and Clubs in Germany.

A few words on the relations between doctors and clubs may be of interest. It is the endeavour of the latter to keep down expenses for medical treatment and for medicines to as low a level as possible in order to provide the members with other forms of benefits, mostly taking the form of a higher rate of sick pay. For this reason the doctor is obliged to prescribe as cheaply as possible, and there are in existence in Germany several collections of formulæ which are supplied to club doctors for use when prescribing for patients. Thus in liniments olive oil is not to be used, instead some cheaper oil, rape-seed oil for instance, has to be prescribed. Expensive forms of dispensing are tabooed, such as infusions, divided powders, and pills. Some clubs go so far as practically to forbid solutions: to quote an instance, the doctor is required to prescribe half an ounce of potassium iodide with instructions to the patient to dissolve it in a wine-bottle full of water and to take a glassful as a dose. Instead, again, of prescribing, say, 10 powders, each containing 8 grains of phenacetin, the doctor writes out a prescription for 80 grains of this drug, with directions to "take as much as will go on the point of a knife." This course has been severely condemned, while the new Hungarian Pharmacopœia shows that the dangers which may arise from this loose form of dosage are fully recognised by forbidding the dispensing of all potent drugs in bulk.

As soon as a patient presents himself for treatment the doctor must make a report to the board of the club, informing it of the nature of the member's illness, and on the form he must state whether the patient has received permission to go out, and if so, the hours fixed by the doctor must be given. Every week the doctor has to make a report to the club, and when the patient is discharged as fit for work the exact date must be communicated to the board. If the doctor has reason to believe that he is dealing with a malingerer or is of opinion that hospital treatment would be advisable under the circumstances, he informs the board, and the latter takes the necessary steps to have the person admitted to hospital. If some special treatment appears indicated—for instance, massage, a course of baths, or a mineral-water cure—the consent of the club must first be obtained, and the extent to which such treatment is accorded depends naturally upon the financial position of the club.

Some organisations are able to send their members to such well-known resorts as Baden-Baden or Bad Nauheim to undergo treatment, or convalescents are sent to recuperate in some country place or sanatorium, several of which have been erected by the sick clubs in coöperation for the sole benefit of their members.

Invalidity Pensions.

The method in force in Germany with regard to applications for invalidity pensions are not without interest. The sick clubs have to make provision for their members for a period of 26 weeks, and at the end of this time, if the insured is still incapacitated for work, the benefits extended under the invalidity insurance now become operative. The insured must make an application to the invalidity insurance office, and in addition a medical certificate must be presented, for filling up which the doctor receives a fee of 5*s*. The information required is certainly exhaustive, this being partly due to the fact that an invalidity pension is only paid out if the applicant's capacity for work has been reduced to one-third of the normal, otherwise the authorities are empowered to make the person undergo a special form of treatment intended to restore him to complete health—this includes admission to a sanatorium for tuberculosis. In this certificate the doctor has to answer questions dealing with the following: complaints made by the applicant; commencement, duration, and course of the affections which have led to incapacity; duration of the last treatment by the doctor giving this certificate; objective examination—viz., constitution, appearance, bodily condition as regards strength and nutrition, pulse; nervous system; heart and blood-vessels; respiratory organs (circumference of chest in expiration and inspiration); organs of the abdomen (hernia); organs of sense; urinary and sexual apparatus; limbs; possible alcoholism; ultimate diagnosis. In addition the doctor must make statements as to the following: origin of the applicant's complaint and his degree of incapacity for work. Further, he must express an opinion as to whether the incapacity is likely to be permanent or whether a suitable form of treatment is indicated in order to improve the patient's earning powers or his condition of health. The last question on the form is, Do you suspect the applicant of exaggerating or malingering?

The Question of Dispensing.

A few words on an innovation, as far as Great Britain is concerned, which will follow the introduction of the National Insurance Bill may prove of interest here. It is proposed in great measure to divorce the doctor's duty of giving professional advice from dispensing, and the supply of medicine to the insured is to be handed over with few exceptions to the pharmacist. In Great Britain the public is accustomed to associate the tangible result of the doctor's visit with the professional advice given; both have grown to form a twin result of "calling in the doctor." This is to be changed under the new *régime*, and the bottle of medicine will no longer be bound up so intimately with the doctor's visit owing to the intervention of another party. It is an old custom which Great Britain shares alone with some Swiss cantons and the United States; elsewhere the doctor is strictly forbidden to dispense, and the compounding of all medicines is a privilege reserved to the pharmacist. In Great Britain the man with a registrable pharmaceutical qualification can open a pharmacy without further difficulty, and this condition prevails in the Latin countries, in Holland, and in Switzerland. In Germany, Austria-Hungary, Scandinavia, Russia, and the Balkan States the number of pharmacies is limited in proportion to the population, there being on an average one pharmacy for every 10,000 inhabitants. The exercise of the profession of pharmacy is treated in the light of a monopoly, and the authorities reserve to themselves the right of granting permission to open or conduct a pharmacy to suitable applicants. Under these circumstances it is easy to understand the great difference in the profession in Great Britain and abroad, and if the British pharmacist deals in numerous articles which his Teuton *confrère* is apt to consider beneath the dignity of a skilled profession to handle, it must be remembered that the conditions are totally different. Abroad the revenue of the pharmaceutical chemist, who is a university man, is largely derived from dispensing, which is far from being the case in British pharmacies, with the exception of certain businesses in the West End of London and a few quarters in great cities. However, in return for his privileged position the German pharmacist is hedged in by laws and regulations of the most drastic kind, and is under constant Government supervision—his pharmacy is inspected by the authorities from time to time in no perfunctory manner, and any slight transgression is recorded against the owner, with dire consequences at some later date.

Scale of Charges for Dispensing.

In these countries there exists another provision absent in Great Britain, but which, it appears, will have to be created to meet the requirements of the Insurance Bill. In those countries in which the exercise of pharmacy is subject to restriction, and also in Italy, there exists an authoritative scale of charges for dispensing, and for rich and poor alike the cost of a prescription is identical, severe penalties being inflicted in the case of any overcharge. These dispensing tariffs are elaborated by the Government authorities, the cost of a prescription being obtained by adding the charge for the ingredients, a charge for the manipulations entailed in compounding, and the charge for the container. Three prescriptions "taxed" according to the German tariff will illustrate this point:—

		s.	*d.*
1.	Potass. bromid., ʒii....	0	1
	Potass. iodid., ʒii.	0	8
	Aq. ad ℥vi.	0	4½*
	"Dispensation" (i.e., label, cork, registration) ...	0	2
	Bottle	0	2
	Cost of above prescription	1	5½

* Charge for solution, including water.

2.	Tinct. opii, ʒii.	0	4
	"Dispensation"	0	2
	Patent drop bottle	0	3
	Cost of above prescription	0	9
3.	Quinin. sulph., gr. jss.	0	1½
	Acetanilid., gr. x.	0	1
	Mitte pulv. xii.		
	Charge for mixing	0	2½
	Charge for dividing into 12 powders...	0	7½
	"Dispensation"	0	2
	Cardboard box	0	2½
	Cost of above prescription	1	5

In the case of prescriptions for members of sick clubs most countries compel the pharmacist to grant a rebate (in Germany of 10 to 15 per cent.) off the charges of the official tariff; with few exceptions, due to differences of a local character, a member of a sick club can have his prescription made up in any pharmacy should there be more than one available in his place of residence. Indeed, the fact that one-fifth of the entire population of the German empire is insured is sufficient to prove that a very large proportion of the prescriptions now dispensed must belong to the class of club work. For reasons of economy the club patients are required to bring back the bottle or container in the event of having a prescription repeated, and the use of expensive pots or glass-stoppered bottles is forbidden, unless specially prescribed by the doctor.

Results of Capitation System.

It has been claimed for the National Insurance Bill that its introduction will tend to regulate the doctor's financial position by relieving him of the burden of unpaid bills, by the vast extension of the capitation system. From German experience it would seem that capitation payments are not in accordance with modern views of the relation between the work accomplished and the remuneration provided, and a system of this kind seems bound to prove unfair to one of the participants. The introduction of compulsory insurance in Germany was followed by a great increase in the number of medical students, and the competition among members of the profession was turned to advantage by the sick clubs. It must be remembered that in Germany the selling of practices is totally unknown, and partnerships in private practice do not exist, and a practice in that country does not represent capital as is the case in England. Soon the doctors discovered the mistake they had made, and recognising the futility of individual action they combined

to form a powerful organisation, known as the "Leipziger Verband"; its full title is the "Association of German Doctors for the Protection of their Economic Interests," and it now has a membership of over 23,000. The strikes of club doctors in Cologne and elsewhere are well known, and show that the association has not hesitated to adopt extreme measures in order to promote the material position of its members.

German Statistics.

In conclusion, some interesting figures from the official German statistics may be adduced to show the work entailed in practice by a scheme of national insurance. While the health of the empire has materially improved during the past quarter of a century, we are confronted by the peculiar fact that the volume of work accomplished in connexion with compulsory insurance has considerably increased, and incidentally the expenditure has assumed enormous proportions. In 1909 the average cost for medical attendance per head of the insured amounted to 5*s*. 9*d*.; this represents an increase of no less than 165·1 per cent. since 1885. Hospital treatment accounted for 3*s*. 4*d*. per insured, an increase of 122 per cent. since 1892, while the cost of medicines and appliances amounted to 3*s*. 7*d*., an increase of 110·1 per cent. since 1885. It is interesting to note that the total expenditure per member in Germany amounts to 12*s* 8*d*. for medical benefits. If we deduct two-thirds from the 3*s* 4*d*. for hospital treatment, and consider the remaining 1*s*. 1*d*. as covering the cost of medical attendance (the figure accepted in Germany), this would mean that the actual cost of medical attendance per person insured amounts to 6*s*. 10*d*. No less than 40·3 per cent. of the insured were reported unfit for work during 1909; this represents an incidence of illness amounting to 42·2 per cent. among the males, and to 35·2 per cent. among the females. The average length of each case of illness, coupled with incapacity, amounted to 20·5 days, or 19·4 days in the case of males, and 23·8 days among the females. Per head of the insured this represents an average of 8·25 days' illness. These figures also show an increase in the course of the past 25 years.

GENERAL MEDICAL COUNCIL.

ELECTION OF DIRECT REPRESENTATIVES.

NOMINATIONS for candidates for the four vacancies, three for England and one for Scotland, on the General Medical Council must reach the Council Office at 299, Oxford-street, London, W., or, in the case of Scotland, 54, George-square, Edinburgh, by Nov. 1st. The candidates for the posts of Direct Representatives for England are, we understand, at present as follows: Dr. H. W. Langley Browne of West Bromwich, Dr. H. A. Latimer of Swansea (who both seek re-election), and Mr. T. Jenner Verrall of Bath, who are standing jointly as the three candidates recommended by the British Medical Association; Mr. George Brown of Callington, Cornwall, Dr. Sidney C. Lawrence of Lower Edmonton, and Dr. Arthur Hawkyard of Leeds, who are also standing jointly, and whose election address appears below; Mr. George Jackson of Plymouth; and Dr. Arthur Haydon of London.

Dr. Norman Walker of Edinburgh seeks re-election as the Direct Representative for Scotland, as was stated in our Scottish letter of last week.

To the Registered Medical Practitioners of England and Wales.

LADIES AND GENTLEMEN,—We have been invited by the Society of Members of the Royal College of Surgeons of England and the Imperial Medical Reform Union to allow ourselves to be nominated as candidates for the three vacant posts as Direct Representatives for England and Wales on the General Medical Council. These requests have been supported by so many practitioners that we have decided to accept their invitations. One of us (George Brown) has already served ten years on the Council, and his record of hard work there on your behalf is well known to you all.

In supporting our candidature you make an emphatic protest against the attempt now being made by the officials of the British Medical Association to seize upon all the four positions and fill them, not with representatives of the practitioners directly elected by them, but with nominees of the Council of the Association. If this attempt were successful the composition of the General Medical Council would revert to that prior to the Act of 1886—viz., an assembly of guardians of vested interests, and so opposed to the interests of "the rank and file." It is intolerable and unjust this endeavour to limit the candidature entirely to those men who hold office in the Association as long as there are others able and willing to represent the practitioners and independent of official trammels and whose course of action will be based on actual experience of your needs and whose policy is plainly defined by the terms of this address.

We three are standing on one and the same platform, which has amongst its stout planks: (1) suppression of quackery and imposture; (2) reform of the General Medical Council with an increase of its legal powers; (3) the one-portal system of examinations for qualification to practise our profession (read the leading article in THE LANCET of Oct. 21st, 1911); and (4) checking of the abuse of free hospital treatment.

With reference to No. 2, we think that the time has arrived for a thorough revision of the constitution of the General Medical Council. Consideration of its proceedings for ten years past will convince anyone that it is quite time our profession was governed by a council, the majority (at least) of whose members should be men elected by the practitioners of the United Kingdom and Ireland, and not by a council consisting of representatives of the teaching and examining bodies and of nominees of the Crown. These gentlemen have never been engaged in general practice and know little or nothing whatever of the difficulties that beset "the family doctor" or of the causes of our inadequate incomes, and those only obtained by excess of work.

The National Insurance Bill.—We think that the General Medical Council should have taken a more active part in safeguarding the interests of the profession which are so seriously threatened by this Bill promoted by Mr. Lloyd George, the Chancellor of the Exchequer. If you send us by your votes to the medical Parliament we intend to carefully watch all proposed legislation which appears likely to affect your interests, and to urge the Council, when it is necessary, to take prompt and effective action on your behalf. If the present legal powers of the Council are not equal to its work, then no time should be lost in acquiring further powers. We consider that the activity of the Council should extend far beyond the regulation of the studies and the registration of students after their approval by one or more of the numerous licensing bodies, whose interest in your welfare disappears as soon as they have pocketed their last fees and handed you a legal qualification to practise. We are in sympathy with the "good intentions" of the National Insurance Bill, but whilst giving the British Medical Association every credit for its efforts in this matter we are well aware that many of you think that in their conferences with the Chancellor of the Exchequer the necessity of a low wage-limit and an adequate capitation fee (and their definition in the Act itself) should have been insisted on. Further, Mr. Lloyd George might have been urged to seriously consider the alternative to a capitation fee of payment for work done. Failing recognition of the just claims of the practitioners, we consider that the proper course is to withdraw the Bill from Parliament or at least the clauses relating to medical attendance. We are convinced that the Bill, as it stands, will do us all great harm. In this direction the influence of the General Medical Council should be at once brought to bear on the Government.

Ourselves.—Our residential qualifications are excellent, for we live respectively in the South-West, North, and South-East of England. Whilst one (George Brown) has personal acquaintance with the conditions of practice in the South and West, following years of general practice in central London, another (Hawkyard) has the same experience of the North of England, and the third one (Lawrence) has a thorough knowledge of the conditions of practice in the Midland counties and London suburbs. We claim to be well qualified to represent you on the Council by reason of a very large united experience of medical work, both of a public and private character, and from a preventive as well

as a curative point of view. We thoroughly understand the evils of club and pauper practice from personal experience, which gives us an intimate knowledge of the requirements of "the man in practice."

On these grounds, and in view of our avowed policy, we confidently ask for your own votes and for your influence in securing other votes for

Your obedient servants,

GEORGE BROWN,
Hon. Sec. of the Imperial Medical Reform Union; formerly Direct Representative; Vice-President of the Society of M.R.C.S. Eng.

ARTHUR HAWKYARD,
President of the Leeds and District Medical Practitioners' Association.

SIDNEY C. LAWRENCE,
Hon. Sec. of the Society of M.R.C.S. Eng.; M.O.H. of Edmonton.

Oct. 24th, 1911.

To the Editor of THE LANCET.

SIR,—I have decided to become a candidate for election as a Direct Representative in order to promote the interests of English and colonial graduates holding foreign degrees.

It has been my endeavour for many years past to overcome insular prejudice and bring about a much needed reform—namely, the registration of foreign degrees—as an indication of academical distinction and evidence of study abroad. From a financial point of view this would bring more than £1000 into the treasury of the General Medical Council.

My address to the electors on this and other matters will be found in the current issue of THE LANCET and the *British Medical Journal*.

I am, Sir, yours faithfully,

ARTHUR GEORGE HAYDON, M.D.,
Secretary, Brussels Medical Graduates' Association.

Cavendish-square, London, W., Oct. 24th, 1911.

MALARIA IN BOMBAY.

IN April of the present year Dr. Charles A. Bentley, who has been employed on special duty in Bombay in connexion with malaria investigation, presented a report on his researches, which has now been published. In our issue of Sept. 2nd (p. 732) we noted the action of the Bombay Government consequent on this report; and on Sept. 23rd (p. 924) we reported the discussion that took place thereon by the City Corporation. Dr. Bentley's investigation was exhaustive, and his report offers several points of interest for discussion

Nature of Population.

In regard to the population involved, which numbered 977,822 at the Census in 1906, he shows that it was altogether abnormal; not only are the inhabitants of Bombay composed of very many different races—as many as 62 different dialects being spoken—but, in addition to the fixed and permanent population, there are three categories of "floating population"—viz., temporary residents for business purposes; a labouring class, shifting regularly according to the season of the year; and a very large number of travellers and pilgrims constantly arriving and departing. The vast majority of the inhabitants belong to the labouring class, and of these a very large number exist in conditions of the greatest poverty, one of the chief consequences being excessive overcrowding—as many as 22 persons have been counted asleep on the floor and adjoining verandah of a single-room tenement. In addition to the poverty so widely prevailing under normal conditions, during the last few years the increased prices of grain have considerably added to the difficulty of the struggle for existence.

In the earlier part of the last century Bombay had a rather good, but vague, reputation for health, owing to its sea breezes, though it is doubtful if this was deserved; malaria must have been present, but was not particularly prevalent. In 1903 Powell found the malaria parasite in 2542 out of 3413 blood specimens from the police. In 1905 the municipal corporation resolved that, in view of the increasing prevalence of, and high mortality from, fevers, a comprehensive inquiry should be instituted; nothing, however, of much importance was done until an investigation by Major Liston, I.M.S., in 1908, showed that in a particular area near the new docks 80 per cent. of the children had enlarged spleens, and 50 per cent. of those examined harboured malarial parasites in their blood. In November of that year the Bombay Government decided to undertake a systematic research into the whole matter of malarial causation and prevention; of this the present report by Dr. Bentley is the result.

Estimation of Malarial Prevalence.

The first point to be determined was the actual extent of malarial prevalence; this was effected (1) by making a census of enlarged spleens; and (2) by a systematic series of blood examinations for the parasite. As a result of a house-to-house "spleen census," by examining 52,536 children in different parts of the city, McKendrick found that in Ward A, the most southerly portion of the Bombay peninsula, extending from Colaba to the new docks and marine lines, the percentage with enlarged spleens was 29·9; in Ward B, adjoining Ward A to the north on the harbour side, the percentage was 13; while in no other ward was the percentage above 5·9; and in F and G, the two northernmost ones, it was only 1·1 and 1·0 respectively. The percentage for the whole city was 7·2, a figure which has, however, little significance, as the numbers examined in the various areas were not in proportional relation with the respective child populations. In Ward A, where spleen enlargement was found most frequently, approximately 80 per cent. of the children were examined; in Wards D to G, where the spleen enlargement was slight, less than 40 per cent. were examined; therefore, although 7·2 per cent. of the total number examined had enlarged spleens, the real incidence in the city was considerably less. Even on this incomplete examination the incidence is not high, and, as the author of the report states, Bombay is not, as a whole, very malarious. In certain ward-sections, however, the percentage was found to be much higher—e.g., 42·3 in Esplanade section (A Ward), 37·8 in Mandvi Section (B Ward), and 33 in North Fort (A Ward): though the prevalence in the two former may be associated with proximity to the New Dock Extension Works, this explanation will not hold good for the whole of the North Fort Section. In a part of this, and in Dhobi Talao Section on the west of the city, a large amount of malaria is due to mosquitoes breeding in the wells of private houses.

The second mode of examination for malaria—viz., search for parasites in the blood—confirmed the conclusions arrived at by the spleen census. The parasite index (percentage of infection) was found to be 37·5 in Esplanade Section, 34·9 in North Fort, and 40·8 in Dhobi Talao Section. The index was high in nearly all the other sections of A, B, and C Wards in the south and west of the island, while in the four other wards to the north the rate was much lower, in nearly all cases below 5 per cent. Dr. Bentley considers that it is hopeless to attempt to draw any conclusion as to the prevalence of malaria in different years, owing to the confused nomenclature adopted in the death returns, in which ague and remittent fever are returned as separate headings from malaria. He quotes the remarkable statement in the official *Bombay Gazeteer* that "Tarwadi and Byculla have a very low death-rate from malaria, but are notorious for the prevalence of ague and remittent fever"; this is as nice a "derangement of epitaphs" as Mrs. Malaprop herself could have produced.

Causation.

As to the causation of epidemic malaria in Bombay in recent times, Dr. Bentley is decidedly of opinion that the construction works of the Alexandra and Hughes Docks, commenced in 1904 and still in progress, have been largely responsible, by acting as a centre from which diffusion took place. In Mandvi section, for instance, which lies to the west of Victoria Dock, the disease penetrated some distance; and further west, about half-way through Chakla section, its progress being then barred by the high blocks of dwellings in the narrow streets of that neighbourhood. In some cases an enlarged spleen rate of 20 per cent. was found in residents on the side facing the harbour, while in tenements facing in the opposite direction the spleen rate was only 3 per cent. So also the railway staff resident near the Victoria terminus and on the side next the docks suffered severely (so much so that as many as ten trains had to be cancelled). On the P. and O. boats lying in the southerly berths of the Victoria Docks many cases of malaria occurred in 1908, but only among members of the crew who remained on board; ships lying out in the harbour were not affected. It was found, however, that this infection from the dock site would not

account for all the malarial incidence; in North Fort, in Dhobi Talao section on the west side of the island, and elsewhere, extensive incidence of malaria exists, due to the presence of open house wells, which form innumerable breeding places for the mosquito. The principal agent in transmission is considered to have been Neocellia stephensi. The sequence of events that caused the outbreak appears to have been as follows: (1) Existence of serious malarial infection in residents of North Fort near to the new dock works; (2) numerous open house wells, tanks, and cisterns in North Fort adjoining this area; (3) settling down of coolie labourers in temporary huts on the new dock site; (4) formation of pools of water in the vicinity; (5) gradual spread of Neocellia stephensi from North Fort to these new breeding places; (6) spread among the labourers; and (7) the occurrence in 1907–08 of climatic, economic, and other conditions favouring the outbreak. It is pointed out that the settling of large numbers of coolies in temporary huts on the site of their work was a contravention of the rule laid down by Colin more than 50 years since, and emphasised by Fayrer, that labourers should not be housed on the site of large excavation works, but should be removed from the locality.

Preventive Measures.

The measures that have been taken to combat the epidemic have been chiefly directed to the extermination of the mosquitoes concerned, by treatment of small pools and wells with pesterine—i.e., crude petroleum; by the covering of all open wells, tanks, and cisterns, and the draining and filling in of these wherever feasible; and by the free distribution of quinine daily in sugar-coated tablets. The systematic and thorough inspection and protection of wells, both in and near houses, and of tanks and cisterns, are the measures regarded as of most importance. Some amount of success has already attended the efforts that have been made. The discovery by Major Liston that Neocellia stephensi was the carrier responsible for most of the infection made it possible to concentrate preventive measures against this species; infected individuals were not met with before the middle of July, either in 1909 or 1910. The commonest anopheline mosquito in Bombay is Nyssomyzomyia rossi, but no instances of malarial infection of this species were discovered. Dr. Bentley points out in conclusion that, as eradication of malaria is the end to be achieved, permanent measures for the protection or abolition of the breeding places of malaria carriers must have precedence, though at the present time in places like the new dock works special temporary measures will be required; quinine administration is subordinate, but not to be neglected. He estimates the cost at rather more than a lakh of rupees, or about £7000, per annum, while the present money loss from sickness and death due to malaria he calculates at about twelve times this amount.

We have only touched on a few points in the report of this inquiry, which appears to have been conducted in the most painstaking and exhaustive manner; it indicates with precision on what lines action should be taken, and it is to be hoped that sanitary administrations throughout India will be prompted also to take action, on lines similar to, though not necessarily the same as, those so forcibly recommended by Dr. Bentley.

THE LONDON COUNTY COUNCIL AND MEDICAL AFFAIRS.

Annual Report of the Education Medical Officer.

DISCUSSION took place at the meeting of the Education Committee of the London County Council on Oct. 25th on the annual report for 1910 of the medical officer of the education service (Dr. Kerr). The report will be issued shortly, but in the meantime the general purposes subcommittee presented a summary of the document, which, it said, had been subjected to much examination and criticism on account of the increase in cost of medical work in the schools. Naturally this increased work had necessitated the augmentation of the medical staff. Beginning with 40 quarter-time doctors in 1908, this staff had been increased to 56 on Sept 1st, 1909, and to 72 on Sept. 1st, 1910. The professional staff employed at the end of 1910 numbered 84 doctors (70 men and 14 women), giving time equivalent to the full time of 24 medical officers. As from Jan. 1st, 1911, this staff had been further increased to 114 doctors (96 men and 18 women), giving time equivalent to the full time of 32 medical officers. The permanent staff at the end of 1910 comprised the medical officer (education), two assistant medical officers (full-time), two assistant medical officers (half-time), seven assistant medical officers (quarter-time), including specialists in mental, ophthalmic, aural, orthopædic, and dental work, together with 72 medical inspectors (quarter-time). This staff had been increased as from Jan. 1st, 1911, by two assistant medical officers (full time) and 28 medical inspectors (quarter-time).

As the Council's arrangements made four years ago for carrying out the statutory duties imposed by the Education (Administrative Provisions) Act, 1907, had now fully developed, and medical inspection was completely organised in all the schools, it was anticipated that the staff at present engaged would be sufficient to cope with the work.

Of the children examined in full detail there were recorded in last year's report (1909) the results of 37,420 examinations, with 12,656, or 33 per cent., requiring medical treatment. These represented children at all ages. Of the 172,619 children examined in 1910 and noted in detail, 52,954, or 32·6 per cent., received advice cards. The proportion of children who would be selected by the doctors after careful examination and given advice cards could now be fixed on the basis of the last two years as 65,610 out of 210,039, which is 32 per cent., or approximately one-third of those examined. Of the 172,619 children recorded, 81,151 were returned as normal—i.e., free from any definite organic defect. Bad defects of vision or eye diseases were recorded in 18,923. Defects of throat or nose numbered 29,927; of ears or hearing, 9499; skin disease, 2913. This included 453 ringworm cases found by the medical officers, ringworm being generally excluded by the nurses; other diseases were recorded in 15,296.

With regard to the state of nutrition of individual children, those recorded as in good condition were 46·7 per cent., those in moderate condition 41·8 per cent., and those in bad condition 11·5 per cent. The physique of the children had been made the subject of considerable research, the results of which were presented in the form of charts. The various groups shown on the charts corresponded very closely with the three classes distinguished by the British Association. The correspondence of the result with the predominant occupation of the parents in each area was, with a few exceptions, remarkably close. The lower averages were found in the riverside districts, North Kensington, and in a central area extending from the Strand district to Bow and Bromley. The most unexpected figure was the weight recorded for Fulham, and here the majority of the children were tidy and came from apparently comfortable homes of the artisan and commercial class. The committee pointed out that the numbers at present available were, perhaps, too small and liable to error from exceptional children.

During the year under review some beginnings were made with the provision of dental treatment for children, but so little had the public realised the value of this service that its development must be slow. Medical inspection was now carried out in all the Council's secondary schools, training colleges, trade and technical schools. It was just as important in these institutions as in the elementary schools, and, from the economical point of view, probably more important. Each student was examined once a year, and each institution visited once in six weeks. Great difficulties were still experienced in the provision of proper educational treatment of epileptics, neither was there at present any special accommodation for children who were both mentally and physically defective. In 1910 there was a striking diminution in the incidence of scarlet fever and diphtheria. Measles, on the contrary, had been unusually prevalent, the figures both for the spring and autumn showing an abnormal rate of incidence for the time of the year.

In the course of a short discussion Mr. A. J. Shepheard referred to Dr. Kerr's complete report as a most interesting survey of one phase of the social life of London. Both Mr. Shepheard and Miss Adler, a subsequent speaker, urged the importance of making the Council's arrangements for medical treatment more complete.

The report was ordered to be placed on sale.

The Propagation of the Unfit.

The Asylums Committee in a report to the London County Council on Oct. 24th mentioned the case of a female patient,

aged 67 years, who was admitted to Colney Hatch Asylum on Sept. 12th, 1911, for the sixteenth time since April, 1872. The patient had also been in other asylums on eleven occasions. She was married at 18 years of age, and had had 13 children, five of whom were dead. Her first attack of insanity was at the age of 21, when her first child was born. The patient's children were said to be all healthy with the exception of two, who had recently shown signs of insanity. She had two aunts in asylums, and two of her sisters had suffered from insanity; both were dead, one having committed suicide. The committee submitted these particulars by way of supplementing the history of a male patient given some time ago.[1] It seemed a striking illustration of the need for legislation to prevent the increase of the unfit.

Deportation of Alien Pauper Lunatics.

The Asylums Committee also reported as to the proceedings taken under the Aliens Act, 1905, with a view to deporting to their own countries foreign lunatics chargeable to London ratepayers. The number of certificates granted by stipendiary magistrates since the Act came into operation was 86, and 59 patients had been deported. This left 27 to be accounted for, and as to these the Home Secretary did not see his way to make an expulsion order in 14 cases, four died before the expulsion order was issued, one case was removed to a private institution, and eight cases were still under consideration by the Home Secretary. In addition 12 patients had been deported without a certificate being necessary. The total number deported to date was 71.

London Asylum Accounts.

The district auditor reported on the accounts of the London county asylums for the year ended March 31st, 1911. The total expenditure of the committee was £620,249. the cost of maintenance of the ten asylums varying from £70,061 in the case of Claybury to £11,544 in the case of the Epileptic Colony. The expenditure on maintenance showed an increase of £17,157 on the figures of the previous year; this was due chiefly to the higher cost of provisions and necessaries. The auditor gave definite figures on this point. Provisions in the year ended March, 1910, cost £173,422; in 1911, £184,263. an increase of £10 841. Necessaries in 1910 cost £60,482, and in 1911 £63,412, an increase of £2930.

Dr. Geoffery Clarke, second assistant medical officer at Long Grove Asylum, has been appointed first assistant medical officer at Colney Hatch Asylum.

Dr. J. J. Murphy has resigned his appointment as first assistant medical officer at Banstead Asylum in order to go abroad, and the committee has received the resignation with regret.

MEDICINE AND THE LAW.

A House Surgeon's Claim under the Workmen's Compensation Act.

IN the Court of Appeal recently an appeal was heard in which the house surgeon of the Kidderminster Infirmary appealed against the decision of the county court judge who had refused to award him compensation under the Workmen's Compensation Act. The circumstances in which he had claimed were as follows. Subscribers had purchased for the infirmary an X ray apparatus. The house surgeon had voluntarily offered his arm for the purpose of experiment to test the length of exposure to the rays, and having sustained a burn, applied for compensation to the infirmary committee. The county court judge held that it was no part of the applicant's duties to expose himself to the risk of such an experiment, and that consequently the accident did not arise out of and in the course of his employment, and refused to award compensation. The Court of Appeal, after hearing the arguments of counsel on behalf of the appellant, did not call upon the defendants' counsel to reply, and dismissed the appeal with costs, holding that it was no part of a house surgeon's duties to submit himself to dangerous experiments, and confirming the decision of the county court judge that the accident did not arise out of and in the course of the appellant's employment.

[1] THE LANCET, April 8th, 1911, p. 961.

An Action for the Recovery of Fees.

In the Chertsey county court recently Dr. S. G. Tippett sued Sir Joseph B. Robinson, claiming £84 19*s.* for fees for professional attendance alleged by the plaintiff to have been rendered at the request of the defendant to a woman who had been injured in a collision between his motor-car and the cart in which she was riding. The defendant denied that he had employed the plaintiff to attend the woman or authorised his employment. According to Dr. Tippett's evidence the services which he rendered, including the engagement of two nurses, were authorised on behalf of the defendant by Lady Robinson, with whom he communicated by telephone after he had been called to attend the patient at the time of the accident. He was aware that a sum of money had been paid to the injured woman in respect of the accident. Sir J. B. Robinson denied having given any authority for the engagement of the plaintiff in connexion with the case, or that he had ever admitted liability for the accident. He stated that he had paid 14 guineas for the nurses engaged as an act of charity to the injured woman. Lady Robinson denied having authorised the indefinite engagement of nurses, and further denied that she had agreed to pay the plaintiff's charges, and also that she had any authority to pledge her husband's credit. The defendant's chauffeur denied having engaged the services of a medical man, and stated that nothing had been said at the time of the accident as to the defendant being responsible for the expenses to be incurred. A verdict for the plaintiff for £50 was returned, leave to appeal being granted.

Juries and Sympathy in Cases of Infanticide.

Some not unneeded observations were made by Mr. Justice Scrutton to a jury at the Old Bailey recently when summing-up the evidence in a case in which a young married woman, 25 years of age, was being tried for the manslaughter of her infant son. There was evidence that the prisoner had suffered from depression. His lordship reminded the jury that they must not allow their sympathies to interfere with their giving true answers to questions of fact, and informed them that he had in his list for trial four cases arising out of the deaths of infants immediately after their birth. He pointed out that the effect of leniency on the part of juries in response to appeals to their sympathies must ultimately be an increase in the number of babies killed immediately after birth "in order to get them out of the way," adding, "your business is to answer questions of fact according to the facts and not in accordance with your sympathies. The question of punishment is for the court, and I ask you to do me the justice to believe, although I have a red robe and a wig, that I am a man, with exactly the same feelings and sympathies as yourselves; and for the punishment you must trust the judge." The extent to which infants are killed or allowed to die at birth because it is desired that they should be "out of the way" is probably more fully realised by the medical profession than by the public at large, and has long been a subject of protest by them. The woman who is placed in the dock to answer a charge of killing her child finds it easy to excite sympathy, and sometimes obtains it more readily than if want, or whatever the predisposing cause may be, had led her to commit an illegal act of a different character. On the other hand, it is not denied that a woman situated as the prisoner was in the case under comment may be legitimately an object of profound pity. In short, to put an end to the life of a human being is an act demanding full investigation and careful consideration to determine the degree of criminality involved. Mr. Justice Scrutton eventually recognised the claim to clemency of the prisoner before him, after the jury had convicted her, by passing upon her a sentence of five days' imprisonment, which implied her immediate release; but the jury equally rightly affirmed that a crime had been committed. The tendency of juries to assume the right to exercise clemency, which is for the judge in his discretion and with his fuller knowledge and experience, was illustrated in two instances at this trial. The grand jury had thrown out the indictment for murder, although, as the judge observed, they had received no recommendation from the court to do so, and although the prisoner had admitted having given her child three teaspoonfuls of laudanum and having then drunk the remainder of the drug in her possession, facts which rendered it at least probable that she intended to kill him and herself

as well. Secondly, at the close of the case the jury which tried it at first returned as their verdict that the prisoner was guilty, but was not responsible for her actions. The effect of this, as was pointed out to them by the judge, would have been to consign her to a criminal lunatic asylum, but the finding of irresponsibility was withdrawn at his lordship's suggestion and a recommendation to mercy substituted, with the result stated above.

The Absence of a House Surgeon from an Inquest.

At an inquest at Doncaster recently comment was made by the coroner, and a rider was appended to their verdict by the jury censuring the house surgeon of the infirmary who had failed to attend as a witness. The deceased had died in the infirmary after meeting with an accident, and a medical man who had seen him when he was under treatment was able to give evidence as to the cause of death. The inquest was held at 5 P.M., and in the course of the afternoon the house surgeon had communicated with the coroner by telephone, and had told him that he had made arrangements for going away that afternoon. The house surgeon had also mentioned the name of the medical practitioner who could, and who in fact did, give evidence with regard to the case. The house surgeon had been told by the coroner that he must attend as a witness unless the substitute whom he mentioned could give evidence that would be sufficient, but he had not been formally summoned. In the circumstances it is difficult to see why the house surgeon should be made the object of censure in his absence, and without any opportunity being given to him to explain; and it may be added that if he had foregone his plans, whatever they may have been, and attended, he would not as a member of the staff of a hospital have been entitled to the ordinary fee of a medical witness.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7574 births and 4450 deaths were registered during the week ending Oct. 21st. The annual rate of mortality in these towns, which had steadily decreased from 21·2 to 14·9 in the eight preceding weeks, further declined to 14·4 per 1000 in the week under notice. During the first three weeks of the current quarter the mean annual death-rate in these towns averaged 14·8 per 1000, and was 0·1 per 1000 below the annual death-rate during the same period in London. The death-rates in the 77 towns last week ranged from 6·8 in Hornsey, 7·0 in Grimsby, 8·3 in Coventry, and 9·6 in Merthyr Tydfil to 21·5 in Dewsbury, 21·6 in Bootle, 22.2 in Bury, and 22·7 in Sunderland. The 4450 deaths from all causes in the 77 towns were 183 fewer than the number in the previous week, and included 406 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 512 in the eight preceding weeks. Of these 406 deaths, 223 resulted from infantile diarrhœa, 60 from diphtheria, 48 from enteric fever, 37 from measles, 25 from whooping-cough, and 13 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·3 per 1000, against 2·6 and 1·7 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœa, which had steadily decreased from 2714 to 357 in the eight preceding weeks, further declined to 223 last week, and caused the highest annual death-rates of 2·2 in Bootle, in St. Helens, and in Warrington, and 2·5 in York. The deaths referred to diphtheria, which had averaged 45 in the three preceding weeks, rose to 60 last week, and included 18 in London, 4 in Portsmouth, and 3 in Liverpool. The fatal cases of enteric fever, which had been 35, 37, and 39 in the three preceding weeks, further rose last week to 48, which was the highest number recorded in any week of the current year; 10 deaths were recorded in Hull, 8 in London, 4 in Bradford, and 3 in Stoke-on-Trent. The deaths attributed to measles, which had been 19, 18, and 27 in the three preceding weeks, rose again last week to 37; 13 deaths occurred in London, 8 in Wolverhampton, 3 in Nottingham, and 3 in Salford. The deaths referred to whooping-cough, which had been 51, 55, and 35 in the three preceding weeks, further decreased to 25 last week, and included 4 in Birmingham, 3 in London, 3 in Cardiff, and 2 in Sunderland. The 13 fatal cases of scarlet fever were 3 in excess of the number in the previous week, and included 2 in Liverpool. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 1966 in the seven preceding weeks, had further advanced to 2106 on Saturday last; 344 new cases of this disease were admitted to these hospitals during the week, against 333, 293, and 355 in the three preceding weeks. These hospitals also contained on Saturday last 1099 cases of diphtheria, 206 of whooping-cough, 178 of enteric fever, and 82 of measles, but not one of small-pox. The 1239 deaths from all causes in London last week were 94 less than the number in the previous week, and included 228 which were referred to diseases of the respiratory system, against numbers steadily rising from 73 to 210 in the seven preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had increased from 134 to 170 in the three previous weeks, declined to 150 last week, and 346 inquest cases were registered. The causes of 39, or 0·9 per cent., of the deaths registered in the 77 towns during the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Sheffield, Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, Salford, and in 52 other smaller towns. The 39 uncertified causes of death last week included 10 in Birmingham, 9 in Liverpool, and 2 each in Portsmouth, Leicester, St. Helens, Hull, and Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 891 births and 513 deaths were registered during the week ending Oct. 21st. The annual rate of mortality in these towns, which had been 14·9 and 16·4 per 1000 in the two preceding weeks, declined to 15·7 in the week under notice. During the first three weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 15·7 per 1000, and was 0·9 per 1000 above the mean death-rate during the same period in the large English towns. The annual death-rates in the Scotch towns last week ranged from 11·6 and 14·0 in Perth and in Edinburgh to 16·8 in Leith and 17·0 in Glasgow. The 513 deaths from all causes in the eight towns were 25 less than the number in the previous week, and included 47 which were referred to the principal epidemic diseases, against 60 and 74 in the two preceding weeks; of these 47 deaths, 20 resulted from diarrhœa, 9 from measles, 7 from scarlet fever, 5 from diphtheria, 5 from whooping-cough, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·4 per 1000, and was 0·1 per 1000 above the mean death-rate from the same diseases in the 77 large English towns. The deaths attributed to diarrhœal diseases, which had been 52, 33, and 41 in the three preceding weeks, declined to 20 last week, and included 17 of infants under two years of age; 9 deaths were registered in Glasgow, 5 in Dundee, and 3 in Edinburgh. The deaths referred to measles, which had been 1, 4, and 5 in the three previous weeks, further rose last week to 9, and comprised 7 in Glasgow and 2 in Aberdeen. The 7 fatal cases of scarlet fever were 1 below the number returned in each of the two preceding weeks, and included 2 each in Glasgow, Aberdeen, and Greenock. The deaths attributed to diphtheria, which had been 13, 11, and 12 in the three preceding weeks, declined to 5 last week, of which 2 were recorded in Glasgow. The 5 deaths referred to whooping-cough were equal to the average in the two preceding weeks, and included 3 in Glasgow. The fatal case of enteric fever occurred in Glasgow. The deaths referred to diseases of the respiratory system, which had steadily risen from 41 to 80 in the five preceding weeks, declined to 78 last week, and were 2 below the number returned in the corresponding week of last year. Of the 513 deaths from all causes in the eight towns last week, 182, or 35 per cent., were recorded in public institutions, and 27 deaths were attributed to different

forms of violence. The causes of 12, or 2·3 per cent., of the deaths in the eight towns last week were not certified; in the 77 English towns the proportion of uncertified causes last week did not exceed 0·9 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 540 births and 409 deaths were registered during the week ending Oct. 21st. The annual rate of mortality in these towns, which had been 19·6 and 19·3 in the two preceding weeks, declined to 18·6 per 1000 in the week under notice. During the first three weeks of the current quarter the mean annual death-rate in these Irish towns averaged 19·2 per 1000; in the 77 English towns the mean annual death-rate during the same period did not exceed 14·8 per 1000, while in the eight Scotch towns it was equal to 15·7. The annual death-rate last week was equal to 20·0 in Dublin (against 14·3 in London), 17·0 in Belfast, 26·5 in Cork, 8·9 in Londonderry, 20·4 in Limerick, and 26 6 in Waterford; in the 16 smallest of these Irish towns the mean annual death-rate did not exceed 15·7 per 1000. The 409 deaths from all causes were 16 less than the number returned in the previous week, and included 47 which were referred to the principal epidemic diseases, against 81 and 74 in the two preceding weeks; of these 47 deaths, 31 resulted from diarrhœa, 4 from enteric fever, 4 from scarlet fever, 3 from measles, 2 from whooping-cough, 2 from diphtheria, and 1 from typhus, but not one from small-pox. These 47 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·1 per 1000. The mean rate from the same diseases in the 77 English towns last week was equal to 1·3, while in the eight Scotch towns it did not exceed 1·4 per 1000. The deaths attributed to diarrhœal diseases, which had steadily decreased from 121 to 58 in the five preceding weeks, further declined to 31 last week, all of which were of infants under two years of age; 13 deaths were recorded in Dublin, 9 in Belfast, 2 in Wexford, and 2 in Sligo. The 4 deaths referred to enteric fever were equal to the average in the three preceding weeks, and were all registered in Dublin. The 4 fatal cases of scarlet fever were slightly in excess of recent weekly numbers, and occurred in Dublin. The 3 deaths attributed to measles were also slightly in excess of recent weekly numbers and included 2 in Dublin and 1 in Cork. The 2 deaths referred to whooping-cough were equal to the average in the three preceding weeks, and comprised 1 in Dublin and 1 in Belfast. The 2 fatal cases of diphtheria were recorded in Cork and Dundalk respectively, while that of typhus was registered in Dublin. The deaths referred to diseases of the respiratory system, which had been 64 and 50 in the two preceding weeks, rose to 66 last week. Of the 409 deaths from all causes in the Irish towns last week, 137, or 33 per cent., were recorded in public institutions, and 8 deaths were attributed to different forms of violence. The causes of 14, or 3·4 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 0·9 per cent. in the 77 large English towns, and was equal to 2·3 per cent. in the eight Scotch towns.

VITAL STATISTICS OF LONDON DURING SEPTEMBER, 1911.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·9 per 1000 of the population, estimated at 4,522,628 persons in the middle of the year. In the three preceding months the rates were 4·4, 5·1, and 4·4 per 1000 respectively. The lowest rates last month were recorded in Paddington, Kensington, the City of Westminster, Hampstead, and Holborn; and the highest rates in St. Marylebone, Finsbury, Shoreditch, Bethnal Green, and Deptford. Scarlet fever was much more prevalent than in the preceding month; among the several metropolitan boroughs the greatest proportional prevalence of this disease was recorded in St. Marylebone, Hackney, Shoreditch, Bethnal Green, and Deptford. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 1206, 1400, and 1324 at the end of the three preceding months, had risen again to 1656 at the end of last month; the weekly admissions averaged 261, against 162, 200, and 159 in the three preceding months. The prevalence of diphtheria showed a considerable increase over that recorded in the previous month; this disease was proportionally most prevalent in Hampstead, Islington, Finsbury, Bermondsey, Greenwich, and Woolwich. There were 892 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 771, 839, and 720 at the end of the three preceding months; the weekly admissions averaged 138, against 102, 120, and 85 in the three preceding months. Enteric fever was very much more prevalent than in any other recent month; the greatest proportional prevalence of this disease was recorded in Hammersmith, Fulham, St. Pancras, Finsbury, the City of London, and Lewisham. The Metropolitan Asylums Hospitals contained 155 enteric fever patients at the end of last month, against 33, 47, and 56 at the end of the three preceding months; the weekly admissions averaged 39, against 6, 9, and 10 in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Finsbury, Shoreditch, Bethnal Green, Stepney, Southwark, and Deptford. The 18 cases of puerperal fever notified during the month included 4 in Southwark, 3 in Stepney, and 2 each in Hackney and Lewisham. The 19 cases notified as cerebro-spinal meningitis included 4 in St. Pancras, 4 in Battersea, and 2 each in Islington, Hackney, Shoreditch, and Lambeth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided; the death-rates from all causes are further corrected for variations in the sex- and age-constitution of the populations of the several boroughs. During the four weeks ending Sept. 30th the deaths of 5537 London residents were registered, equal to an annual rate of 16·8 per 1000 of the population, against 11·7, 12·4, and 18·9 per 1000 in the three preceding months. The death-rates last month ranged from 9·1 in Hampstead, 11·3 in Stoke Newington, 12·9 in Wandsworth and in Lewisham, and 13·1 in Paddington to 20·5 in Finsbury and in Bethnal Green, 21·2 in Southwark, 23·7 in Shoreditch and in Poplar, and 24·0 in Bermondsey. The 5537 deaths from all causes included 24 from measles, 13 from scarlet fever, 46 from diphtheria, 57 from whooping-cough, 27 from enteric fever, and 1369 among children under two years of age from diarrhœa and enteritis. The lowest death-rates from these diseases in the aggregate were recorded last month in the cities of London and Westminster, in Hampstead, Stoke Newington, Hackney, and Holborn; and the highest rates in Shoreditch, Bethnal Green, Poplar, Southwark, Bermondsey, and Deptford. The 24 deaths from measles were 23 below the corrected average number in the corresponding period of the five preceding years; of these 24 deaths, 7 belonged to Southwark, 4 to Bethnal Green, and 4 to Stepney. The 13 fatal cases of scarlet fever showed a decline of 16 from the corrected average number, and included 2 in Fulham, 2 in St. Marylebone, 2 in Islington, and 2 in Southwark. The 46 deaths from diphtheria were slightly below the average number in the corresponding period of the five preceding years; the greatest proportional mortality from this disease was recorded last month in Hammersmith, Hampstead, Islington, Finsbury, and Greenwich. The 57 fatal cases of whooping-cough showed a decline of 7 from the corrected average number; this disease was proportionally most fatal in Stoke Newington, Bethnal Green, Poplar, Bermondsey, Lambeth, Deptford, and Greenwich. The 27 fatal cases of enteric fever were 6 above the corrected average number in the corresponding period of the five preceding years; of these 27 deaths, 5 belonged to Finsbury, 4 to Camberwell, 3 to St. Pancras, and 2 each to Fulham, Islington, Southwark, and Wandsworth. The 1369 deaths from diarrhœa and enteritis among children under two years of age showed a marked decline from the exceptionally high number recorded in August; among the metropolitan boroughs the mortality from this cause was proportionally greatest in Shoreditch, Bethnal Green, Stepney,

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING SEPTEMBER, 1911.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1911.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.‡									Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.		
LONDON	4,522,628	—	1081	606	—	259	6	18	415	19	2404	6·9	—	24	13	46	57	27	1369	1536	4·4	5537	16·8
West Districts.																							
Paddington	142,541	—	25	3	—	6	1	—	7	—	42	3·8	—	1	—	—	1	1	35	38	3·6	135	13·1
Kensington	172,296	—	11	14	—	5	—	—	6	—	36	2·7	—	—	—	1	1	—	34	36	2·7	183	14·9
Hammersmith	121,837	—	18	13	—	12	—	—	7	—	50	5·3	—	—	—	3	—	1	31	35	3·7	123	13·7
Fulham	153,726	—	32	17	—	9	2	1	11	—	72	6·1	—	1	2	1	1	2	60	67	5·7	199	17·7
Chelsea	66,218	—	11	8	—	2	—	—	4	—	25	4·9	—	1	—	1	1	—	13	16	3·1	80	16·3
City of Westminster	159,709	—	26	8	—	5	1	—	5	1	46	3·8	—	—	—	—	—	—	24	24	2·0	165	14·2
North Districts.																							
St. Marylebone	117,844	—	70	9	—	7	—	1	15	—	102	11·3	—	—	2	1	1	—	24	28	3·1	135	15·9
Hampstead	85,599	—	7	18	—	1	—	—	3	—	29	4·4	—	—	—	2	—	—	5	7	1·1	53	9·1
St. Pancras	218,031	—	51	38	—	25	—	—	17	4	135	8·1	—	—	1	3	3	3	39	49	2·9	257	16·1
Islington	327,234	—	97	71	—	14	—	1	18	2	203	8·1	—	1	2	6	3	2	99	113	4·5	420	17·4
Stoke Newington	50,669	—	10	7	—	3	—	—	3	—	23	5·9	—	1	—	—	2	—	3	6	1·5	42	11·3
Hackney	222,674	—	72	22	—	5	—	2	43	2	146	8·5	—	—	—	1	2	1	39	43	2·5	243	14·8
Central Districts.																							
Holborn	49,084	—	4	8	—	1	—	—	3	—	16	4·2	—	—	—	1	—	—	8	9	2·4	58	16·6
Finsbury	87,639	—	22	18	—	59	—	—	21	—	120	17·8	—	—	—	2	1	5	34	42	6·2	133	20·5
City of London	19,475	—	5	2	—	2	—	—	—	—	9	6·0	—	—	—	—	—	—	1	1	0·7	18	13·2
East Districts.																							
Shoreditch	111,284	—	48	20	—	6	—	1	18	2	95	11·1	—	1	1	2	2	—	64	70	8·2	193	23·7
Bethnal Green	123,247	—	40	15	—	6	—	—	29	—	90	9·1	—	4	—	1	3	—	66	74	7·5	200	20·5
Stepney	279,560	—	62	29	—	13	—	3	41	—	148	6·9	—	4	1	1	2	—	122	130	6·1	401	19·5
Poplar	162,290	—	44	30	—	6	1	1	22	—	104	8·4	—	—	—	2	6	1	91	100	8·0	286	23·7
South Districts.																							
Southwark	191,595	—	48	17	—	11	—	4	32	—	112	7·6	—	7	2	2	3	2	91	107	7·3	299	21·2
Bermondsey	125,840	—	22	26	—	3	—	—	12	—	63	6·5	—	—	—	1	3	1	73	78	8·1	226	24·0
Lambeth	298,032	—	63	40	—	8	—	—	13	2	126	5·5	—	1	—	4	6	1	79	91	4·0	351	15·9
Battersea	167,765	—	44	8	—	8	—	—	13	4	77	6·0	—	—	1	—	—	1	47	49	3·8	178	14·8
Wandsworth	313,389	—	71	22	—	6	1	1	12	1	114	4·7	—	—	—	2	5	2	58	67	2·8	294	12·9
Camberwell	261,407	—	48	51	—	13	—	—	19	—	131	6·5	—	—	—	4	3	4	79	90	4·5	314	16·3
Deptford	109,475	—	44	12	—	5	—	—	20	—	81	9·6	—	1	—	2	5	—	50	58	6·9	157	19·7
Greenwich	95,982	—	26	25	—	1	—	1	8	—	61	8·3	—	1	—	1	3	—	38	43	5·8	125	17·4
Lewisham	161,677	—	28	29	—	10	—	2	6	1	76	6·1	—	—	1	2	—	—	31	34	2·7	154	12·9
Woolwich	121,509	—	32	26	—	5	—	—	7	—	70	7·5	—	—	—	—	—	—	31	31	3·3	125	14·3
Port of London	—	—	—	—	—	2	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard. ‡ Deaths from "typhus fever" and "other continued fevers" are not now distinguished in the Registrar-General's weekly returns; these two columns are therefore omitted from the Table.

Poplar, Southwark, Bermondsey, and Deptford. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases (excluding diarrhœa) was 19·7 per cent. below the average.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Staff-Surgeon: R. W. B. Hall to the *Victory*, additional, for disposal. Surgeon: C. C. Macmillan to the *Pegasus*, on commissioning.

ROYAL ARMY MEDICAL CORPS.

Surgeon-General G. D. Bourke, C.B., K.H.P., Principal Medical Officer of the Irish Command, has been appointed a member of the corporation of the Royal Hibernian Military School. Lieutenant-Colonel F. W. G. Gordon-Hall from Glasgow, has embarked on the s.s. *Rohilla* for a tour of service in South China. Lieutenant-Colonel J. C Morgan has on promotion been appointed to the medical charge of the military hospital at Glasgow. Lieutenant-Colonel A. A. Sutton, D S O., has taken up duty as senior medical officer on the West Coast of Africa with the military forces. Lieutenant-Colonel C. J. Macdonald has embarked for a tour of duty in North China. Lieutenant-Colonel R. Kirkpatrick, C.M.G., commanding the Seventh Company of the Royal Army Medical Corps and in medical charge of the Military Hospital at Devonport, has been placed under orders to proceed abroad during the ensuing trooping season. Lieutenant-Colonel W. C. Beevor, C.M.G., commanding the station hospital at Bangalore, has been appointed to the Medical Charge of the transport s.s *Rewa*, leaving Bombay for Southampton. Major A. L. A. Webb has arrived at Sierra Leone for a tour of duty on the West Coast of Africa. An exchange of stations on the foreign service roster has been approved between Major C. R. Evans and Captain J. A. Hartigan; the former has accordingly taken up duty at Malta, and the latter will proceed to North China on the termination of his leave. Major F. M. Parry has been placed under orders for a tour of service at Mauritius during the ensuing trooping season. Major G. St. C. Thom, commanding the station hospital at Subathu, Simla Hills, has been transferred to Murree. Major H. K. Palmer, at present serving at the station hospital, Colaba, Bombay, has been granted six months' leave of absence home from India. Major A. H. Safford, specialist in bacteriology, has been appointed to take charge of the Research Laboratory at Fyzabad. Captain J. H. Graham has been ordered to Ireland for duty, and on arrival will be posted to the Cork District. Captain N. Low, company officer of the Royal Army Medical Corps Detachment at Belfast, has been selected for appointment to the Belfast, University Contingent, Officers Training Corps from Oct. 20th to Nov. 23rd, and Captain H. C. Gray, clinical pathologist at the Royal Infirmary, Phœnix Park, Dublin, has been similarly selected for attachment to the Dublin University (Trinity College) Contingent from Oct. 18th to Nov. 21st. Captain E. W. Powell has taken over charge of the Brigade Research Laboratory at Aden. Captain A. D. Frazer has been instructed by the War Office to join for duty in Ireland, and will be posted to the Belfast District on arrival. Captain R. B. Black, on termination of the promotion course at the Royal Army Medical College, has been appointed to the Egyptian Army with the local rank of Bimbashi. Captain P. G. Hyde, on the closing of Rathmore Camp, has joined at Dublin. Captain R. L. V. Foster and Captain D. S. Skelton, from the Royal Army Medical College, have been posted to Bodmin and York respectively. Captain D. P. Johnstone, from Brackenbir Moor, has been appointed to Manchester. Captain R. K. White has been transferred from Tipperary to Kinsale. Captain J. W. S. Seccombe, in charge of the Cantonment General Hospital at Nasirabad, has been detailed for duty on board the s s. *Rewa*, leaving Bombay for Southampton. Captain A. T. Frost, specialist in dermatology and venereal diseases at the Royal Infirmary, Phœnix Park, Dublin, has been detailed for duty with the Royal College of Surgeons Contingent, Officers Training Corps, from Oct. 18th to Nov. 21st. Captain R. L. Argles, staff surgeon at Ferozopore and in medical charge of the Ordnance Department, has been granted one year's extension of his Indian tour of service by H E. the Commander-in-Chief in India. The following Captains have been selected by the War Office to attend the courses of instruction for promotion to the rank of Major to be held at the Royal Army Medical College, London, commencing on Nov. 1st next: C. J. Thomson (Edinburgh), A. B. Smallman (Woolwich), W. F. Ellis (Bradford), G. H. J. Brown (Rhayader Camp), T. E. Harty (Guildford), D. P. Watson (Preston), G. A. Kempthorne (Glencorse), N. E. Dunkerton (Woolwich), R. T. Collins (Woolwich), A. C. Osburn (Colchester), L. Bousfield (Crownhill), J. H. Douglass (Dublin), R. R. Lewis (Aldershot), A. L. Otway (Belfast), C. H. Turner (Newbridge), and W. F. H. Vaughan (Cosham).

INDIAN MEDICAL SERVICE.

His Excellency the Governor of Bombay in Council has been pleased to appoint Lieutenant-Colonel C. H. L. Meyer to be principal of the Grant Medical College in Bombay in succession to Lieutenant-Colonel H. P. Dimmock, who has retired from the service. Major H. G. Melville, Bengal Presidency, has arrived home on leave of absence from India. Major F. A. Smith has been appointed Agency Surgeon to the Eastern States of Rajputana on his return from leave. Major G. McI. C. Smith has been selected to officiate as Professor of Materia Medica at the Medical College, Lahore, during the absence on leave of Major H G. Melville. Major P. St. C. More has been granted 20 months' combined leave from India. The services of Major C. H. Bowle-Evans, Bengal, have been placed at the disposal of H.E. the Commander-in-Chief in India. Major T. Stoddart has taken up duty as Civil Surgeon at Mogok in succession to Captain H. S. Matson, transferred to be Civil Surgeon at Taunggyri. Major A. Gwyther has been selected for appointment as Civil Surgeon of Howrah during the absence of Lieutenant-Colonel A H. Nott. Captain M. H. Thornely has been transferred from Manbhum to Shahabad as civil surgeon, in succession to Major T. H. Delany. Captain A. C. W. Young has been appointed to hold charge of the Bacteriological Research Laboratory in the Bannu Brigade by His Excellency the Commander-in-Chief in India. Captain W. S. Nealor has taken up duty as medical officer of the 123rd Outram Rifles. Captain K. S. Singh has been granted one month and eleven days' privilege leave of absence. The services of Captain A. P. G. Lorimer have been placed temporarily at the disposal of the Government of Madras. Captain R. H. Bott, specialist in advanced operative surgery to the Fourth (Quetta) Division, has taken up duty as Professor of Midwifery at the Lahore Medical College during the absence on furlough of Major R Heard Captain J. W. Little has been selected by the Foreign Department as agency surgeon to fill the vacancy caused by the transfer of Major C. H. Bowle-Evans. Captain S. H. Bingess has been appointed a Specialist in Advanced Operative Surgery. The services of Captain J. Smalley have been placed temporarily at the disposal of the Government of Bombay. Captain A. H. Proctor has taken up duty as Resident Surgeon at the Medical College Hospital in Calcutta during the absence on leave of Captain E O. Thurston. Captain N E Griswood has been transferred to Delhi as District Plague Medical Officer. Lieutenant R L. Gamlen has left Lahore for Calcutta in medical charge of the 32nd Sikhs *en route* to join the Abor Expeditionary Field Force.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Captain Ernest U. Bartholomew resigns his commission (dated Oct. 21st, 1911). Lieutenant John Fraser is confirmed in his rank.

TERRITORIAL FORCE.

Infantry.

4th Battalion, The Cheshire Regiment: Surgeon-Captain John B. Yeoman resigns his commission (dated Oct. 21st, 1911).

Royal Army Medical Corps.

3rd West Lancashire Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains (dated Oct. 1st, 1911):—Lieutenant Augustus A.W. Merrick, Lieutenant Ernest Knight, and Lieutenant Norman S. Jeffrey.

1st London (City of London) Field Ambulance, Royal Army Medical Corps: Lieutenant Edward L. Rowse to be Captain (dated Oct. 1st, 1911)

2nd Welsh Field Ambulance, Royal Army Medical Corps:

Arthur Cecil Devereux to be Lieutenant (dated July 11th, 1911).

Attached to Units other than Medical Units.—Lieutenant Frank W. Burn to be Captain (dated July 3rd, 1911). Captain James Andrew resigns his commission (dated Oct. 21st, 1911).

For attachment to Units other than Medical Units.—Lieutenant Henry Robinson, from the London Mounted Brigade Field Ambulance, Royal Army Medical Corps, to be Lieutenant (dated Sept. 21st, 1911).

THE NAVY LEAGUE AND THE PREVENTION OF TUBERCULOSIS.

At the annual meeting of the Navy League, which was held under the presidency of Mr. Geoffrey Drage at the Royal United Service Institution on Oct. 21st, a resolution, proposed by Lady Fremantle, to the effect that the establishment of sanatoriums for consumptive naval invalids is eminently desirable, and that the Navy League undertakes to do everything possible to promote a scheme having this object in view, was adopted.

MEDICAL STORES IN THE PRUSSIAN ARMY.

No. 47 of the Military Medical publications[1] issued by the Prussian War Ministry, has lately reached us. First there is a description of the large storehouse itself, its machinery-installations, and the plan for expanding it in war time. Then the various branches of the work done here are successively detailed. The store department administers the authorised establishment of medical equipment for the Prussian army, and whatever other similar stores may be assigned to it. It distributes stores to the various Prussian army corps as they may require them, equips new depôts when ordered and also those on the lines of communication not supplied by their provincial authorities. When mobilisation is over it takes back stores from those depôts that are to be reduced. It examines new or altered patterns of equipment, communicating its conclusions to the depôts of the other army corps, and, if necessary, to the War Ministries of Bavaria, Saxony, and Würtemberg. It conducts original researches, and tests in its laboratory and workshops all modern improvements in material for the care of the sick, and advises, after discussion with the military hospitals of Berlin, whether these will be of advantage to the army. Finally, it teaches medical officers, informing them of the latest advances in equipment, and how they are to use and care for the patterns issued; it trains medical storekeepers and instructs volunteer "Red Cross" *personnel*, also occasionally foreign officers. On its staff are a lieutenant-colonel of the Army Medical Corps, a senior dispenser, an artificer, and a staff sergeant. First-aid dressings are made here and bandages. In each first-aid packet is a gauze compress and bandage impregnated with sublimate solution (3 per 1000, perhaps to be replaced by cyanide). The bandage is 4 m. by 7 cm. (4½ yards by 2¾ inches). The compress is 18-fold and measures 5 by 2¾ inches. It is sewn on to the bandage, a 10-inch strip being left free to begin with. They are then all rolled up together, according to pattern, wrapped in calico and tied with a thread. Directions for use are printed on a paper affixed with turpentine-starch paste. The date and the order, "To open pull off the thread," are stamped on the outside. These packets are put up in boxes of 300 and are then sterilised, first for an hour at 105° C., and then for two hours following in current steam. A woman can make 100 a day, and some 400,000 or 500,000 are turned out in a year. The silk bought is analysed to make sure its chemical constitution is such as to promise stability; it must be sufficiently inextensible, and its breaking strain must be in due relation to its diameter, which is measured under a microscope. Silk threads are put up in glass tubes having a cotton-wool filter at each end. They are first sterilised, then dried, metal capsules are adjusted over the ends, and they are packed in dated cardboard boxes. Catgut is similarly tested, and for sterilisation is first boiled five hours in ether, dried for 48 hours in a water oven at 75° C. and then in a Cumol oven at 156° C. Rubber goods are analysed to ensure a sufficient percentage of india-rubber: tubing must have 60 per cent. except drainage tubing, which need only have 50 per cent. Indiarubber rings must not be used to seal up preserved provisions, as weakly acid solutions dissolve from them slowly some of the barium and zinc which they contain. Rubber plasters are made in this depôt. They remain serviceable longer than those usually sold, and besides they are known to contain no substance that can harm a wound. Tinned mess utensils are examined to see they have been made according to law. Absorbent cotton is stated to be more absorbent if it contains some free fatty acid, but not more than ½ per cent. is allowed. Endeavours have been made to find some way of preventing the rusting of steel instruments, so far without success. This is a very interesting pamphlet which we commend to all officers in charge of stores. They will find it of great value.

[1] Das Königliche Hauptsanitätsdepot in Berlin. Berlin: A. Hirschwald. Pp. 38. 3 plates and 24 illustrations. Price 2 marks.

THE NEW NAVAL MEDICAL SERVICE REGULATIONS.

In connexion with the revised regulations for the Naval Medical Service directions have been issued by which surgeons under eight years' seniority, who have passed the necessary examination for staff-surgeon, may accept the new regulations, without prejudicing any chance of special promotion which they may possess under the old regulations, on account of appointments held in civil hospitals prior to their entry into the Navy. Surgeons under eight years' seniority who have already passed the examination for staff-surgeon under the old conditions will not be permitted to be re-examined under the new conditions.

DEATHS IN THE SERVICES.

Colonel W. Pleace Warburton, C.S.I., late I.M.S., at Lowestoft, recently, aged 68. He joined the Indian Medical Service in 1866, and for the greater part of 33 years' service he was engaged in administrative work. For some time he was medical officer to the Raja of Kapurthala, and in 1894 became Principal Medical Officer and Sanitary Commissioner of Assam. Later he was appointed Inspector-General of Civil Hospitals in the United Provinces. He recently vacated the post of Superintendent of the Edinburgh Royal Infirmary, a position which he had held since 1899.

Inspector-General of Hospitals and Fleets John Breakey, R.N. (retired), on Oct. 21st. He was appointed surgeon in 1854, staff-surgeon in 1863, fleet-surgeon in 1876, deputy inspector-general in 1882, and inspector-general in 1886. He was assistant surgeon of the *Penelope* during the Russian war in the Baltic in 1854, and was present at the bombardment of Bomarsund (Baltic medal). He also served in the China war of 1857–58 (China medal). In 1887 he was appointed inspector-general of Haslar Hospital. He retired in 1889.

The King has given to Captain Geoffrey Wallace Grainger Hughes, Royal Army Medical Corps, His Majesty's Royal licence and authority to accept and wear the insignia of the Fourth Class of the Imperial Ottoman Order of the Medjidieh, which has been conferred upon him by His Highness the Khedive of Egypt.

Lieutenant-Colonel Sir R. Havelock Charles, Serjeant-Surgeon to the King, will accompany the King and Queen on their Indian tour. Their Majesties' Indian suite will include Lieutenant-Colonel Bird, I.M.S., as extra surgeon.

Major Gilbert, I.M.S., has been appointed Surgeon to the Governor-Designate of Madras, Sir Thomas Gibson-Carmichael.

DONATIONS AND BEQUESTS.—Under the will of the late Mr. Daniel Myers the London Hospital will receive £1000 for the endowment of a bed in memory of the testator's wife. By the same will £500 are bequeathed to Guy's Hospital and a like sum to the Jews' Hospital and Orphan Asylum, West Norwood, and £300 each to the Jews' Deaf and Dumb Home; the Home and Hospital for Jewish Incurables, Tottenham; the Metropolitan Hospital, Kingsland-road; the North-Eastern Hospital for Children; the East London Hospital for Children; the Hospital for Sick Children, Great Ormond-street; the City of London Hospital for Diseases of the Chest; the Cancer Hospital; the Royal Free Hospital, Gray's Inn-road; the Middlesex Hospital; University College Hospital; St. Mary's Hospital, Paddington; and the Poplar Hospital; and £200 each to the Metropolitan Convalescent Institution and the Baroness de Hirsch Convalescent Home, Hampstead Heath.—An anonymous donation of £500 has been received by the treasurer of the Bristol Eye Hospital.—The Middlesex Hospital Cancer Charity has received from Mr. and Mrs. Richard R. Hollins a further donation of £100 for the maintenance of the "Richard Hollins" Cancer Research Scholarship.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—It is becoming more evident every day that our profession is to be not merely revolutionised but victimised. The Chancellor is acting with perfect straightforwardness in emphasising the two plain offers he is making to the public—viz.: (1) 9*d.* for 4*d.*; and (2) the best of doctoring in *all* illnesses without any bills to pay.

We may safely leave to politicians to consider the arithmetic of his first offer. The second only concerns us, and the prominence always given to it in his fascinating popular addresses shows that he attaches very great importance to it as a consideration in voting, and as an inducement to swallow his gigantic Bill whole. We as a profession are bound to examine carefully the *finance* of this offer, which touches us so closely, and it is our duty, as the interested parties, to follow the Chancellor's example by translating it into those terms of currency which will at once explain to the working man the gigantic money value of the boon he is offering on behalf of our profession, and at the same time enable ourselves and the public to understand its true cost, which must be met either by our profession or by the public purse.

Remembering, as its author has clearly indicated, that his scheme is ultimately to be extended to the entire family (say averaging five persons), what is his offer? He says in effect, "Not only will I give you 9*d.* for 4*d*, but I will also give you in medical aid, for 1*d.* to 5*d.* a week, what you have hitherto paid 1*s.* to 5*s.* for." We may fairly average up the annual doctor's bill, at current rates, of a householder earning £160 a year at from £2 12*s.* to £13 per annum, according to the amount of serious sickness occurring. This figure may probably for the future under the Bill be put far higher, for it is not the hitherto average bill incurred for serious sickness only that is to be paid, but a far larger account for attendance in *all* illnesses, great or small; and it is the small and numerous illnesses which under his proposals will be by far the largest total item in the bill. Now, why has he not, so far, put this offer also in plain figures?

First, because the sum is so incalculable that it cannot be estimated in advance or put in nutshell form. Second, because the sum is so gigantic that it cannot be provided by Parliament, and he has therefore arranged that it is to be provided by our profession, in sweat and toil, through its acceptance of a system of contract *per capita* payment; in effect, this badly financed scheme requires underwriting, and *we* are to underwrite the gigantic insurance risks of the Chancellor's experiment. Payment per attendance for services rendered, which has hitherto been the very bedrock of our free profession, has been scouted by politicians and even shirked by some of ourselves, *solely* because it does not fit in with the Chancellor's promises and the Parliamentary Budget. It is freely granted that it does not, owing to the inconceivable extravagance of those promises. But this leaves our profession on the horns of no dilemma save this: of either saving the Chancellor's reputation at our own expense in incessant sweated and degraded work, or of washing our hands honestly of his Bill. Accepting the dilemma, which alternative do we elect?

Our leaders (according to the most far-seeing observers in your columns) have hardly emerged with credit from the first round of the fray in which they deliberately elected to tackle the Chancellor on his own chosen ground with their hands tied behind them by the so-called "principles" of his Bill. Is it not time for those of us—I believe an overwhelming majority—who intend to stand by the present free basis of our profession *at all costs* to say so openly? *I hereby declare that on no consideration will I accept the transforming of my practice into a contract per capita basis.* I invite you, Sir, to open your columns to receiving the names of those who adhere to the above declaration. Once a beginning is made a few hundreds of declared adherents—the more the stronger—will give heart to our whole profession, and by establishing a vanguard of stalwarts strengthen the hands of our "negotiators"; and, what is of far more importance, enlighten public opinion, both in and out of Parliament, as to our real intentions—viz., to stand inflexibly by the old flag of freedom under which we have hitherto lived secure, and which cannot fall save by our own acquiescence. The reasons for the faith and determination that are in certain of us are so numerous, and the aspects of the question so many sided, that it would be impossible to elaborate them here. Suffice it to say that they have, one and all, been convincingly demonstrated in most able letters to the press; and that they are, one and all, based not merely upon private interests, singly or as a profession, not merely upon ordinary justice and freedom of contract, upon ordinary relations of work to pay, but fundamentally upon the real interests of the public and of the poor, when these interests are seriously examined without political or electoral party bias.

Many members of the medical profession remain entirely unconvinced by the able but unpractical arguments raised by some few idealists in our profession in favour of a universal State medical service. These arguments have naturally been used by the Chancellor's adherents as in some measure conferring the approval of our profession on his scheme for substituting a universal contract system for the free practice under competitive conditions which ought to be adhered to without compromise. This *per capita* system is fundamentally immoral, dishonest, and demoralising to both doctor and patient.

Those who think in this manner in no way set themselves against any reasonable plan of enlisting their aid in a scheme of national insurance for the poor. But this is not the time or place for elaborating proposals, based on *totally different principles* from those of the present Bill, which cannot by any ingenuity be amalgamated or engrafted on that Bill. We do not, under any circumstances, intend to try to pour new wine into old bottles. Nor do we intend to allow our interests to be destroyed by the passing of the Bill in a hurry in a month's autumn session. Why should we? The present is, in all probability, the psychological moment which will make or mar us; it is manifest to all who discern the signs of the times in politics that the present is the moment when our intentions should be honestly declared.

Will you, as a medical statesman, take this opportunity of gauging the opinion of the profession by inviting the signatures of all who agree with my declaration, so as to form at least a body of declared and deliberate intention which the interests of the public require should become known?

I am, Sir, yours faithfully,

Osmotherly, Northallerton, Oct. 20th, 1911. H. B. LUARD.

*** We have from the beginning deplored the acceptance by the medical profession of the incalculably wide extension of the contract system proposed under the National Insurance Bill. Under this system much harm has already been done to professional and scientific work. But it is understood that a majority of the medical profession has given adherence to the principle and now only remains in doubt whether the terms upon which that adherence has been promised can be obtained. Were this not so, we should consider it even now not too late to urge on our readers the dangers of contract practice.—ED. L.

To the Editor of THE LANCET.

SIR,—The promoters of the National Insurance Bill seem to have decided that the simplest way to deal with the medical profession is to ignore its claims; the Bill is to be rushed through Parliament, and the Government will take its chance of finding sufficient medical men to make a start with the work. Unfortunately, the profession has missed a great opportunity of refusing absolutely to recognise the contract system; but we can save the situation even now if we will only name our terms and stick to them.

The people are promised adequate medical attendance under the Bill. Now no professional man should be expected, except as an act of charity, to see a patient and supply drugs for less than half-a-crown each visit or

consultation. If we take eight as the average number of visits and consultations per annum for each person, £1 a year would be the corresponding remuneration. If then there must be a capitation fee let us fix it at 20*s.*, and not a penny less. "Absurd on the face of it" will be the reply. Quite so; in other words the Act can only be worked as a colossal charity financed by ourselves. We can also refuse to give way on the £2 a week income-limit. If we adhere resolutely to these two demands the Bill will, it is true, be unworkable, but the responsibility will not rest with us.

I am, Sir, yours faithfully,

EDWIN SMITH, M.D. Lond., Barrister-at-Law,
Lecturer on Forensic Medicine at St. Thomas's Hospital.
London, S.W., Oct. 24th, 1911.

To the Editor of THE LANCET.

SIR,—There is one point of importance in connexion with the Insurance Bill which, so far as I am aware, has not been raised, and that is the responsibility for the treatment of venereal diseases. Section 13 (4) of the Act, referring to diseases or disablement caused by misconduct of the person claiming the benefit, expressly states that whatever else be withheld, "such person shall nevertheless continue to be entitled to medical benefit." Unless the exact position of persons suffering from venereal diseases is settled in black and white before the Act is passed, the medical profession will find itself in a difficult position at a later date.

It is hardly fair to the profession that the treatment of venereal diseases, spread over a long period as it often must be, should be included in the contract, and yet it is of paramount importance to the public that such diseases should be efficiently treated. In the case of tuberculosis a considerable sum of money is set aside for its prevention and cure, and the responsibility for an excessive amount of certain diseases can be brought home to those responsible for it—Clause 46. Sooner or later the question is sure to be raised whether the contributions of the well-behaved are to be appropriated for the benefit of those who contract diseases while in pursuit of their own vicious pleasures. Then we may be faced by an outcry for prevention of venereal diseases by regulation or otherwise.

I am, Sir, yours faithfully,

London, S.W., Oct. 24th, 1911. A. GORDON WILSON.

To the Editor of THE LANCET.

SIR,—I would suggest that all medical men holding club appointments which at present are open to anyone to join should on a fixed date give notice to terminate their appointments by Dec. 31st. Otherwise there may be a way to pass the Insurance Bill and leave the clubs alone to find their doctors. Hence there would be a rush of well-paid artisans defeating our very chief object. This step would also assure the outside world that we do not intend to be defeated. We should, before re-accepting club appointments, stringently act on our united points and remove from our list any person violating our requirements. Even if here and there we have defections we can hold our own easily in the main. Mr. Lloyd George, I suspect, will drop the medical part of his Bill and leave the clubs to fight it out. Unless we resign we must accept unfit persons who will pour in on the Bill becoming law.

I am, Sir, yours faithfully,

Ewyas Harold, Hereford, Oct. 23rd, 1911. LESLIE THAIN.

To the Editor of THE LANCET.

SIR,—In the letter of Mr. A. Benthall on the above subject which you publish in your issue on Oct. 14th, p. 1093, he says, among other things, that "the suggestion of payment by fee for each attendance is a delightful dream, but utterly Utopian and out of the range of practical politics." I should like to ask if Mr. Benthall has ever heard of the National Deposit Friendly Society where the "dream" is put into very practical politics. If not, I should advise him to send for a copy of the rules of that society.

I am, Sir, yours faithfully,

Bangor, Oct. 22nd, 1911. RICHARD WILLIAMS.

THE RELATION OF THE ORGANIC PHOSPHORUS CONTENT OF VARIOUS DIETS TO DISEASES OF NUTRITION, PARTICULARLY BERI-BERI.

To the Editor of THE LANCET.

SIR,—Adverting to an annotation which I contributed to THE LANCET of Oct. 14th, and to an objection to one of my statements raised by Dr. H. Fraser in his letter published in your columns of Oct. 21st, I beg to explain that in the process of revising my original communication I inadvertently deleted the words "and aleurone layer" after pericarp. The statement was intended to read: "The disease as it occurs in the Far East, is now generally recognised to be due to a dietary of white rice from which the pericarp and aleurone layer (containing the bulk of the phosphates and other salts) have been removed in the process of 'polishing' or milling." I regret that the unfortunate omission of the words above mentioned led to the mistake pointed out by Dr. Fraser. Like all others interested in the subject of beri-beri, I am well acquainted with his published works and with the valuable investigations which he and his collaborator Dr. Stanton have made, and which have done so much to elucidate the etiology of this disease.

Whether, as some contend, the absence of a sufficiency of organic phosphorus in the dietary is the essential cause of beri beri, or whether, on the other hand, it is due to the presence or absence of some subtle compound in the diet as yet unknown, it can nevertheless be affirmed without hesitation that, thanks largely to the work of Fraser and Stanton, the disease can be prevented where rice is the staple article of diet, if care be taken to supply a kind from which certain essential qualities have not been removed by a process of over-milling.—I am, Sir, yours faithfully,

Oct. 23rd, 1911. THE WRITER OF THE ANNOTATION.

To the Editor of THE LANCET.

SIR,—As the chemical part of the work on this subject, recently published by Dr. Simpson and Mr. Edie, was carried out in the University of Liverpool and I have followed the whole of it, I may perhaps be allowed to reply to some of Dr. Fraser's criticisms in THE LANCET of Oct. 21st.

The monograph by Schaumann criticised by Dr. Fraser is, in my opinion, one of the finest masterpieces of scientific work—collating, as it does, the labours of very many workers—which I have ever seen in any language, and it would be a great pity if any simple error, such as ascribing the active principle to the phospho-protein group, should deprive Schaumann of the credit of clearly and emphatically pointing out the close relationships of a large group of nutritional disorders. The study of these diseases is of national importance not only to India and the East, but to our own nation and all Western civilisation. As early as 1896 Eijkman in Batavia had shown that fowls fed entirely on polished rice suffered and died from polyneuritis. Grijns in 1908 confirmed this, and Holst and Frohlich in Christiania in a lengthy series of researches on pigeons and guinea-pigs clearly showed that beri-beri and scurvy arose from the restrictions of diet.

Bradden in India first pointed out that tropical beri-beri was prevalent in those Eastern tribes and races, e g. Chinese, who used a highly milled rice as their staple diet, but did not occur in races such as the Tamils, who cured their rice in such a way that the pericarp and sub pericarpal layers were not removed from the grain in the process of milling. There is no question of the value of the experimental confirmation of this obtained in asylums and in gangs of compound labourers in India by Fraser and Stanton, and others. The workers here have highly appreciated their work, which attracted the attention of Professor Ross and formed the starting point of the experimental researches initiated in consequence and still proceeding.

Dr. Fraser chooses to be very severe when he states that our experiments here add nothing to our knowledge of the subject, but we did think that we had served some good purpose in drawing public attention in England to the probability that the problems of nutrition of infants and children were closely allied in type to beri-beri. We still persist in believing that the experiments of Hill

and Flack, and our own, form a conclusive proof of this position.

In regard to the chemical nature of the substances in the subpericarpal layers which are responsible for the activity we agree with Dr. Fraser that this is a question for the physiological chemist. That the substance is not a protein and does not contain phosphorus has been shown by the extremely interesting and elaborate experiments of the workers of the Bureau of Science of the Government of the Philippine Islands, Messrs. Chamberlain and Vedder. These observers have shown that the active material can be extracted from the rice-meal by alcohol and then dissolved in water. A daily ration of the filtrate, 10 c.c., added to polished rice not only prevented polyneuritis, but cured it after it had been induced. This ration contains only 0·16 milligramme of phosphorus pentoxide, so that it is fairly certain that the active substance is not a phosphorus-containing body. The amount of nitrogen in the filtrate is somewhat greater, being 0·04 per cent., in about 2 per cent. of total solids; this nitrogen would represent (if all protein nitrogen) in the daily ration 0·024 gramme of protein. So that it is extremely unlikely that the active substance is protein in nature.

But this casts no discredit on the views of Schaumann or anyone else. At an earlier date Fraser and Stanton themselves pointed out the close relationship between poverty in phosphorus and neuritis-producing properties in a food. Association of the active substance with organic phosphorus is all that is stated in the paper by Simpson and Edie, who say that: "We hope in a future contribution to give the results of our attempt to isolate the active principle, whether it be one of the organic phosphorus compounds or a substance which associates itself with these in its reactions, as do ferments with nucleo-proteids."

This investigation has been continued and is yielding most interesting results. We have clearly confirmed the results of the observers in the Philippines, and have saved pigeons, almost at the point of dying from polished rice diet, with extracts prepared by their methods, and containing practically no phosphorus and very little nitrogen. We now consider it most probable that the active substance is a glucoside, probably a galactosan, which reduces Fehling solution after, but not before, hydrolysis with acids. Such bodies are already known to exist in the subpericarpal layers and are termed hemi-celluloses by botanical chemists; they also occur in the cell-wall of the yeast plant, which, it will be remembered, is very efficacious in preventing polyneuritis from polished rice, and they are found under the peel of the potato in the layer usually given with striking benefit in infantile scurvy. We have shown that this material in the potato is still active in the treatment of infantile scurvy, even after heating for some hours to 120° C. in the autoclave, in this respect differing from the active material of rice-meal, which is destroyed by prolonged autoclaving, but not by boiling. The comparative thermostability of these active bodies is compatible with a glucosidal nature, but to a large extent against their being protein in character.

I am, Sir, yours faithfully,

BENJAMIN MOORE.

Bio-Chemical Laboratory, The University, Liverpool, Oct. 23rd, 1911.

THE GENERAL MEDICAL COUNCIL AND THE IDENTIFICATION OF REGISTERED PRACTITIONERS.

To the Editor of THE LANCET.

SIR,—It has been observed in a report of the inquest on the body of Mrs. Gorringe in connexion with which reference is made to Mr. Charles Louis Lumley, a practitioner whose name was struck off the Medical Register by order of this Council in 1900, that the coroner, Mr. Troutbeck, is stated to have said: "It was difficult for a doctor to ascertain whether a man, obviously with medical knowledge, was on the Register." If the coroner is correctly reported, he is under a misapprehension.

The preamble of the Medical Act, 1858, begins as follows: "Whereas it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners." I am directed to say that the Council is most anxious to carry out the primary duty imposed upon it by this Act, and a similar duty imposed by the Dentists Act, 1878. It is always willing, and indeed anxious, to give information to public officials, to registered practitioners, and to the public in all cases in which there is any doubt as to whether a person is or is not a registered medical practitioner or dentist. Inquiries are constantly made by telegram, by telephone, or in person, and they are always promptly attended to. In consequence of minute differences in names, and of practitioners making use of names or compound names other than those by which they are registered, it is preferable that inquiries should be made in writing; but in cases of emergency they can be made orally, and the public may be assured that all the means at our command will be made use of to afford them the fullest information.

Copies of the Medical Register, which is the only official list of registered practitioners and which can be obtained through any bookseller, are distributed by the Government to coroners, law and county courts, and various public offices. Moreover, every medical practitioner on completing his first registration is entitled to receive a copy from the Council on application.

I am, Sir, yours faithfully,

NORMAN C. KING,
Acting Registrar, General Council of Medical Education and Registration of the United Kingdom.

299, Oxford-street, W., Oct. 19th, 1911.

MEDICAL EQUIPMENT FOR MERCHANT SHIPS.

To the Editor of THE LANCET.

SIR,—It is with great pleasure that we learn of the prominence which you have given to the recommendation of the Departmental Committee of the Board of Trade on "Ships' Medicine Chests," relative to the need for separate and reserved accommodation in merchant ships for members of the crew who have fallen ill or have been injured.

Your very cordial endorsement of this recommendation is most sincerely appreciated by us, and must exercise considerable influence in Government departmental circles. There is, however, one point in connexion with the comments on this recommendation which occurs to us as open to considerable question. In trusting that the Board of Trade will adopt the recommendation, you state that it would involve the provision, *adjacent to the officers' cabins*, of a spare cabin definitely allocated as a hospital and so marked. According to our views a hospital of the kind should be isolated as far as possible, consistent, of course, with it being in every way convenient for the purpose of efficient and proper treatment of those lodged in such a hospital. That it should be "adjacent to officers' cabins" would, on the face of it, appear to be highly inadvisable, as tending all the more to the risks of contagion and infection, whereby those responsible for the safety of a ship would be subjected to very serious danger, for which there does not appear to be any adequate reason whatever. Moreover, officers' cabins nowadays are very rarely lodged in the "after part of a ship," and the provision of ships' hospitals, if this recommendation is adopted by the Board of Trade, as we hope it will be, will necessarily depend on the plans and arrangements of the particular ships, of which there are so many different classes and types in the Mercantile Marine.

We welcome your most cordial agreement with the broad principle involved in this matter, and the adoption of the recommendation would mean that the Board of Trade Committee referred to would have rendered some signal service to humanity.—I am, Sir, yours faithfully,

T. W. MOORE,
Secretary, The Imperial Merchant Service Guild.

Liverpool, Oct. 23rd, 1911.

THE TECHNIQUE OF SALVARSAN INJECTION.

To the Editor of THE LANCET.

SIR,—I was interested in your annotation in THE LANCET of Oct. 14th dealing with the intravenous injection of salvarsan. It has always occurred to me that there must be more risk in the intravenous method, and I have carefully avoided it. My experience of the use of salvarsan now extends to 14 cases, and I have made all the injections deep into the buttock just above and behind the great trochanter in order to avoid the sciatic nerve. Twelve of my cases

were of the resistant type of tertiary syphilis, with marked gummatous, tubercular, and ulcerative lesions. In all these cases the lesions healed or disappeared in the most remarkable manner and within three to six weeks. In no case so far have I given any subsequent mercurial or iodide treatment. A full dose of 0·6 gramme was administered. At first I confined the patients to bed for six days after the injection, but I do not now recognise the necessity, when all has gone well, for confinement to bed for more than two days. There were two instances of the injection having been given in the out-patient room of the hospital, but I asked the medical attendant to kindly see that these men rested quietly at home for two or three days. I also gave orders that they should be taken home very quietly. Both did well and with no untoward symptoms whatever.

I have always used a neutral solution, well stirring it as I draw it into the syringe. To avoid blocking, a wide-bored needle is a necessity. In the large majority of cases there were no complaints of any after local pain, and the complaints made by the majority were comparatively trifling. The skin surface was disinfected with iodine, and the syringe and needles taken straight from the steriliser. One of the 14 cases was that of a secondary syphilide with the primary chancre still in evidence, and the other unaccounted for was a doubtful case of syphilis, a lymphangitis of the lower lip in a young man, which had been treated otherwise unsuccessfully at the London Hospital and by myself at the Royal Berkshire Hospital. Barely two years have elapsed since I injected my first case and some were injected only a few months or a few weeks ago, therefore it is too early to speak of the permanence of the cure; but it is at all events permanent within the above range-limit of time, and all patients so far have been kept under due observation. The solution, or rather emulsion, was injected within half an hour or within a few minutes of its final mixing and testing.

I am, Sir, yours faithfully,

Reading, Oct. 17th, 1911. W. T. FREEMAN.

PRURITUS ANI.

To the Editor of THE LANCET.

SIR,—Apropos of your annotation on Dr. Dwight Murray's paper, will you permit me to record a few observations of my own? I have had occasion to treat or advise many patients suffering from this complaint. X rays and high-frequency currents have generally been followed by temporary cessation of the symptoms, but I have always felt that this may have been due to more methodical cleanliness on the part of the patient during the course of treatment. I have succeeded in cultivating staphylococci, streptococci, and bacilli coli from the anal folds of pruritic patients, but as these bacteria can often be grown from the ani of unaffected persons it seemed hardly logical to adopt vaccine therapy, especially as the following simple treatment is almost always eventually effectual.

Thorough washing of the parts at the earliest opportunity after defæcation. Should the patient's occupation prevent this being done at the time it must be done when dressing for dinner or before going to bed. The parts are then anointed with some simple sterile lubricant such as almond oil. If there is itching, scratching to a moderate extent may be permitted under sterile conditions—i.e., the hands and nails must be absolutely clean. In the early stage of treatment itching may recur during the night, and this may be instantly relieved by the application of a very minute quantity of salicylate of soda.

The anal folds smeared with an imperceptible layer of fæcal matter form an ideal medium for the growth of bacilli of the coli group, all of which are motile. The movement of the bacteria in the neighbourhood of the nerve-endings may well cause itching. In young, healthy people pruritus ani is rare, and possibly the secretions of the sebaceous follicles may here have an adverse influence on the bacilli that find their way through the sphincters. In old people these secretions may become scanty or inert, and this may possibly be an explanation of the frequency of the complaint in such people. Any way, I find that, although the complaint is completely held in check by the treatment I have indicated, this has to be continuous and be carried out as a matter of routine through life.

It seems highly probable that the moderate scratching, with precautions to avoid abrasion of the skin and inoculation with foreign micro-organisms, may not only remove any remaining colonies of bacteria, but may induce slight leucocytosis and the destruction of those bacteria which Dr. Murray thinks penetrate the skin. Scratching is Nature's cure, and there are many parallel instances where natural inclination intelligently guided is found to be the best remedy. The application of the common antiseptics often aggravates the complaint by causing local irritation, and possibly by interfering with the natural physiological processes that make for relief.

I am, Sir, yours faithfully,

Oban, Oct. 21st, 1911. W. D. ANDERSON.

THE THIRD TRIENNIAL CONGRESS OF THE INTERNATIONAL SURGICAL SOCIETY AT BRUSSELS.

(FROM A SPECIAL CORRESPONDENT.)

IN an annotation in THE LANCET of Oct. 21st brief reference was made to the success of this Congress.

Subjects under Discussion.

The subjects chosen for discussion were: (1) Pancreatitis; (2) The Surgery of the Lungs and Pleuræ; and (3) Colitis. These were discussed under the following headings: 1. The Diagnosis of Pancreatitis; Reporter, Dr. Michel (Nancy). 2. The Treatment of Acute Pancreatitis; Reporters, Professor Körte (Berlin) and Dr. Giordano (Venice). 3. The Prevention of Operative Pneumothorax; Reporter, Professor Garrè (Bonn). 4. The Operative Treatment of Pulmonary Emphysema; Reporter, Professor Garrè (Bonn). 5. The Treatment of Purulent Pleurisy; Reporter, Professor Gaudier (Lille). 6. The Treatment of Pleural Sinuses; Reporter, Dr. Girard (Geneva). 7. Wounds of the Pleuræ and Lungs; Reporter, Dr. Lenormant (Paris). 8. Parasites and Tumours of the Lungs and Pleuræ; Reporter, Professor Hugh Ferguson (Chicago). 9. The Surgical Treatment of Pulmonary Tuberculosis; Reporter, Professor Friedrich (Magdeburg). 10. Acute Colitis; Reporter, Professor Sonnenburg (Berlin). 11. The Treatment of Chronic Colitis; Reporters, Mr. D'Arcy Power (London) and Professor Segond (Paris). 12. Valvular Cæcostomy in the Treatment of Colitis; Reporter, Dr. Gibson (New York).

In the limited space available it is quite impossible to deal adequately with the very valuable reports on the different subjects, still less with the discussions which followed. Some few points may, however, be mentioned. Dr. Michel considers the Cammidge reaction of decided value in the diagnosis of pancreatic disease, notwithstanding the numerous adverse criticisms which have been directed against it.

Surgery of Lungs and Pleuræ.

With regard to the various forms of apparatus at present employed for the prevention of pneumothorax during the course of operations on the thorax Dr. Garrè thinks that none of them are quite satisfactory in spite of the great ingenuity which is displayed in their design and the marked improvement in technique which has attended their use. In cases of pulmonary emphysema Dr. Garrè recommends operation in the condition termed by Freund "the rigid, dilated thorax." The procedure he advocates is the resection of the second to the fifth (inclusive) costal cartilages on one side. By this method the respiratory capacity of the lungs may be doubled. His clinical observations over a period of three years have proved the value of this line of treatment. Unsatisfactory results are due principally to operation being undertaken at too late a stage or in unsuitable cases, as, for instance, when the immobility of the chest wall is due to causes other than calcification of the costal cartilages.

In dealing with wounds involving the pleura and lung Dr. Lenormant considers that treatment simply by occlusion of the external wound and keeping the patient absolutely at rest gives very good results in the great majority of cases, and should be the method of choice in the absence of pressing indications. Aspiration of a large hæmothorax causing urgent dyspnœa, pleurotomy in cases of suffocating pneumothorax, early pleurotomy in the presence of symptoms of pleural infection, will meet all indications in most cases. Only very rarely will it be necessary to

deal directly with a wounded lung. Direct surgical intervention in cases of pulmonary wound is a serious and difficult operation attended with a mortality of about 33 per cent. (statistics of 133 cases submitted to operation), and should only be undertaken in the event of severe primary or secondary hæmorrhage after treatment by absolute rest has proved unavailing. Dr. Lenormant insists on the need for free opening in the thoracic parietes and systematic exploration of the injured lung, as the lesions are often multiple, especially in gunshot wounds. Drainage of the pleura greatly increases the risks of infection (15 per cent. in undrained, 42 per cent. in drained cases), and should not, therefore, be employed unless when special indications such as imperfect hæmostasis or already existing infection are present.

In speaking of the surgical treatment of pulmonary tuberculosis, Professor Friedrich said that in cases of fibroid phthisis with cavities, especially in unilateral, chronic, or apyretic cases which are getting worse in spite of proper medical and climatic treatment, and in which the prospect of recovery is steadily becoming more doubtful, if the patient's general condition is sufficiently good and the age between 15 and 35 years, operative measures may be considered and even recommended. Slight or quiescent areas of tuberculosis in the opposite lung need not be considered as contra-indications. Notwithstanding the heavy mortality (8 in 27 cases), Professor Friedrich considers, due regard being given to the serious nature of the cases treated, that the results of operation are decidedly encouraging. It is, however, essential that the cases should be most carefully selected.

Sir William Macewen referred to three cases of pulmonary phthisis on which he had operated, one of which was particularly interesting because it had been found necessary to extirpate the whole of the left lung and the patient had recovered, and still 15 years after the operation, remained well and followed an occupation involving very hard work.

Colitis.

Mr. D'Arcy Power, speaking on the treatment of chronic colitis, said that when it is clearly recognised that a patient is suffering from ulcerative colitis and is not improving under ordinary treatment the sooner an appendicostomy is performed the better. But appendicostomy, though resulting in great improvement, Mr. Power has found to be insufficient to effect a complete cure, and he thinks that the best line of treatment lies in a combination of appendicostomy with vaccino-therapy. Mr. Power also showed a three-colour photograph of a fresh post-mortem specimen of ulcerative colitis, which very beautifully reproduced the original appearances.

The Exhibition of Fractures.

The great success which had attended the Cancer Exhibition at the second congress and the marked interest displayed in it had encouraged the committee to provide a corresponding attraction on the present occasion. In view of the world-wide revival of interest in their treatment no better subject than that of fractures could have been chosen. The choice was also singularly appropriate in view of the fact that the Presidential chair was filled by Professor Lucas-Championnière, whose name is so widely associated with and who has done so much to improve the treatment of fractures.

Amongst the most interesting exhibits were: (*a*) life-sized models showing the application of Bardenheuer's methods and radiographs illustrating the results obtained; (*b*) Lucas-Championnière's radiographs of articular fractures treated by massage and early movement; (*c*) Marbaix's radiographs of fractures of the neck of the humerus, the olecranon, and in the vicinity of the wrist, treated by immediate movement and massage without reduction and without retentive apparatus; and (*d*) Dollinger's plaster apparatus for the ambulatory treatment of fractures of the thigh and leg, and his plaster bandages for the treatment of fractures of the humerus and femur in new-born children. Probably, however, Lambotte's and Arbuthnot Lane's series of radiographs, showing the results obtained by the operative methods with which their names are associated, attracted the greatest attention.

Another interesting exhibit was Professor Kummell's series of radiographs illustrating the marked tendency of fractured bones in young individuals ultimately to recover their normal form, even when the original deformity had been very great and had not been corrected by treatment.

Hospitality at the Congress.

No account of the Congress at Brussels would be complete without mention of the magnificent hospitality offered to the visiting members by both the medical men and the leading citizens of the town. In many cases the delegates came with their wives, and these were invited also to the dinners and receptions and to a gala performance of *Orphée et Eurydice* at the Opera House, where Madame Croiza gave her services gratuitously. In addition, Brussels ladies lent their own cars and took the ladies of the party for two delightful drives. Madame Depage, Madame Lorthioir, Madame Verhoogen, and Madame Willems invited guests nightly to their beautiful houses. There were also three receptions, the first at Dr. Lorthioir's, where Dr. Lucas-Championnière, the President, received the delegates and their wives; the second at Baron and Baroness Lambert de Rothschild's, whose house is said to be the finest in Brussels; and the last at the beautiful town-hall. When it is considered that this is the third congress running which has been held in Brussels, the population of which is only 400,000, one feels all the more the generosity of the medical men and their wives and of many other citizens.

THE EFFECTS OF THE STRIKE ON THE LIVERPOOL SANITARY SERVICES AND THE DEATH-RATE.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

Liverpool, October.

Measures for the Protection of Infant Life.

WHAT the population of Liverpool has suffered in consequence of the recent widespread strikes has not been fully explained or realised. Indeed, the after-consequences are still making themselves felt and the death-roll is not yet closed. The pity of it is that it seemed, on the contrary, as if the effort of years was about to receive a well-merited reward. When the number of deaths resulting from epidemic diarrhœa during the first weeks of this year's remarkable summer were compared with the figures of the exceptionally hot seasons of 1897 and 1904 it seemed as if Liverpool would escape the usual consequences of very high temperature. Though the heat this summer was greater than that of the two hottest years of recent times the number of deaths was at first less than on those two occasions. The fact is that the sanitary control of the city has been constantly extended and improved. Besides, special attention is bestowed on the prevalence of epidemic diarrhœa among children during the hot weather. A large staff of female inspectors is now employed to visit the homes of the poor and give the parents advice in regard to the proper feeding and care of infants. Instructive posters and leaflets are distributed freely. Moreover, an extra large staff of scavengers is engaged to wash out the courts, alleys, and smaller streets of the poorer quarters. This is not done now and then, but every day. The trough water-closets in some of the courts and the courts themselves are cleared out twice a day, and stable middens are so sprayed with lime as to prevent the breeding of flies. In 1897 and 1904 the measures taken were not so energetic and thorough. Though the meteorological conditions during those two years were the nearest approach to what we have just experienced, the weather was neither so hot nor so dry. Nevertheless, by the beginning of July the infant mortality commenced to rise by leaps and bounds. This year, on the contrary, there was only a comparatively small increase of cases up to August 7th. By that time, however, the great strike had thrown all the sanitary services out of gear. The loss of life that immediately followed will at least serve to show how very effective these services had been.

The Death-rate of the Children and the Strike.

On Sept. 21st last the health committee of the Liverpool Corporation requested the medical officer to prepare a report setting forth exactly what had occurred. This report has just been printed, and Dr. E. W. Hope, the medical officer of health, has kindly forwarded me an early copy.

The statistics therein set forth show that the population of Liverpool is estimated, in the Census of 1911, at 747,627, and the actual deaths from diarrhœa were 20, 23, 38, and 46 during the four weeks of July last. The lowest number of deaths from all causes during that month was 227 in the second week, and this is equal to an annual death-rate of 15 per 1000 of the population. The highest number of deaths was 272 in the fourth week, and this raised the death-rate to 18 per 1000 per annum. During the month of July the average temperature was 64·1° F., and the rainfall only amounted to 0·3 inch. The average July temperature for the previous five years is 58·9° F. and the rainfall 2·4 inches. Out of the population, then estimated at 734,673, the average for the last five years shows 4, 6, 9, and 11 deaths from diarrhœa during the four July weeks, and the general death-rate for each week was equal to 15 per 1000 per annum. For the four weeks in August during these five years (1906 to 1910) the average deaths from diarrhœa were 23, 34, 52, and 63; the general death-rate rose from 15 to 19 per 1000. The average temperature was 59·5° and the rainfall 2·4 inches. The last three weeks of August this year correspond with the strike weeks, when the trouble began on August 5th and reached its most disastrous development on August 17th. This year the average temperature was 68·8°, and though there had hardly been any rain the previous month only 2·7 inches of rain fell in August. This may account for the fact that before the strike commenced, and in spite of the energetic sanitary measures, there were 81 deaths from diarrhœa during the first week and the general death-rate rose to 20 per 1000 per annum. The interruption of the sanitary services and the general disturbance resulting from the strike may be considered as the principal cause of the further and great increase of mortality. For the second week of August we have a death-rate of 24 per 1000, including 132 deaths from diarrhœa. The maximum mortality was recorded during the third week of August, which was the worst week of the strike. There were 159 deaths from diarrhœa, and the general death-rate was equal to 27 per 1000. But no sooner was it possible to begin to restore the sanitary services than the public health began to improve. Thus during the fourth week of August there were 140 deaths from diarrhœa, and the general death-rate descended to 24 per 1000.

The General Death-rate and the Strike.

It will, however, be easily understood that it took some time for the full effects of the evil conditions created to manifest themselves. With infants and young children the increase of sickness was more rapid and the decrease more prompt. Thus the deaths from diarrhœa during last September, though not so numerous, remained very high. They amounted for the four weeks to 148, 130, 109, and 112, notwithstanding the fact that the temperature fell, the average being 58·500, and there was more rain—namely, 3·4 inches. But this is not all due to the strike, for in normal times there are more deaths in September. The average of the previous five years shows that the general death-rate varied from 19 to 20 per 1000, and the total deaths from diarrhœa for the four weeks were, on the average of the five years, 60, 58, 46, and 41. This is higher than the two previous months. Indeed, the four worst weeks of the year in normal times are the last two of August and the first two of September. It so happened that effects of the strike coincided with the end of August. The effect on the general death-rate also coincides with the strike. In the first week of August and before the strike could have any influence the death-rate was affected by the great heat and had risen to 20 per 1000. The second week, when the strike was in progress, it rose to 24 per 1000, and the third week, when the strike had wrought its worst, it was at 27 per 1000. After that there were fluctuations, for during the fourth week in August the death-rate fell to 24 per 1000, then it rose again to 26 per 1000 in the first week, and 27 in the second week of September. Subsequently it fell to 23, and rose again to 25 per 1000 in the third and fourth weeks of September.

These figures very clearly indicate that the exceptionally hot weather did aggravate the situation, and that the strike intensified the evil to an alarming and disastrous extent. For a period of about two weeks it is probable that a third of the deaths from diarrhœa were due to the strike, and for some weeks following a smaller proportion of deaths from this cause were also due to the after-effects of the unwholesome conditions prevailing during the strike. But to judge from the figures given above relating to the general death-rate there seems to have been a notable increase of mortality from other causes, and this prevailed among adults as well as among children. These fatal results were obviously caused by the extreme, almost tropical heat, and the accumulation of filth, together with the want of food, especially of milk. Some 300 butchers' shops had to close their doors because they could not obtain any meat; but the interruption of the milk-supply had a more direct immediate effect on infants. Even the hospitals suffered, in spite of the efforts of the strike committee to secure the safe delivery of what was needed for the care of the sick. The angry crowd could not always distinguish between provisions for the hospitals and the vans conducted by strike breakers. Then parents, even mothers, carried away by the excitement of the moment, were apt to neglect their children, leaving them to play about the accumulating filth of the courts and alleys. The work of sanitary inspection stopped and the lady inspectors, who do such good work in advising mothers, could not penetrate into the disturbed districts.

The Insanitary Conditions Caused by the Strike.

Probably the worst evil of all was the interruption of scavenging services. In the better parts of the town this did not so much matter. Here the inhabitants were able to take care of themselves. They understood the importance of cleanliness, and though their domestic refuse accumulated and could not be removed, they endeavoured to burn a large proportion of it themselves, to sprinkle disinfectants over the rest, and cover it up so that it should not become a breeding ground for flies. Thus, no very great nuisance arose in the better quarters of Liverpool. But in the poor districts a few hours' neglect suffices for dangerous conditions to come into existence. Though closets are provided, there is nevertheless a considerable amount of fæcal matter in the courts. Adults sometimes do not take the trouble to go to the closets, and children habitually do all they need in the open air. Thus, the garbage that accumulates in these localities is much more dangerous than it would be among a more civilised population. To keep down this nuisance a special staff of scavengers scour out these streets and courts every day with the fire-hose and sweep everything down into the sewer. Further, they visit the inside of the houses, and if they find a neglected, dirty closet, the inhabitant is called upon to clean it forthwith while the inspector stands by and sees that it is properly done. If there is any resistance a summons is taken out at once, and the responsible parties have to appear before the police court to answer a charge of creating a nuisance. But during the strike, and for five to six days, this service entirely stopped. Then great poverty prevailed. What little milk was procured was more readily contaminated when brought into such filthy surroundings. Had this continued, something far more dangerous than an increased mortality from diarrhœa among children might have ensued. Cholera, or even plague, might have found favouring conditions amid all this poverty and dirt.

The Strike and the Disposal of Refuse.

Nor was it easy to bring matters back to normal conditions when the strike was over. With the courteous assistance of the sanitary officers I was able to visit the great destructor in Charles-street. Here there is a wharf, and a certain sort of refuse is discharged into barges. It is then conveyed along the Leeds canal to be delivered at different points where it can be utilised for agriculture. No less than 600 tons of refuse are brought every day from the streets of Liverpool to this destructor. About a third, or 200 tons, are burnt forthwith. The rest is sorted and conveyed away by the barges. During the strike, instead of 600 tons, barely 100 tons were brought in the 24 hours. Thus refuse, garbage, and filth of all sorts were accumulating in the courts and streets of Liverpool at the rate of 500 tons a day.

The dealing with this refuse is so well managed that it brings in about £3000 annually. For instance, oyster shells are sorted out and ground up for chickens, and thus they return to our table in the form of egg shells. All tin, iron hoops, and fairly pliable metallic scraps are placed in a compressing machine. A sort of funnel 6 feet long is filled up with these scraps, and then the loose contents are pressed down into a compact mass 25 inches in diameter,

6 inches in depth, and weighing about a hundredweight. Thus rendered easy to handle and transport, it can be more readily conveyed to where it is utilised and consequently finds many purchasers. Some of the clinkers from the furnace are sent away for road making. Others are ground on the spot and converted into artificial flag-stones. Two hundred yards run of flag-stones can be turned out here in one day, and they are the hardest on the market. In making artificial stones, private firms often use brick dust and this does not resist so well as cement mixed with ground clinkers, kept three days under cover and then left to dry in the open-air for five weeks.

When the strike was over it was necessary to work both night and day before the accumulation of refuse could be dealt with, and this continued for several days. As each cart enters it is weighed and, according to the place it comes from, directed to the destructor or to the barges. A minute record is kept of all the work done. The destructor supplies heat for four boilers, and these provide power for the manufacture of the electricity needed in the city. Thus a cessation of the scavengers' work compromises other important services, and this gives a further insight into the disastrous consequences that would have ensued had the strike continued. Now, fortunately, all is restored to the normal conditions. But every class of the community has received an object-lesson of such a rough and emphatic character that it certainly will be long remembered.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Hospitals and Contributions from the City Council.

THE finance committee of the corporation has issued a report on the contributions made by the council to the local hospitals. Various hospitals and dispensaries have written to the education committee for contributions to their funds. Ultimately it was resolved that the matter of hospital contributions should be dealt with by the city council as a whole, acting through its finance committee. The contributions hitherto made annually by the various committees to the hospitals have been: gas committee, £200; electricity committee, £71; and tramways committee, £125. At various times payments have been sanctioned from the common fund to the amount of £152, making altogether £548. The education committee in return for services rendered by the medical staffs of three hospitals to scholars at certain schools contributes £20. Altogether the sum contributed to the hospitals is far too small, considering the large number of workmen employed by the corporation. There are 120,000 children in attendance at the schools, and the number of children treated at the hospitals has largely increased. It has now been decided that the gas committee shall contribute £250, the electricity committee £150, and the tramways committee £250, making a total of £650. To this will be added £850 from the city fund account, making a total of £1500 to be granted each year to the various hospitals of the city.

More Food Poisoning.

In THE LANCET of August 5th and 19th I reported a serious outbreak of ptomaine poisoning at Bacup. There has now been another, though less extensive, outbreak in the same district. From Crewe also is reported a mysterious outbreak of sickness in several families, in some cases the whole family being affected, supposed to be due to the eating of meat which caused severe ptomaine poisoning.

Efforts on Behalf of a Hospital.

Children's pageants have recently been organised in various towns as a means of raising money on behalf of the local hospital. The Women's Guild of Service arranged, on behalf of St. Mary's Hospitals, a great procession on Oct. 13th, representing 26 tableaux. Hundreds of keen collectors were provided with boxes to collect from the spectators the much-needed money. Last year the Working Women's Campaign raised £1026 in aid of St. Mary's Hospitals, and this, with other contributions, enabled the new buildings in Oxford-road to be completed and opened.

Spitting on Tramcars.

The corporation has at last prosecuted three persons who were guilty of this abominable practice. It is to be hoped that everything possible will be done in future to extirpate a habit so unhygienic, disgusting, and uncleanly. There is still much work for the corporation officials to do in this direction.

Death of Captain G. S. Nickerson, R.A.M.C.

The death is announced of Captain G. S. Nickerson, R.A.M.C., Governor of the Sennar Province of Egypt, at the age of 38, as the result of a fall from his horse. Captain Nickerson, like his younger brother, Major W. H. S. Nickerson, R.A.M.C., was educated at the Manchester Grammar School and at the Owens College Medical School. In other obituary notices some confusion has arisen. It was Major W. H. S. Nickerson who served in the South African war and received the Victoria Cross for his gallant conduct at Wakkerstroom on April 20th, 1900. Captain G. S. Nickerson, whose death is now deplored, was the eldest son of the Rev. D. Nickerson, M.A., vicar of Newton-on-Ouse, Yorks. He graduated at the University of Manchester as Bachelor of Medicine and Bachelor of Surgery in 1896, and in the following year obtained the diploma of Public Health. Before entering the Army Medical Service he held a surgical appointment at the Stockport Infirmary.

Oct. 23rd.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Annual Medical Service in Liverpool.

ON Sunday, Oct. 15th, the annual medical service for St. Luke's Day was held at St. Luke's Church. The preacher was the Lord Bishop of London. The church, which seats 850 people, was filled to its utmost capacity. Inside, the sight was very picturesque, members of the medical profession in academic costume and officers and men of the Royal Army Medical Corps (T.) lending a pleasing variety to the scene. A procession comprising members of the profession (of both sexes) was formed at the west end of the church. The Lord Bishop of Liverpool read the lesson, the clergy taking part in the service being the Archdeacon of Liverpool and the Rev. W. Webster of the Liverpool College. The collection, which was on behalf of the British Medical Benevolent Fund, realised £57 3*s.* 1*d.*

Bequests to Liverpool Hospitals.

By the recent demise of Miss Willox, sister of the late Sir John Willox, M.P., the following charities will largely benefit by the terms of the will: £10,000 to the Liverpool Royal Infirmary, £10,000 to the Royal Southern Hospital, £10,000 to the Stanley Hospital, and £10,000 to the Liverpool Sanatorium for Consumption, Delamere Forest. The last-named bequest is to be known as the "Lady Willox Endowment Fund." £10,000 have also been bequeathed to the Newspaper Press Fund, London, to be invested more particularly for the founding of pensions or annuities for the benefit of incapacitated or indigent members. The late Sir John Willox was a distinguished member of the press.

Lancashire Sanitary Inspectors' Proposal: A Contemplated "Health Sunday."

The North-Western Centre of the Sanitary Inspectors' Association held its monthly meeting at the School of Hygiene on Oct. 14th. The members, who assembled from all parts of Lancashire, decided to recommend the General Council to consider the advisability of instituting an annual "Health Sunday" in every town and village throughout Great Britain. It was considered that by this means the question of public health would be prominently placed before the country. Mr. Francis Vacher, formerly medical officer of health to the Cheshire County Council and President of the association, subsequently addressed the members on "the position of women in regard to public sanitary work."

Oct. 23rd.

MEDICAL MAGISTRATE.—Dr. Benjamin Arthur Richmond of Rotherhithe has been added to the Commission of the Peace for the County of London.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Bristol General Hospital.

AT a meeting of the election committee of the Bristol General Hospital Mr. George Parker, M.A., M.D. Cantab., M.R.C.S. Eng., was re-elected honorary physician for a further period of ten years, Mr. Newman Neild, M.B., Ch.B. Vict., M.R.C.P. Lond., M.R.C.S. Eng., was re-appointed honorary assistant physician for another term of ten years, and Mr. Frank Gower Bergin, L.R.C.P. Lond., M.R.C.S. Eng., was re-elected skiagraphist for a period of ten years. Mr. Joseph Storrs Fry, President of the institution, referred to the great loss involved in the death of Mr. C. B. Hare, and moved a resolution embodying a message of sympathy to his brother. This was seconded by Mr. Herbert Baker, the chairman, and supported on behalf of the honorary staff by Mr. Robert Lansdown, who spoke of Mr. Hare's courtesy and kindness to himself and his colleagues. At the memorial service at St. Mary Redcliffe the hospital was very fully represented by many members of the committee and of the medical, nursing, and clerical staff.

The Bristol Medico-Chirurgical Society.

The opening meeting of the 1911–12 session was devoted, as usual, to the presidential address, the presentation of the annual reports, and the election of officers. The society, having been rendered homeless by the migration of the medical library to different premises, met for the first time in the physiological lecture-theatre of the University. Among those present was Sir Isambard Owen, Vice-Chancellor of the University, who is an honorary member. The incoming president, Mr. C. A. Morton, senior surgeon to the General Hospital and professor of surgery to the University, gave an interesting address on the modern surgery of malignant disease, referring to the wide extent of the modern operative field and making special mention of his experience in the excision of rectal growths by the abdomino-perineal method. In supporting a vote of thanks, Mr. N. C. Dobson remarked that he had given a presidential address before the society 20 years before on the same topic. The secretary's report was fairly satisfactory from the financial point of view. The membership of the society is now 168. The librarian's report showed that the library, which is shared by the society with the University, contains 21,929 volumes and receives 249 periodicals. The removal to fresh premises has made it necessary to re-catalogue the whole library.

The Movement against Tuberculosis in Bristol.

The Bristol city council has decided to make the notification of pulmonary tuberculosis compulsory. The establishment of a tuberculosis "dispensary" along the lines of the Edinburgh and Paddington models is almost definitely decided upon. It will be supported, in part at any rate, by voluntary subscriptions, and it is hoped that it will be purely consultative in character, no patients being admitted to treatment, except at the instance of a qualified practitioner. The local profession has promised support to the scheme if it is conducted on these lines.

Milk and Tuberculosis.

At the last meeting of the Plymouth borough council it was decided "that a sum not exceeding £10 be expended in an investigation of the condition of milk sold in Plymouth as regards tubercular infection." One of the members remarked that it was the commencement of what was hoped would be a thorough testing of the milk-supply of the town.

Radio-activity and the Bath Mineral Waters.

The baths committee of the Bath corporation, at its meeting held on Oct. 20th, decided that experiments should be made to afford information as to the best methods of employing radium emanations and the relations between radio-activity and temperature of baths and the drinking cure. Its value in different forms of inhalation is also to be investigated.

The Research Defence Society.

A meeting of the Devon Branch of the Research Defence Society was held in Torquay last week. There was a good attendance, and Professor R. F. C. Leith of Birmingham gave an interesting lecture, illustrated with lantern slides, on "Some of the Gains Obtained by Experiments upon Animals."

Poliomyelitis in Cornwall.

At the quarterly meeting of the Cornwall county sanitary committee the medical officer of health (Dr. R. Burnet) reported that up to the present 37 cases of acute anterior poliomyelitis had been notified in Cornwall since the beginning of August. The chairman, the Hon. John Boscawen, said that Dr. Burnet had worked admirably over the matter. It was regrettable that his son had contracted the disease.

The Sewerage of St. Ives (Cornwall).

A Local Government Board inquiry was held at St. Ives on Oct. 18th in regard to the application of the local council for permission to borrow £1400 for the purpose of sewerage works for the town.

Oct. 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Colonel W. P. Warburton, C.S.I., I.M.S.

ALTHOUGH it had been known in Edinburgh during the past few weeks that Colonel Warburton's health was very unsatisfactory, the news of his death on Oct. 18th came as a shock. Only a few weeks previously an assemblage of medical friends met to take leave of Colonel and Mrs. Warburton, and at that time there seemed the probability of years of life before him. Colonel Warburton was a native of Prince Edward Island, where he received his early education. He was a graduate in medicine of the University of Edinburgh. In 1866 he entered the Indian Medical Service, in which for over 30 years he had a distinguished career. Among the posts held by Colonel Warburton in India were those of medical officer to the native State of Kapurthala, a post which he occupied for 17 years. For short periods he acted as principal medical officer of the Assam military district, and of the military districts of Bandelkhand and Narbada. For four years he was Inspector-General of Civil Hospitals of the North-Western Provinces of Oudh, and later, during the absence of the Director-General, he officiated for three months as Director-General of the Indian Medical Service. At the time of his retirement from the service in 1899 he was honorary surgeon to the Viceroy, and had conferred on him the distinction of the C.S.I. At the end of 1899 Colonel Warburton succeeded Major-General Lithgow in the office of medical superintendent of the Edinburgh Royal Infirmary, from which post he retired at the end of July of this year. On Oct. 21st a simple and impressive funeral service was conducted in the chapel of the Edinburgh Royal Infirmary at noon by the infirmary chaplain, the Rev. Mr. Henderson. It was attended by the managers and by the medical, nursing, and other staffs. The board was represented by Sir Joseph Fayrer, Bart.

Opening of the Royal Medical Society.

Professor Robert Saundby of Birmingham opened the 135th session of the Royal Medical Society on Oct. 20th with an address which was chiefly reminiscent of his connexion with the society when a student. He recalled with pleasure the difference in the debates held in that hall from those of other medical societies. The student was not then afraid to express his opinions, irrespective of whom he might assail. Professor Saundby gave interesting details of the various professors under whom he had worked when studying in Edinburgh—e.g., Christison, Hughes Bennett, Saunders, Laycock, and others. He was always disappointed now with the performances of students at their final examinations. They seemed to have forgotten most of their early studies, and appeared not to appreciate the bearing of chemistry, physiology, and other sciences on clinical medicine. He thought, perhaps, that there was too much teaching and too little thinking on the part of the student. As soon as one examination was over the student very often forgot all he had mastered. He thought that the organisation of teaching was better in Edinburgh than in England; the teachers in the former were better paid and so were able to adopt teaching as their profession, while in England the

necessity for private practice often took up so much of the teachers' time that scant attention was paid to hospital work. In the large cities of England there was ample clinical material, and the medical students ought to do better. He deplored the fact that valuable clinical posts in the hospitals of Birmingham went vacant owing to lack of zeal on the part of Birmingham students. As to the prospects of those entering the medical profession he was sanguine; he did not think it was an overcrowded or ill-paid profession. There was no other profession in which the pecuniary prospects were better; a young doctor could at once earn a living, and there were so many avenues to success—army, navy, and colonial services, lunacy, public health, and so forth. The chances of success for the general practitioner were, however, not so good as they had been, but the opportunities for specialism were greater. Owing to frequent change of residence the bond between patient and practitioner was not so strong as formerly, and thus the young practitioner had now a larger share of practice than was the case formerly. He regretted that medical men did not form partnerships more often, as the advantages were very great. On the motion of Professor Crum Brown, a very hearty vote of thanks was awarded to Professor Saundby.

Dr. Angus Fraser's Retirement.

At the half-yearly meeting of the Aberdeen University Council, held on Oct. 14th, it was unanimously resolved to inscribe the following paragraph in the minutes of the Council: "That the General Council desires to place on record its great regret at the retirement of Dr. Angus Fraser, and its cordial appreciation of his services to the University and to the cause of medical education, in particular as acting as one of the Council's assessors to the University Court, 1889 to 1911." Dr. Ashley Mackintosh, in moving that the foregoing paragraph should be included in the minutes of the Council, said that it was difficult to overstate the services Dr. Fraser had rendered, more particularly to the medical school. Dr. Mackintosh thought he expressed the feeling of all when he said that no teacher in the University had a more sincere place in the hearts and memories of his pupils than Dr. Fraser. Years ago he had heard the opinion expressed by one of their most distinguished alumni, the late Sir James Anderson, that one of the best teachers he had ever come across was Dr. Angus Fraser. Dr. Fraser also had the entire confidence of the medical profession in the North of Scotland. Since 1889 he had held office as an assessor unopposed, and surely no stronger proof of the value of his services could be given. Nobody wished more heartily than the Council that his health might be restored, and that he might be spared for many years to enjoy the rest and retrospect of work well done.

Presentation to Professor D. MacEwan.

At a large and representative meeting of directors, past and present, at Dundee Royal Infirmary, on Oct. 5th, Professor MacEwan was made the recipient of a handsome silver tea service and a large silver tray bearing the inscription:—"Presented by the present and past members of the Board of Directors to Professor David MacEwan, M.D., in recognition of his valued services during 43 years to the Dundee Royal Infirmary. September, 1911." Professor MacEwan was joint house surgeon from July, 1868, to February, 1870. He was first appointed visiting surgeon in 1874, and continued in that position until he resigned on Sept. 30th, 1911. The presentation was made by Mr. T. H. Smith, who spoke in cordial terms of the personal qualities and great services of Professor MacEwan to the infirmary.

Oct. 23th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Heating and Cleaning of Primary Schools.

IN the annual report of the Commissioners of National Education, issued a few days ago, it is stated that at length the Treasury has agreed to provide certain funds to aid in the heating of the school-houses and the cleansing of out-offices. The Commissioners had asked for a grant sufficient to provide for the daily cleaning and weekly charing of the school premises, in addition to the heating of the school-rooms. The amount promised, however, would only provide half the necessary amount; the other half must be provided locally. Hitherto there was no general provision for heating and cleaning, and the expenses had often to be borne by the teacher. In country districts the children carried fuel in the form of peat to school with them.

Old People in Asylums.

At the last meeting of the committee of the Richmond Asylum the medical superintendent, Mr. Donelan, lodged a protest against the reception of senile patients in asylums. He held that these people should be provided for in workhouses. Their admission to asylum wards tended to "distort" statistics and to give a false idea of the relative proportion of recoveries and incurable cases. Moreover, it was cruel to their relatives to put on such patients the stigma of lunacy. The collection of accurate statistics, however, is hardly the dominating object of an asylum.

Medical Substitutes' Fees.

A point of some interest in regard to substitutes for medical officers has recently cropped up in the Edenderry Union. Dr. Waters was appointed temporary medical officer for the Johnstown Dispensary District by the relieving officer, who informed him that the remuneration would be a guinea a day. Dr. Waters acted for 12 days, and submitted a bill to the guardians for 12 guineas. The board refused to pay on the ground that the settled remuneration for medical substitutes in the Edenderry Union was £4 4*s.* per week. On Dr. Waters stating that the relieving officer had specifically engaged him at a guinea per day, the matter was referred to the Local Government Board. The latter replied that a relieving officer had no power to "bargain" with a doctor, and therefore the guardians were not justified in paying the rate of remuneration arranged. This point was decided a few years ago by the Lord Chief Baron, who held that the relieving officer had no authority to pledge the credit of the guardians further than any scale which they might have adopted. The remedy for the medical man is to hold the relieving officer personally liable.

Royal College of Physicians.

The annual meeting of the College was held on St. Luke's Day, when Dr. J. Hawtrey Benson was re-elected President, Dr. G. Peacocke Vice-President, and Dr. T. P. C. Kirkpatrick registrar. The annual dinner was held in the evening.

Typhus Fever in Belfast.

On Oct. 19th the officials of the Public Health Department of Belfast removed to the union hospital and to Purdysburn infectious diseases hospital four cases of typhus fever. The patients are closely related: three are from one street and the fourth—intimately associated with the others—is from an adjacent place. Seven "contacts" were disinfected and are being watched. The cases are mild.

The Water Famine in Belfast.

From October, 1910, to September, 1911, inclusive, only 28·75 inches of rain fell, while for the same 12 months during the previous driest years on record—1887 and 1893—the rainfall was 30·77 and 33·15 inches respectively, the average yearly rainfall for the city being 34·57. The present drought is, therefore, very exceptional. A leading citizen of Belfast, who has a thorough knowledge of engineering, recommends in the press a "stand-by" or "emergency" scheme for providing a temporary supply of water of some eight million gallons per day by pumping the water of Lough Neagh into the existing Stoneyford works (a distance of a little over six miles), from which it could be conveyed into Belfast. The Water Commissioners do not favour this plan; they seem to rely upon rain coming as usual, and they intend to apply for powers in the coming session of Parliament to enable them to construct a reservoir—which should long ago have been done—in the Mourne Mountains. Fortunately, the weather has altered and rain has at last come.

The King Edward Memorial in Belfast.

At a meeting of the executive committee of this scheme, held on Oct. 19th, it was reported that the fund, which had reached £17,570, would be kept open a little longer to increase it, if possible, to £20,000. The plans for the new building at the Royal Victoria Hospital, the form decided on for the memorial, will then be considered.

County Antrim Infirmary.

A three-day bazaar, with the object of increasing the funds of the County Antrim Infirmary, was opened in Lisburn on

Oct. 19th by the Countess of Aberdeen, who was accompanied by the Lord Lieutenant. Lady Aberdeen gave some most interesting recollections regarding her family's connexion with the district, and referred to her great-uncle, Dr. W. Thompson, who did the first ovariotomy in Ulster, and was for many years surgeon to the County Antrim Infirmary, and whose widow endowed the well-known Hospital for Incurables. Their Excellencies inspected the infirmary, visited the bazaar, and the Thompson Memorial Home for Incurables.

Oct. 24th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Congresses.

IN addition to the Surgical Congress, of which I wrote in some detail last week, the second congress of the French Pædiatric Association took place on Oct. 6th and 7th under the presidency of Dr. Comby. Little's disease, which was the subject of various reports was first considered. The second question was infant tuberculosis. The meeting decided on holding the first International Congress of Pædiatry at Paris in October of next year. The Obstetrical Society of France held its meeting from Oct. 5th to 7th, at which reports were presented on the pathogeny and treatment of puerperal eclampsia. The French Association of Urology held its meeting also from Oct. 5th to 7th, when reports were presented on non-hydatid cysts of the liver, and on non-hydatid cysts of the kidney.

A Chemist's Mistake.

Last month a Paris chemist dispensed for a patient a solution of corrosive sublimate in mistake for a soothing draught. Immediately after the departure of the purchaser the chemist discovered his error, but, ignorant of the name or address of his customer, he was unable to communicate with her. In order to prevent, or at least to minimise, the consequences of his mistake, the chemist at once inserted a warning notice in the newspapers, hoping that his customer would read it before making use of the draught. The warning, however, came too late, for she had drunk a portion of the draught on the day of purchase. She was saved by the intervention of a medical man, but she was nevertheless ill for a fortnight. On the pharmacist indemnifying her the action she had instituted was withdrawn.

The Paris Water-supply.

The question of the Paris water-supply, to which I have referred several times this year, has engrossed the attention of hygienists all the summer. The Commission of Surveillance of the Bureau of Hygiene met on Oct. 19th to investigate the present alarming condition. In the poorer quarters of Paris a serious epidemic of typhoid fever is raging, and the most urgent measures have become necessary to safeguard the public health. During the summer, in order to provide a sufficient water-supply, as I stated in THE LANCET of August 12th, 35,000 cubic metres daily of water from the Marne were distributed by the existing pipes, after disinfection with sodium hypochlorite. It now appears that this sterilising process was inadequate, so that the water which was turned into the reservoirs of Ménilmontant, Montsouris, and Charonne has contaminated all the pipes in these quarters, as is shown by the charts of typhoid fever cases at present notified in all these parts of Paris. Further, M. Hanriot, of the Academy of Medicine, declares that he has found not only chlorine in the dangerous waters but also sulphuric acid. Investigation has disclosed the fact that it had been found requisite to treat the waters of the Vanne by sodium sulphate to neutralise the excess of chlorine. This was the more necessary in that these waters were not, like the 35,000 cubic metres of water from the Marne during the month of August, mingled with 200,000 cubic metres of spring water. Moreover, this mode of sterilisation, efficacious enough against the bacillus coli, is inadequate against Eberth's bacillus. Parisians have therefore been officially recommended to boil their water, a recommendation especially necessary in the poorer quarters particularly attacked. The wealthier quarters have little to fear, for they have always taken all necessary precautions to sterilise their water, and, moreover, there the habit of drinking mineral waters is almost universal.

The Radium Palace.

Madame Curie has asked M. Ménot, the architect of the Sorbonne, who is building the Radium Palace on the site of the former Convent of Visitandines in the rue St. Jacques, to add a teaching laboratory. The original plans of the Palace contemplated only a research laboratory, to the cost of construction of which the Pasteur Institute undertook to contribute 400,000 francs and the University of Paris 280,000. The new laboratory desired by Madame Curie will not add more than some 40,000 francs to the expense. It will accommodate 40 students. This additional subvention will be sought from the University of Paris.

Oct. 21st.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Temperance Movement in Austria.

AT a meeting of the Austrian anti-alcohol societies held recently in Graz it was remarked that the proportion of medical members was increasing considerably, an important fact both as an indication of the favour with which the temperance movement was regarded in well-informed quarters, and also on account of the influence which such practitioners exercised over their patients. Another notable feature was the circumstance that numerous college and university students have joined the ranks of the anti-alcoholists within the last two years. For those who know that beer-drinking is (or rather used to be) one of the chief relaxations of the German students, this fact is more significant than a whole volume on the subject. A third and also a very important item in the discussions was the attention paid by many speakers to the influencing of children in favour of total abstinence. In fact, a large proportion of the papers dealt with the effects of alcohol on children. Dr. Weiss of Vienna, as well as Professor Kassowitz, pointed out how the breast feeding of infants was interfered with by alcoholic indulgence on the part of the mother; the latter also denounced the use of alcohol as a tonic for children under 14 years of age. Frau Fröhlich, who read a paper on Alcoholism in Children under Six Years of Age, said that both in rural districts and in industrial centres infants were often given some alcoholic tincture, or even more or less diluted brandy, as a hypnotic, to ensure a quiet night for the hard-working parents. Beer-drinking was quite common at a very early age in Bohemian and Silesian villages, since the parents had no clear ideas as to the harmful effects of this habit. Frau Masaryk gave an account of an inquiry which she had made with reference to the use of alcoholic beverages by school-children. She described the facts supplied to her from reliable sources as fearful. In certain districts there was not a single boy over 12 years who had not been intoxicated at least once. Even in the larger towns boys and even girls were regularly given an evening drink from their parents' beer glass, whilst in the wine districts the daily consumption of light wine by children amounted on an average to a pint per head. Dr. Schweighofer of Salzburg delivered an address on the Effects of Parental Alcoholism as Manifested in the Offspring, illustrating his remarks by a series of lantern pictures. He maintained that alcohol rather than syphilis was mainly responsible for the increase of mental disease amongst our modern population. He therefore urged the necessity of restricting the manufacture and sale of alcoholic beverages, since the income derived from this source by the State was more than spent in combating its evil effects in the forms of crime and illness.

Illness of Professor von Neusser.

The numerous friends of that eminent physician, Professor von Neusser, will learn with regret that he has had to undergo a severe operation for nephrolithiasis and subsequent hydronephrosis. He is reported to be doing well, but still his condition is such as to cause a good deal of anxiety to his family. It may be mentioned that the diagnosis of his illness was made by himself.

Disorderly Scenes in the Anatomical Institute.

Owing to their constantly increasing number the students

in the anatomical institute have had to put up with a great deal of discomfort in the course of their work. The accommodation for those engaged in dissection has become so inadequate that students have had to wait their turn for weeks and weeks; and the conveniences for washing have been altogether insufficient. Some idea of the congestion may be formed from the fact that 500 students are working at a time with only 200 chairs at their disposal, and only two hot-water pipes in use. At the recent opening of the winter term the students organised a noisy demonstration, at the same time assuring the professor (Dr. Tandler) that this form of protest was not directed against him but against the administration of the clinical institutes—in fact, against the Government. The professor acknowledged the reality of their grievances and volunteered to go at the head of a deputation to the Dean of the University and afterwards to the Ministry of Education in order to present a request for the necessary funds for the required improvements. This was agreed to, and after some delay the Government consented to grant 30,000 kronen in order to increase the number of seats and to provide certain important apparatus. One of the chief subjects of complaint, however, will be very difficult to remedy. This is the insufficiency of the ventilation, for owing to the situation of the institute in one of the busiest main thoroughfares the windows of the dissecting rooms and laboratories cannot be opened as frequently as would be desirable.

Oct. 23rd.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

The Harvey Lecture by Dr. Simon Flexner.

Dr. Simon Flexner, of the Rockefeller Institute, in delivering one of the lectures of the Harvey Society recently, took as his subject the local specific therapy of infections. At the Rockefeller Institute, he said, experimental influenzal meningitis had been induced in monkeys and had been successfully treated by a serum produced by Dr. Waldstein. Monkeys even in an advanced stage of the disease had recovered under local treatment. Pneumococcal meningitis also had been induced in the monkey, but up to the present time pneumococcal serum had given very poor results. The micro-organism of acute poliomyelitis was so minute as to be invisible. It was localised in the central nervous system, the paralysis being secondary. The most probable means of treating the disease successfully was by local injection. Dr. Flexner considered urotropin of little use in developed cases, though perhaps of some value as a preventive measure. In the treatment of infantile paralysis, if any success was to be looked for, early treatment was essential. Work was being pursued at the institute with the view of producing effective serums for the treatment of dangerous local infections, and there was reason to hope that their efforts might ultimately be crowned with success.

The Milk-supply Problem in New York.

At the New York Academy of Medicine, in the Section of Pædiatrics, the milk question as it relates in certain of its aspects to infant mortality was recently discussed. The Chief Health Commissioner, Dr. Lederle, asked the members of the Academy to support the Health Department in its efforts to obtain an appropriation from the Board of Estimate to enable it to open 70 milk stations in Greater New York. He said that at least 1200 infants had been saved in the past nine months by the improved quality of the milk supplied and by the campaign of education. The milk problem, he said, had become a great economic problem, and it was impossible in a city of the size of New York, where 1,600,000 quarts of milk were used daily, to have each quart pure enough for infant feeding. Such a course was neither requisite nor economical. To solve the problem he had prepared a schedule subdividing the milk-supply into three classes—for infants and children, for adults, and for cooking purposes.

New York's Lowest Death-rate.

There has been a substantial decrease of the death-rate of the city for the first nine months of the year. The death-rate for this period was 15·56 per 1000, as against 16·27 per 1000 for the corresponding period of 1910. Up to Sept. 30th of this year 11,733 infants under 1 year have died from all causes, as against 12,920 for the period ending Sept. 30th, 1910, giving death-rates of 124·6 and 142·3 per 1000 respectively.

Conditions in Factories of New York State.

Dr. Charles D. Graham-Rogers, of the State Labour Department, recently described to the Wagner-Smith Factory Investigating Commission the conditions menacing the lives and health of factory workers. He stated that he alone was "the entire Bureau of Medical Inspection" for the factories of the State, and that he was utterly powerless, under the present law, to cope with the evil conditions he found and could merely report them with recommendations for remedial measures. Insanitary conditions, he said, prevailed throughout the factories of the State. Children were employed in phosphorus match factories, packing matches in boxes, although the law permitted their employment only in stacking the boxes. He recommended the absolute exclusion of women and children from match factories and the absolute prohibition of the use of yellow phosphorus. Among other recommendations made were the following: (1) compulsory dust removal and ventilation; (2) medical examination of employees; (3) instruction in industrial hygiene in schools; (4) the establishment of a division of industrial hygiene composed of medical men, biologists, and chemists; and (5) the prohibition of work in cellars.

Renaming of Blackwell's Island.

Blackwell's Island, which was for many years the seat of the city asylums for the insane, ordinary and criminal, with its old buildings, now enlarged and improved, has been given over to the hospitals of the Department of Charities. That body has, therefore, decided to change the name of the island to Hospital Park, the commissioner pointing out that the self-respect of the present inmates is safeguarded by changing the name with its connotations of crime and insanity.

The Budget Exhibit.

The Budget Exhibit is an annual object-lesson to the taxpayers of New York, showing them how the local taxes are expended. The departments of health and charity naturally occupy considerable space and attract much attention from the 15,000 daily visitors. An interesting exhibit is a model milk station for children, in which is a huge map of Manhattan borough, showing every infant death of the past year marked with a black dot. Moving pictures display various sections of the overcrowded East Side.

Abolition of the Public Drinking Cup.

The regulations regarding individual drinking cups in public places have led to occasional ludicrous results. The Pennsylvania Railroad supplied paraffin individual cups for its patrons, and the newly landed immigrants, confusing these with the gelatin cones in which penny ice-creams are sold, attempted to devour them. Some of the smaller hotels supply the paraffin cups in slot machines. The New York Public Library has installed a kind of fountain which throws a stream of water directly into the air, which the thirsty bend over and drink.

A "Christian Science" Home.

The "Christian Science" adherents, who seem to have dropped out of the public eye considerably since the death of Mrs. Eddy, have at length heeded the reproach that they have never done anything for the sick poor, and the first "Christian Science" Home of the State of New York has been incorporated.

Illicit Drug-Selling.

Five arrests were made recently in one day for the illegal sale of opium, the Federal excise officers finding over £300 worth of the drug prepared for smoking. This smoking opium is said to be made from the ordinary solid extract, mixed with lactose and the residuum found in the interior of the opium pipe after its use for some time, which is known as *yen shi*. A drachm of this mixture is sold in a small tin can, or "shell," for 50 cents (2*s*.). Such a shell furnishes the usual daily dose: when "cooked" *secundum artem* it makes about a dozen "pills."

New York State Hospital for Incipient Tuberculosis.

Bronze tablets were unveiled recently in the two new pavilions of the State Hospital for Incipient Tuberculosis in

the Adirondacks. These pavilions, erected in memory of Dr. John H. Pryor of Buffalo and Dr. Willis G. Macdonald of Albany, double the capacity of the institution and cost in themselves over £40,000; they will reduce a waiting list of 150 to 10 or 12. There are now an administration building and four connected pavilions, with 516 acres of farm and forest land, valued in all at over £100,000. Patients live in the open air the year round, and the institution claims to cure from 76 to 84 per cent. of all incipient cases.

Hookworm Disease in California.

The California State Board of Health has asked for the coöperation of the United States Public Health and Marine Hospital Service in regard to the prevalence of hookworm disease in the State. It has been shown that about 25 per cent. of immigrants into the State are infected; also that many of the deep gold miners are suffering from the disease. Dr. Charles W. Stiles, of the Public Health Service, is at present investigating this disease in Texas.

Oct. 17th.

Obituary.

ALFRED PETER HILLIER, M.D., C.M. EDIN.,

MEMBER OF PARLIAMENT FOR NORTH HERTS

THE announcement of the death of Dr. A. P. Hillier, which took place in tragic circumstances at his residence in Eccleston-square on Oct. 24th, will be received with regret by members of the medical profession. In the House of Commons he was an active worker, whose speeches were listened to with attention. His vigorous criticisms of the National Insurance Bill during the past session of Parliament will be remembered by our readers.

Dr. Hillier, who was born in 1858, was the son of Mr. P. Playne Hillier of Shortwood, Gloucestershire. He graduated M.B., C.M. at the University of Edinburgh in 1882, having previously taken the B.A. degree of Cape University in 1877. In 1884 he proceeded to the M.D. degree. In 1878–79 he served as a trooper with the Colonial Forces in the Kaffir War, obtaining a medal and clasp. Subsequently he commenced practice at East London, Cape Colony, and later was appointed resident surgeon to the Kimberley Hospital, afterwards entering into partnership with Dr. (now Sir Starr) Jameson. Politics, however, appealed to him strongly, and on going to Johannesburg in 1893, in which year he was elected President of the South African Medical Congress, he took an active part in Transvaal affairs. As a prominent member of the Reform Committee at the time of the Jameson Raid he was for some time confined in Pretoria Gaol, being released in 1896 on the payment of a fine of £2000. In the following year he returned to England. In 1899 he was one of the delegates of the National Association for the Prevention of Consumption to the Berlin Tuberculosis Congress. He was consulting physician to the London Open-air Sanatorium and was also a councillor of the Royal Colonial Institute. His interest in public affairs won him from the active practice of his profession, and he devoted himself more and more to politics. In 1900 he unsuccessfully contested Stockport, and in 1906 he was rejected by South Bedfordshire, but in January, 1910, he was the successful candidate for the Hitchin Division of Hertfordshire, standing in the Unionist interest.

Dr. Hillier was joint editor of *Tuberculosis*. In 1900 he published "Tuberculosis: its Nature, Prevention, and Treatment, with Special Reference to the Open-air Treatment of Phthisis," and in 1903 the "Prevention of Consumption." His political writings included "Raid and Reform," which was published in 1897; "South African Studies," published in 1900; and the "Commonweal, or the Federal System of Political Economy," published in 1909. He also contributed articles on South Africa to the Encyclopædia Britannica, and was the author of the "Antiquity of Man in South Africa and Evolution." Dr. Hillier married in 1885 a daughter of Mr. F. B. Brown of Queenstown, Cape Colony, whom he leaves with one son and two daughters.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Richard Schulz, formerly *oberarzt* of the Ducal Hospital in Brunswick, aged 63.—Dr. Ludwig Bauer, *docent* of hygiene in the Stuttgart Technical School, aged 47.—Dr. Emil Emmert, *docent* of ophthalmology in the University of Berne. He was the son of the late Dr. Karl Emmert, professor of forensic medicine, and published various papers on ophthalmological topics, and also on the subject of school hygiene. He was 66 years of age.—Dr. Blatin, formerly professor of physiology in the Clermont Medical School.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in October the following candidates passed in the subjects indicated:—

Surgery.—E. E. Allen (Sections I. and II.), Royal Free Hospital; E. G. Brisco-Owen (Section I.), Cardiff and Royal Free Hospital; F. G. Norbury (Section II.), Glasgow; and G. S. Richardson (Section II.), Leeds.
Medicine.—E. E. Allen (Section II.), Royal Free Hospital.
Forensic Medicine.—E. E. Allen, Royal Free Hospital; H. N. Eccles, Guy's Hospital; E. B. Keen, Charing Cross Hospital; and F. C. Shone, University College Hospital.
Midwifery.—E. E. Allen, Royal Free Hospital; L. M. Ladell, London Hospital; H. Rimington, St. Bartholomew's Hospital; F. C. Shone, University College Hospital; and H. G. Steel and W. H. Vincent, St. Mary's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—E. E. Allen, F. G. Norbury, and G. S. Richardson.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Kulbs, who recently came from Kiel to be Professor His's First Assistant in the Medical Clinic, has been granted the title of Professor.—*Cracow:* Dr. Johann Mazurkiewicz of Lemberg has been recognised as *privat-docent* of Psychology.—*Göttingen:* Dr. Bernhard Zoeppritz has been recognised as *privat-docent* of Midwifery and Gynæcology; and Dr. Oswald Loeb, formerly of Berne and Basle, as *privat-docent* of Pharmacology.—*Greifswald:* Dr. Pels-Leusden, now in charge of the surgical side of the Berlin Charité Policlinic, has been offered the chair of Surgery in succession to Dr. F. König, who has gone to Marburg.—*Innsbruck:* Dr. Hans von Haberer of Vienna has been appointed to the chair of Surgery, in succession to Dr. Schloffer, who is migrating to Prague. Dr. Hans Rabl, extraordinary professor in Vienna, has been offered the chair of Histology and Embryology.—*Moscow:* Dr. S. Golovin of Odessa has been appointed to the chair of Ophthalmology.—*Naples:* Dr. Battaglia has been recognised as *privat docent* of Anatomy and Pathological Histology; Dr. G. Spinetti as *privat-docent* of Operative Medicine; and Dr. De Sandro and Dr. E. Ciaramelli as *privat-docenten* of Internal Pathology.—*Rome:* Dr. S. Tini and Dr. F. Scordo have been recognised as *privat-docenten* of Internal Pathology; Dr. L. Dominici and Dr. S. Puglisi Allegra as *privat-docenten* of External Pathology; Dr. A. Mendicini, Dr. G. Bianconi, and Dr. G. Impallomeni as *privat-docenten* of Orthopædic Surgery.—*Turin:* Dr. E. Calamida and Dr. C. Mantelli have been recognised as *privat-docenten* of External Pathology, Dr. E. Mani as *privat-docent* of Ophthalmology, and Dr. Bertolotti as *privat-docent* of Physio-therapeutics.—*Vienna:* Dr. Otto Poetzl has been recognised as *privat-docent* of Psychology and Neurology.

KING'S COLLEGE (UNIVERSITY OF LONDON).—A course of four advanced lectures in Physiology will be delivered in the Physiological Laboratory, King's College, London, by Dr. F. S. Locke on Energetics, at 4.30 P.M., on the following Mondays: Nov. 13th, 20th, 27th, and Dec. 4th, 1911. These lectures are free to all members of King's College, London, to all internal students of the University of London, to all medical students in London, and to all medical men on presentation of their cards.

ROYAL DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students will be held on Friday, Nov. 24th, at the Hôtel Métropole (Whitehall Rooms), under the presidency of Mr. Walter Harrison. Those who desire to be present are requested to communicate with the Dean. The medical committee will be "At Home" to all old students of the hospital on the following day from 2.30 to 5 P.M., when the various departments of the hospital and school will be open, and specimens

and cases of interest, &c., will be shown by the members of the staff and lecturers.

LITERARY INTELLIGENCE. — The University of London Press announce for early publication: "Infectious Diseases and their Preventive Treatment" by Edward Seaton, M.D., consulting medical officer, Surrey County Council.

FINE FOR WATERING MILK.—A farmer was fined £20 and costs, or three months' hard labour, by the Bristol magistrates last week for selling milk containing 27·65 per cent. of added water. He had been fined before on two occasions.

DEATH OF A CENTENARIAN.—The death occurred recently at Upper Snailham Farm, Icklesham, East Sussex, of Mrs. Sarah Ann Carter, who had attained the great age of 102. She was born at Northiam, and had resided in the vicinity all her life. At the time of her death Mrs. Carter had 50 grandchildren, 110 great grandchildren, and 13 great great grandchildren.

DEATH OF DR. WILLIAM LANG.—At Southwick, Sussex, on Oct. 13th, the death occurred of Dr. William Lang in his 71st year. Studying at Glasgow University he graduated C.M. with honours in 1863 and proceeded to his doctorate in the same year. For some time he was resident assistant medical officer at Town's Hospital and the City Lunatic Asylum, Glasgow, but subsequently he settled in Grenada, West Indies, where he was health officer for the port of Grenville. He was living in retirement at Southwick.

CHELSEA CLINICAL SOCIETY.—The opening meeting of the fifteenth session of the Chelsea Clinical Society was held on Oct. 17th at St. George's Hospital Medical School. The retiring President, Dr. T. W. Parkinson, most generously presented the society with a presidential badge. The President, Dr. J. A. Mansell Moullin, gave the opening address on the subject of "Hysterectomy and its Influence upon Gynæcological Surgery of the Present Day." In future the society will hold its meetings in the club-rooms of St. George's Hospital Medical School, which have very kindly been placed at the disposal of the society by the authorities and executive officers of the hospital.

ST. BARTHOLOMEW'S HOSPITAL WOMEN'S GUILD. —A well-attended meeting was held in the Great Hall of St. Bartholomew's Hospital on Monday, Oct. 23rd, at the invitation of Lord and Lady Sandhurst, to inaugurate a women's guild for the hospital. A short account of a similar guild at Guy's Hospital was given by Mrs. Lauriston Shaw, and after speeches by Lord Sandhurst and Dr. Norman Moore resolutions were passed forming the guild and electing the first committee and officers. The objects of the guild are to provide clothes for the use of necessitous patients in the wards and on their discharge from the hospital, and to take up any other work in connexion with the hospital which from time to time may commend itself to a general meeting with the sanction and approval of the treasurer and almoners.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill.

PARLIAMENT has re-assembled after its autumn holiday, and the Government has taken steps to secure the passage of the National Insurance Bill into law before the end of the year. On Wednesday, Oct. 25th, the Prime Minister submitted to the House of Commons a closure motion allocating time to its further discussion. After protests from the Opposition, a time-table was adopted by which the future proceedings on the Bill are to be regulated. Sixteen Parliamentary days have been allocated to the consideration in committee of the clauses and schedules of the invalidity portion of the Bill which have not yet been reviewed by the House of Commons. Seventeen clauses were discussed before the House rose for the holidays. The unemployment portion of the Bill has been referred to a Grand Committee. Five Parliamentary days are to be given to the report stage. The contention of the Government is that this time-table will afford adequate opportunities for the discussion of the various fresh questions which arise on the Bill.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London, W. LONGMANS, GREEN, AND CO., New York.

International Medical Monographs. General Editors: Dr. Leonard Hill, F.R.S., and Dr. William Bulloch. The Mechanical Factors of Digestion. By Walter B. Cannon, A.M., M.D., George Higginson Professor of Physiology, Harvard University. Price 10*s.* 6*d.* net.

The Diagnosis of Nervous Diseases. By Purves Stewart, M.A., M.D. Edin., F.R.C.P. Third edition, revised and enlarged. Price 15*s.* net.

CHURCHILL, J. AND A., London.

A Manual of Midwifery. By Thomas Watts Eden, M.D., C.M. Edin., F.R.C.P. Lond., F.R.C.S. Edin. Third edition. Price 15*s.* net.

Allen's Commercial Organic Analysis. Volume V.: Tannins; Analysis of Leather; Dyes and Colouring Matters, Dye-stuffs of Groups 6 to 12; Colouring Matters of Natural Origin; Analysis of Colouring Matters; Colouring Matters in Foods; Inks. By the Editors and the following Contributors: W. P. Dreaper, J. F. Hewitt, W. M. Gardner, Albert F. Seeker, Percy H. Walker, E. Feilmann. Fourth edition, entirely rewritten. Edited by W. A. Davis, B.Sc., A.C.G.I., and Samuel S. Sadtler, S.B. Price 21*s.* net.

A Manual of Bacteriology, Clinical and Applied. By R. Tanner Hewlett, M.D., F.R.C.P., D.P.H. Lond. Fourth edition. Price 10*s.* 6*d.* net.

COLUMBIA UNIVERSITY PRESS, New York. OXFORD UNIVERSITY, PRESS, London.

Education and Preventive Medicine. By Norman Edward Ditman, Ph.D., M.D. Price 1*s.* 6*d.* net.

FROWDE, HENRY, AND HODDER AND STOUGHTON, Edinburgh, Glasgow, and London.

Manual of Surgery. By Alexis Thomson, F.R.C.S. Edin., and Alexander Miles, F.R.C.S. Edin. Volume I.: General Surgery. Fourth edition, revised and enlarged. Price 10*s.* 6*d.* net.

GARDEN CITY PRESS, LIMITED, Letchworth, Herts.

Five Months in a London Hospital. By Katherine Roberts. Price, cloth, 2*s.* 6*d.*; paper, 1*s.*

KING, P. S., AND SON, Orchard House, Westminster, London, S.W.

National Conference on the Prevention of Destitution. Report of the Proceedings of the National Conference on the Prevention of Destitution held at the Caxton Hall, Westminster, on May 30th and 31st, and June 1st and 2nd, 1911. President: The Rt. Hon. the Lord Mayor of London. Price 10*s.* 6*d.* net.

Archives of Neurology and Psychiatry from the Pathological Laboratory of the London County Asylums, Claybury, Essex. Edited by Frederick Walker Mott, M.D., F.R.S., F.R.C.P., Director of the Laboratory and Pathologist to the London County Asylums. Vol. V. 1911. Price not stated.

LEWIS, H. K., 136, Gower-street, London.

Heart Sounds and Murmurs, Their Causation and Recognition. A Handbook for Students. By E. M. Brockbank, M.D. Vict., F.R.C.P., Senior Hon. Assistant Physician, Royal Infirmary, Manchester. Price 2*s.* 6*d.* net.

A Pocket Medical Dictionary, giving the Pronunciation and Definition of the Principal Words Used in Medicine and the Collateral Sciences. By George M. Gould, A.M., M.D. Sixth edition, revised and enlarged. 34,000 words. Price 5*s.* net.

MACMILLAN AND CO., LIMITED, London.

Conduct and its Disorders, Biologically Considered. By Charles Arthur Mercier, M.D., F.R.C.P., F.R.C.S., Physician for Mental Diseases to Charing Cross Hospital. Price 10*s.* net.

Man and Beast in Eastern Ethiopia. From Observations made in British East Africa, Uganda, and the Sudan. By J. Bland-Sutton, F.R.C.S. Eng. Price 12*s.* net.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.

A Manual of the Practice of Medicine. Prepared especially for Students. By A. A. Stevens, A.M., M.D. Ninth edition, revised. Price 12*s.* 6*d.* net.

A Text-book of Physiology. For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., Sc.D., LL.D., Professor of Physiology in the Johns Hopkins University, Baltimore. Fourth edition, thoroughly revised. Price, cloth, 18*s.* net.

Pathological Technique. A Practical Manual for Workers in Pathological Histology and Bacteriology. By Frank Burr Mallory, A.M., M.D., Associate Professor of Pathology, Harvard University Medical School, and James Homer Wright, A.M., M.D., S.D., Director of the Pathological Laboratory of the Massachusetts General Hospital. Fifth edition, revised and enlarged. Price, cloth, 13*s.* net.

Veterinary Bacteriology. A Treatise on the Bacteria, Yeasts, Molds, and Protozoa Pathogenic for Domestic Animals. By Robert Earle Buchanan, Ph.D., Professor of Bacteriology in the Iowa State College of Agriculture and Mechanic Arts, Division of Veterinary Medicine. Price, cloth, 13*s.* net.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.)

Health to Date: The Modern Doctor; with Newer Methods of Cure. As explained by W. T. Fernie, M.D. Price 4*s.* 6*d.*

Dental Anæsthetics. A Text-book for Students and Practitioners. With a Contribution on Analgesia by John Bolam, L.D.S. Edin., Honorary Assistant Dental Surgeon, Newcastle-upon-Tyne Dental Hospital. By Wilfred E. Alderson, M.D. Durham, M.S., B.Hy., D.P.H., Honorary Physician, Newcastle-upon-Tyne Dispensary. Price 3*s.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BRAINE-HARTNELL, CHRISTOPHER, F.R.C.S. Edin., has been appointed Honorary Surgeon to the Cheltenham General Hospital.

BRODRICK, CHARLES CUMBERLAND, L.R.C.P. & S. Edin., has been re-appointed Medical Officer of Health by the Tavistock (Devon) Rural District Council.

CAMPBELL, RODERICK ALAN, M.D. Edin., has been appointed Assistant Physician to the Crichton Royal Institution, Dumfries.

COPE, V. Z., M.S. Lond., F.R.C.S. Eng., has been appointed Surgeon in Charge of Out-patients at St. Mary's Hospital.

CLAYTON-GREENE, W. H., F.R.C.S. Eng., has been appointed Surgeon to St. Mary's Hospital.

CRUICKSHANK, JOHN, M.B., Ch.B. Glasg., has been appointed Pathologist and Clinical Pathologist at the Crichton Royal Institution, Dumfries.

CUMMING, J. H., M.R.C.S., L.R.C.P., has been appointed House Physician at the Royal Free Hospital.

DIXON, JOSEPH F., M.D. Dub., has been appointed Medical Superintendent of the Leicester Asylum.

DOWNES, HAROLD, M.B., C.M. Edin., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Ilminster (Somerset) Urban District.

FENWICK, W. STEPHEN, M.S., M.B. Lond., F.R.C.S. Eng., has been appointed Surgeon to Out-patients at the Hampstead General Hospital.

GOWLAND, W. P., M.D., B.S. Lond., has been appointed Senior Demonstrator in Anatomy at the University of Liverpool.

GREEN-ARMYTAGE, VIVIAN BARTLEY, Captain, I.M.S., has been appointed Medical Officer to the Eden Hospital, Calcutta.

GREENWOOD, A. ATKINS, M.B., B.S. Lond., has been appointed Medical Officer to the X Ray and Electrical Department at the Hampstead General Hospital.

HOULTON, J. L., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Ear, Nose, and Throat Department at the Royal Hospital, Sheffield.

KINGSTON, STUART HARDY, M.B. Bristol, L.R.C.P. Lond., M.R.C.S., has been appointed Senior Resident Medical Officer at the Bristol Royal Infirmary.

MACPHAIL, JOHN MONRO, M.B., Ch.B. Edin., has been appointed Assistant Medical Officer of the Eastville and Stapleton Workhouses by the Bristol Board of Guardians.

PORTER, R. E., M.R.C.S., L.R.C.P., has been appointed House Surgeon at the Royal Free Hospital.

RAWLINS, Miss M., M.B., B.S., has been appointed Assistant Anæsthetist at the Royal Free Hospital.

SCOTT, Miss M., M.B., B.S. Lond., has been appointed House Physician at the Royal Free Hospital.

SHINNIE, A. J., M.B., Ch.B. Aberd., has been appointed House Surgeon at the Hampstead General Hospital.

STUART, A. M., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at the Hampstead General Hospital.

STURDEE, EDWIN LAWRANCE, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Exeter Port Sanitary Authority and Public Vaccinator for the Exmouth District by the St. Thomas (Exeter) Board of Guardians.

TAYLOR, ARTHUR L., M.B., B.S. Edin., has been appointed Assistant Medical Officer at the Derby Borough Asylum.

THACKRAH, Miss M., M.B., B.S. Lond., has been appointed House Surgeon at the Royal Free Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £80 per annum, all found.

BATH ROYAL UNITED HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Resident Medical Officer for six months. Salary at rate of £60 per annum, with board, residence, &c.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM CITY ASYLUM, Winson Green.—Junior Assistant Medical Officer. Salary £150 per annum, with board, laundry, &c.

BRISTOL ROYAL INFIRMARY.—Throat, Nose, and Ear House Surgeon. Salary £75 per annum, with board, apartments, and washing.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Second House Surgeon for nine months. Salary £80 per annum, with board, residence, and laundry.

DENBIGH, DENBIGHSHIRE INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, apartments, laundry, &c.

DONCASTER, ROYAL INFIRMARY AND DISPENSARY.—Senior House Surgeon and Assistant House Surgeon, unmarried. Salaries £90 and £60 per annum respectively, with board, apartments, and washing.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Second Casualty Officer for six months. Salary at rate of £40 per annum, with luncheon and tea. Also Assistant Surgeon.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £72 per annum.

GLASGOW SCHOOL BOARD.—Female Lecturers on Hygiene and Home Nursing.

HOLT, NORFOLK, GRESHAM'S SCHOOL.—Medical Officer. Salary £250 per annum.

HUDDERSFIELD ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £60 per annum, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

ILFORD URBAN DISTRICT COUNCIL.—Assistant Medical Officer of Health. Salary £250 per annum.

LEEDS GENERAL INFIRMARY.—Medical Tutor. Salary £125 per annum. Also Medical Registrar. Salary £25 per annum.

LEEDS PUBLIC DISPENSARY.—Honorary Physician.

LEICESTER INFIRMARY.—Honorary Surgeon.

LISCARD, CHESHIRE, WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and service.

LIVERPOOL, CANCER RESEARCH LABORATORY, The University.—Assistant. Salary £150 per annum.

LIVERPOOL EYE AND EAR INFIRMARY, Myrtle-street.—Honorary Assistant Surgeon.

LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Resident Medical Officer. Salary £250 per annum, with board and residence.

LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Salary at rate of 50 guineas per annum, with board, residence, and washing.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham Hill-road.—House Surgeon. Salary £100 per annum, with apartments and board.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood.—Honorary Dental Surgeon. Also Honorary Radiographer.

NAPSBURY, ST. ALBANS, MIDDLESEX COUNTY ASYLUM.—Assistant Medical Officer. Salary £160 per annum, with board, lodging, washing, and attendance.

NEWCASTLE-ON-TYNE, HOSPITAL FOR SICK CHILDREN.—Honorary Assistant Physician.

NORWICH, JENNY LIND INFIRMARY FOR CHILDREN, Unthank-road.—Resident Medical Officer (female). Salary £50 per annum, with board, apartments, and laundry.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Pathologist. Salary £100 per annum. Also Clinical Assistants.

POPLAR AND STEPNEY SICK ASYLUM, Bromley, Middlesex, E.—Third Assistant Medical Officer. Salary £120 per annum, with rations, apartments, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Surgeon-in-Charge of Out-patient Department of Ear, Nose, and Throat.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon for six months. Salary £60 per annum, with board, lodging, and washing.

ROCHDALE INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and laundry.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Dental Surgeon.

ROYAL NAVAL MEDICAL SERVICE.—Fifteen Commissions.

ST. MARY'S HOSPITAL, London, W.—Casualty Physician. Salary £75 per annum.

SALFORD ROYAL HOSPITAL.—Honorary Dentist.

UNIVERSITY OF LONDON.—Examiners.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—Senior Resident Medical Officer. Salary £120 per annum, with board, residence, and washing.

WALSALL AND DISTRICT HOSPITAL.—House Physician and Casualty Officer. Salary £80 per annum, with board, residence, and laundry.

WESTMINSTER HOSPITAL (opposite Westminster Abbey).—Assistant House Physician for two months, non-resident, but board provided.

WHITTINGHAM, NEAR PRESTON, COUNTY ASYLUM.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, apartments, and washing.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

Births, Marriages, and Deaths.

BIRTHS.

FLINT.—On Oct. 14th, at Cliff House, Buxton, Derbyshire, the wife of Thomas Buxton Flint, M.R.C.S., L.R.C.P., of a daughter.

GRIFFIN.—On Oct. 19th, at Baldock, Herts, the wife of John P. Griffin, M.R.C.S., L.R.C.P. Lond., of a son.

MARRIAGES.

GRAHAM LITTLE—KAUFFMANN-KENDALL.—On Oct. 21st, Ernest Gordon Graham Little, M.D., B.A., F.R.C.P., to Sara Helen Kauffmann-Kendall, daughter of the late Maurice and of Mrs. Kauffmann-Kendall, of Chester-terrace, Regent's Park.

DEATHS.

BREAKEY.—On Oct. 21st, at Carlisle Mansions, Victoria-street, London, John Breakey, M.D., R.N., Inspector-General of Hospitals and Fleets (retired).

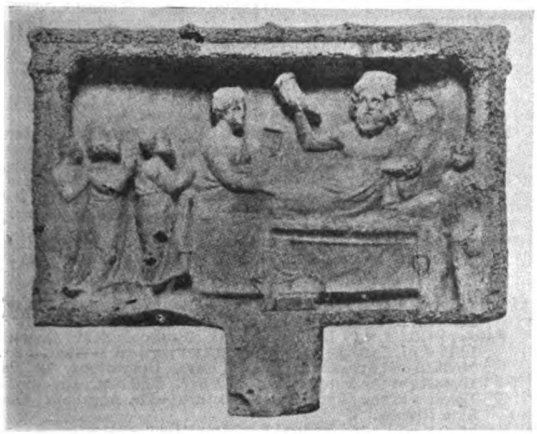
SIMPSON.—At 52, Queen-street, Edinburgh, on Oct. 25th, Dame Margaret Stewart Barbour, wife of Emeritus Professor Sir Alexander Russell Simpson, M.D. No flowers, by request.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A NEW GREEK MONUMENT TO ASKLEPIOS AND HYGIEIA.

AMONG the numerous specimens of Greek sculpture and the bronzes and statuettes that have for several years been in course of recovery from the wreck of a Roman ship discovered by the sponge fishers off Mahdia, in Tunis, has recently been found an Attic relief, of which we present a reproduction of a photograph. It is the latest obtained of a series of reliefs depicting the sacred banquet offered to Asklepios and Hygieia and is carved in marble. The scene shows six persons partly inside or in front of some pillared edifice, perhaps one of the porticos of the deity's temple, where he was supposed to appear to and heal the faithful. At the extreme right, and in front



of one of the pillars, is a young Neocoros bearing some kind of patera. To the left are a man, woman, and youth or girl, the last of the three being partly outside the shrine. The centre of the stele display Asklepios and Hygieia in greater proportionate size than the other four figures. The deity is half reclining upon a couch, the upper part of his body nude. He is about to drink from a large rhyton held in his right hand, whilst the left holds a saucer containing some kind of food. His eyes are lifted heavenward. He is bearded, and his abundant locks of hair support the calathos, a vase-shaped basket used as a headdress. Hygieia is seated upon a sort of dais, and is shown in profile with her face turned towards her father. Her hair is ornamentally gathered up to the head, leaving the neck bare. She wears a tunic and mantle. In one hand she holds a receptacle, doubtless for incense, and her feet are supported upon a stool. Before the couch of Asklepios is a table bearing the ritual meat or cakes for the banquet. Although no direct information has been derivable from the wreck as to whence its contents were obtained, archæologists have been able to show, from inscribed stones that were on board and from the date of certain objects, that the vessel left Greece soon after the sack of Athens, and of the Piraeus, by Sylla. Several objects among the relics are known to have come from the navy yard there, where the sacred galleys, once part of the Athenian fleet, were housed; and classic authors especially speak of the booty the Roman legions took from the Piraeus. At this port there was an Asklepieion frequented by mariners, and four stela, somewhat similar to this one from Mahdia, have been found upon its site. There can be but little doubt that this relief also comes from the Piræus, because the sunken galley has among its cargo inscriptions carried off from temples standing there. Moreover, the workmanship is not quite so good as was generally considered appropriate for the Asklepieion at Athens, so there is every reason to consider that it was taken from the shrine of the god of healing at the arsenal, from which emporium also were derived two bronze prow ornaments belonging to the ancient galleys housed there, which have also been found at Mahdia.

HEALTH OF THE GOLD COAST.

THE official report, just issued, on the Blue Book of the Gold Coast Colony for the year 1910, estimates the European population at 1830. The general population of the colony and its dependencies was returned in 1901 as 1,696,695, but, partly owing to reluctance on the part of the natives to be enumerated and partly to defective organisation, the Census was incomplete. There is no compulsory registration of births and deaths, but in the principal towns the burials are registered. The death-rate per 1000 amongst Europeans in 1910 was 27·18, as compared with 12·82 in the previous year, and the invaliding rate per 1000 was 43·75, as compared with 38·48. The causes of invaliding amongst European officials were: Malarial fever, 6; anæmia, 5; blackwater fever, 3; neurasthenia, 3; gastritis, 2; heart disease, 2; various, 11. Among non-officials: Malarial fever, 12; blackwater fever, 6; anæmia, 3; gastritis, 4; various, 17. No means exist of obtaining accurate statistics as regards the health of the natives, but from the data available it would appear that the sickness-rate for 1910 was less satisfactory than that of the previous year. In the early part of 1910 there were 10 cases of yellow fever, 9 of which were fatal, amongst Europeans in Seccondee. During the year 50 cases of sleeping sickness were treated in the different hospitals, and 11 deaths were recorded; the disease was more prevalent in Ashanti than in the colony. Glossina palpalis is reported to be present in most districts, and the possibility of an outbreak of sleeping sickness on the Gold Coast is now recognised, and efforts are being made to cope with the situation. In Ashanti there were several outbreaks of small-pox. The number of vaccinations performed throughout the Gold Coast was 25,590, of which 14,060 were successful. During the year 43,943 cases of disease were treated, of which 271 proved fatal. The most prevalent maladies were dysentery, malarial fever, rheumatism, venereal diseases, diseases of the eye and of the respiratory system, abscesses, skin diseases, and parasitic diseases. New hospitals have been completed at Tarquah, Akuse, and Winnebah, and a special fly-proof hospital has been built at Anum in the Volta district for the treatment of sleeping sickness and observation of suspects. The older hospitals still maintained are those at Accra, Seccondee, Cape Coast, Axim, Saltpond, Elmina, Quittah, and Addah.

A WARNING.

To the Editor of THE LANCET.

SIR,—It would, I think, be well to insert the following warning in your columns. A tall, well-developed man between 30 and 40 years of age, with ginger-coloured hair, and giving the name of Fitzgerald, called to see me the other day at 9.15 A.M. As my consulting-room was not available at the moment he was shown into the drawing-room. He was fairly well dressed and had a tweed cap. The story was that he was a doctor from Australia, had been in bad company the previous night, where he was robbed of watch and all his money. He had been drinking heavily the previous day. After he left a silver table-bell was missing. Information has been laid at the Marylebone police station.

I am, Sir, yours faithfully,

Weymouth-street, W. CHAS. W. CHAPMAN.

A SURGICAL RECORD.

ACCORDING to the *Allgemeine Medizinische Central-Zeitung* Professor Dr. Poppert recently performed his 2000th operation for the removal of gall-stones in the surgical clinic of the Giessen Hospital. This is supposed to be a record number—at all events for European hospitals.

CHRISTMAS GIFTS TO CRIPPLED CHILDREN.

Sir William Treloar writes to remind our readers of the annual distribution of hampers and clothing to poor crippled children of the metropolis which he has organised each Christmas for so many years past. Donations will be welcomed by him at 69, Ludgate Hill, London, E.C.

HYGIENE FOR BOYS.

A Naval Surgeon who wishes to give an hour's talk of a practical nature to boys of about 16 on their first joining the Navy, asks for information as to a small book or pamphlet likely to assist him in the matter; also whether suitable lantern slides are available. The intention is not to "talk morality," but to teach the boys to have respect for their bodies by learning something about them and their working.

MERCK'S ANNUAL REPORT.

WE have received an advance copy of this annual report, which contains a valuable record of progressive pharmaceutical chemistry and therapeutics. It gives a thorough presentation of the developments which have been announced during the 12 months under review. The present volume (Vol. XXIV.) comprises 380 pages of literary matter, and a feature on this occasion is the large space devoted to the therapeutic use of the cacodylates. We always find Merck's Annual Reports a source of useful and reliable information. Copies of the current report may be obtained from E. Merck, 16, Jewry-street, London, E.C.

A. M. Z.—1. The partnership would be responsible for the rent of the telephone. 2. The partnership, being the tenant of the groom's cottage, appears to be liable for the rates as well as for the rent.

ERRATUM.—Messrs. A. and M. Zimmermann point out that in our notice of "Atophan" in our last issue, the words "carbolic acid" were used when "carbonic acid" was intended.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for October and November, 1911:—

April-October.—Rome Exhibition (United Italy's Jubilee).
May 3rd-Oct. 31st (Glasgow).—Scottish Exhibition.
,, 6th-Oct. 31st (Dresden).—International Hygiene Exhibition (British Section opened June 14th closed Oct. 16th).
,, 12th-Oct. 31st (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
September-November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Oct. 26th-28th (Rome).—Congress of the Italian Society of Laryngology, Otology, and Rhinology.
,, 31st-Nov. 4th (London, Royal Horticultural Hall).—Twenty-second Universal Cookery and Food Exhibition.
October (Paris).—First Congress of the International Medical Association for the Prevention of War.
Nov. 1st (opens) (Turin).—International Exhibition of Hygiene.
,, 1st-14th (London).—"The Englishwoman" Exhibition of Arts and Handicrafts.
,, 3rd-11th (London, Olympia).—Tenth International Motor Exhibition.
,, 9th-11th (Cape Town).—Congress of the South African Branch of the Royal Sanitary Institute.
,, 10th-25th (Manchester).—Smoke Abatement Exhibition.
,, 14th and 15th (Vienna).—Jubilee of Union of Austrian Dental Surgeons.
,, 21st-23rd (Montreal).—Canadian Public Health Association (First Annual Meeting).
November (Rome).—Fourth International Congress of Physical Education.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

FRIDAY.

LARYNGOLOGICAL SECTION (Hon. Secretaries—W. H. Kelson, Dan McKenzie), at 11, Chandos-street, W.: at 5 P.M.

Cases

Will be shown by Dr. StClair Thomson, Dr. Kelson, and others.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—J. H. Targett, W. W. H. Tate), at 11, Chandos-street, W.: at 8 P.M.

Dr. P. Cole: Broad Ligament Cyst of Müllerian Origin.
Dr. Lockyer and Mr. Turner: Cancer of Uterus and Ovary subsequent to Double Salpingectomy.
Dr. Hubert Roberts: Tuberculosis of Uterus.
Dr. Barris: Urinary Organs in Pyelo-nephritis of Pregnancy.
Dr. Macnaughton-Jones: (1) Rare Books from Prof. Klein (Munich): (2) Ovarian Fibroma with Cancer of Uterus; (3) Ovarian Cystoma of Unusual Size.
Dr. Inglis Parsons: Fibroma of Uterus with Cancer of Cervix.
Dr. Banister: Unusual Case of Chorion-epithelioma.

Short Communication:

Dr. T. Copeland Savage (Auckland, N.Z.): A Case of Full-term Extra-uterine Gestation. Laparotomy during Spurious Labour. Recovery of Mother with Living Child.

(N.B.—Please note that this Meeting of the Section will be held on FRIDAY.)

SECTION OF ANÆSTHETICS (Hon. Secretaries—Mrs. Dickinson Berry, H. J. Scharlieb): at 8.30 P.M.

Reports on Two Cases of Death Under Anæsthesia.

Short Communications:

Dr. W. J. McCardie Notes on Cases showing Some of the After-effects of Chloroform.
Dr. J. F. W. Silk: Case of Pleurisy and Bronchitis after Open Ether.
Mr. Rowland Collum: Notes on a Troublesome Dental Case.
Mr. Bellamy Gardner: The Use of a Mouth Prop and Tongue Clip as a System of Anæsthesia.

(Members are invited to give a record of any interesting cases that have occurred in their practice.)

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Clinical Cases.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith-road, W.

FRIDAY.—8 P.M., Clinical Evening.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. J. E. R. McDonagh: Clinique (Skin). 5.15 P.M., Lecture:—Dr. L. H. Pegler: On Some Nervous Affections of the Pharynx and Larynx, including Functional Aphonia.
TUESDAY.—4 P.M., Dr. W. J. Fenton: Clinique (Medical). 5.15 P.M., Lecture:—Dr. T. G. Stevens: Unusual and Excessive Hæmorrhage at Puberty and the Menopause.
WEDNESDAY.—4 P.M., Mr. L. H. McGavin: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. R. Jones: The General Medical Treatment of Early Cases of Insanity.
THURSDAY.—4 P.M., Mr. M. White: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. A. Wylie, Treatment of Middle Ear Disease by Hot Medicated Air.
FRIDAY.—4 P.M., Mr. L. Paton: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Armour: Abdominal Drainage.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Davis: Diseases of the Ear. (Lecture III.)
WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Lloyd Williams: Etiology-Pathology and the Prevention and Treatment of Caries of the Teeth.
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Armour: Surgical Anatomy of Inguinal and Femoral Herniæ.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Disease.
SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 2.15 P.M., Special Lecture:—Dr. F. Taylor: Acute Abdominal Pain.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Mr. Walton: The Diagnosis of Upper Abdominal Lesions.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. H. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson).
TUESDAY.—Clinic:—10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting) 4.30 P.M., Demonstration:—Dr. G. N. Meachen: Selected Skin Cases.
WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).
FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Dr. J. Atkinson: Nose.
FRIDAY.—3.30 P.M., Lecture:—Mr. J. G. French: Some Points in Chronic Middle Ear Suppuration.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Mr. S. Scott: Peripheral Mechanism of Sound Perception.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. Ormerod: Cases from the Ward.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. C. Wall: Asthma and Nasal Disease.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Dr. W. Griffith: Bacteriology of the Skin.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Syphilis: History and Primary Invasi n (Constitutional and Local).—Eruption, Erythematous (I., Macular; II., Maculo-Papular).

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. E. B. Leech: The Medical Aspect of Gall-stones (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (4th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 25th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Oct. 19	30·02	E.	...	74	64	49	56	56	Foggy
,, 20	29·74	S.	0·09	93	63	56	59	60	Raining
,, 21	29·62	S.	0·09	76	62	57	56	58	Cloudy
,, 22	29·04	S.W.	0·30	87	60	52	53	54	Raining
,, 23	29·58	W.	0·40	96	60	52	51	53	Cloudy
,, 24	29·57	S.W.	...	75	57	52	52	53	Cloudy
,, 25	29·29	W.	0·90	81	52	46	46	47	Cloudy

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A Clinical Lecture
ON
ACUTE IRITIS.

Delivered at the West London Post-Graduate College on August 30th, 1911,

BY N. BISHOP HARMAN, M.A., M.B. CANTAB., F.R.C.S. ENG.,

ASSISTANT OPHTHALMIC SURGEON, WEST LONDON HOSPITAL; OPHTHALMIC SURGEON, BELGRAVE HOSPITAL FOR CHILDREN; SOMETIME EXAMINER IN ANATOMY, CAMBRIDGE UNIVERSITY.

GENTLEMEN,—The condition chosen for the subject of this lecture is one which must be of interest to every one of you. But it is one upon which it is scarcely possible to say anything new, certainly as regards that most essential part of our work—treatment. My aim will be, therefore, to bring the appearances of this inflammation and its treatment vividly before your mind, so that iritis shall become, as it were, a foe well known in form and feature, one whose presence you will discover with facility, so that having recognised it you may attack it and lay it with all speed and decision.

SOME OLD-TIME WORKS.

This inflammation has been, from some point of view or other, the subject of innumerable disquisitions, both in monographs, papers, and in text-books, and some of these are well worth your study. There is stored up in our libraries a wealth of old-time critical observation, made by men who sought out the truth when aids to diagnosis were far less numerous than now, and as a consequence their minds were the more intent upon elaborating those physical signs which were patent to sight and touch, just those which you can as readily perceive when you are far from a laboratory such as you are accustomed to in a well-equipped clinical school.

To cite only a few such works. You could not do better than spend an evening with the *De Iritide* of Fredericus Augustus ab Ammon, published in 1839; it is written in Latin, yet to anyone who read Cæsar's Commentaries with tolerable facility in his school days the understanding of this work will not be difficult. Then the section on Iritis in the Practical Treatise of Diseases of the Eye by William Mackenzie, of the date 1830, is well worth study; but you must remember that at this date iritis and glaucoma were not well differentiated, so that under "arthritic iritis" we find described what we now know to be something quite different from iritis, and which we call simple or acute glaucoma. Then there is not a man in any of the British services who should fail to read the two little books of John Veteh, sometime a British army surgeon. The one, "An Account of the Ophthalmia which has Appeared in England since the Return of the British Army from Egypt," and the other, "On the Diseases of the Eye," published in 1820. They are small in compass, but weighty in thought and observation, and you will find there a brilliant piece of generalisation upon iritis to which I shall refer later.

Then as regards treatment, one half-hour's reading of a paper by T. Pridgin Teale, jun. (in the Transactions of the Ophthalmological Society of the United Kingdom of 1866), in which he describes his experiments into the separate value of the numerous prescriptions surgeons were wont to fire blunderbuss fashion at their patients, will tell you all that is really worth knowing on the subject.

Not one of you can afford to be without a practical acquaintance with this inflammation and its treatment, and a comparison of your personal observations with the observations of those who led the way into the knowledge of to-day will prove an exercise of the greatest value.

REMARKS ON DIAGNOSIS.

In this lecture I propose we should confine our attention to acute iritis, and exclude from our consideration iritis due to injury, from sympathetic inflammation, and those forms of subacute and chronic inflammation associated with cyclitis and changes in Descemet's membrane.

To the untrained, and therefore unperceiving, eye of the casual onlooker any violent inflammation of the eye looks much the same, and the sensations complained of by the patient may seem indistinguishable. Acute iritis, acute glaucoma, and acute conjunctivitis all produce an intense redness of the white of the eyes, all reduce the clearness of vision, and all cause pain more or less severe. But to you must come the sharpness of vision and keenness of understanding which shall see beyond this general likeness and recognise essential points of difference, for upon your diagnosis must follow prompt and vigorous treatment, which, if it be appropriate, will result in a speedy relief to the patient, but if it be inappropriate will result in disaster and perhaps blindness. Treatment that is a sure cure for iritis is certain blindness for glaucoma, and what is good for a conjunctivitis is unmitigated evil for both iritis and glaucoma.

THE SCHEME OF THE IRIS.

For a proper understanding of the state of the iris in acute inflammation, and of the rationale of the treatment thereof, a knowledge of the structure of this most beautiful of organs is essential. I do not propose to enter into details of anatomy you can find in any good text-book, but let me attempt to give you a graphic idea of it.

Conceive it as a curtain set up to divide the eye into two unequal parts. The basis of the curtain is a loose skeleton or spongework of connective tissue; it is complete save for a circular hole piercing its middle. The skeleton forms a scaffolding upon which are hung a series of muscles, blood-vessels, and nerves. Of muscles two sets; one to close the mouth of the central hole, and another to drag it widely open. Of vessels plenty, arranged in two rings, the larger at the attachment of the curtain and a smaller around the hole, with numerous communications between them. Of nerves an intricate plexus, following the lines of the muscles and vessels, and intimately communicating with both. The curtain is painted behind with a layer of rich pigment, which penetrates more or less into the substance, and in some subjects even to the face of the curtain, so as to produce an infinite variety of colours and markings.

Such a curtain must needs be very "lively"; it presents infinite possibilities of movement, and a delicate susceptibility to influences, good or bad, that may arise from the state of its owner. The looseness of the spongework that forms its basis and the richness of its blood-supply suggest how readily it will swell in states of inflammation; the complexity of its nerves, and their intimate association with those others both within and without the eyeball, tell how severe must be the pain of such inflammations; and lastly, the thinness and incompleteness of its covering tell how certainly inflammatory fluids within its mesh will escape to the surface as exudates, which, if they be coagulable, will glue the curtain to whatever it touches. Were this curtain a thing of mechanics of large and handleable size, and were we to substitute some other fluid for the blood, you would have no hesitation to press back the curtain and empty its mesh of its superabundant fluid, just as you would squeeze a sponge and prevent its sticky surface adhering to whatever it might be in contact with. That is the whole secret of the treatment of iritis, as we shall see in the following striking case.

A TEXTUAL CASE.

A man, aged 44, was seen at the West London Hospital just a year ago with all the symptoms of a most intense iritis in the left eye. He said that the eye began to be red two days previously, and since then on account of the intense pain he had had no sleep. The eyelids were swollen and blotchy, tears coursed down his cheek, and he turned his head away from the light. When the eyelids were parted the conjunctiva was seen to be a fiery red, there was no pus or muco-pus, and, except for a little froth due to an excessive secretion from the Meibomian glands which had collected about the inner canthus and in the lacus lacrymalis, the conjunctiva was shining and bright. The cornea was slightly hazy, and within the anterior chamber and filling full two-thirds of its cavity was a jelly-like mass. The mass was conterminous with the rim of the cornea towards the nasal and lower borders, but elsewhere it was free and presented a smooth rounded edge. It was semi-transparent, so that through it could be seen a contracted and irregular pupil partly blocked with white material. The whole of the iris had a swollen and dirty appearance, in marked contrast to the clean bright iris of the healthy eye.

The eye was exquisitely tender to the touch, and the tension of the globe fuller than that of the healthy side.

On examining the conjunctiva closely it was evident that every blood-vessel was engorged with blood, their finest ramifications and anastomoses could be traced out; but besides these vessels those deep to the conjunctiva which run in the episcleral tissue and those that perforate the sclera were equally engorged. The distinction of these two sets of vessels was clear: there was an obvious difference in depth; there were differences in colour, for the surface vessels were brick-red and the deeper ones of a dusky red colour; but the main distinction could be made certain by gently moving the conjunctiva from side to side by means of pressure through the eyelid, then the conjunctival vessels were seen to ride over the fixed scleral vessels. Tracing these deeper vessels we could see how engorged they were at the points of penetration into the sclera to reach the ciliary region and how prominent were the fine vessels which form a close network about the limbus of the cornea. The features of this engorgement of the deeper vessels pointed to an inflammation of the structures within the eye, and particularly of the ciliary body and the iris with which these vessels are directly associated. The engorgement of the conjunctival vessels then appeared in its true light, merely a coincident effect of the intensity of an inflammation which, as by a spreading wave, upheaved all those parts contiguous with it.

Similarly, examining that part of the iris not covered by the jelly-like mass within the anterior chamber, we could see upon its surface points of bright red colour, and these when examined with the corneal loupe resolved themselves into a number of small blood-vessels which bulged from the surface of the iris by reason of their engorgement with blood.

Next in order for solution came the problem of the jelly-like mass within the anterior chamber. Its shape and apparent solidity suggested at once a comparison to the size, shape, and consistency of the crystalline lens, and I have heard it said that such a condition was once mistaken for a dislocated lens. A further examination of the iris was enough to dispel any possible thought that an accidental dislocation of the lens might account for this case. It was clear the iris was well supported behind, for it was not tremulous, neither did it appear to be depressed backwards towards the posterior chamber. Nothing but the lens in its proper place could support the iris so exactly as this iris was supported, so the jelly-like mass must be some adventitious product. Despite its appearance of structure and solidity it could be nothing else than a coagulum, a clot of exudate poured out from the inflamed iris and ciliary body. The disturbance of these organs had altered the character of the aqueous, so that instead of a mildly albuminous fluid it had become rich in fibrin and albuminous coagulable albumins, with the result that it had clotted and made a cast of the anterior chamber, and the clot after its kind had shrunk away from its mould to produce the singular appearance of this picture.

That the symptoms of this man's condition were correctly read was evident, for the effects of the treatment, based upon the diagnosis, were such that in three days' time the coagulum had completely disappeared, the pupil was widely dilated, the exudate upon the lens capsule gone, and there was naught to tell how nearly the inflamed iris had been glued down to the lens save one lump of brown uveal pigment on the lens and a corresponding gap in the uveal edge of the iris.

To complete the history of this case, the man acknowledged having suffered an attack of gonorrhœal urethritis 25 years ago and to having acute rheumatism of his knees shortly after. He had had iritis 12 years ago. He denied contracting syphilis, and the Wassermann reaction examined by Dr. Julius Bernstein was negative.

Six months after the severe attack I have detailed his left eye became painful, there was marked injection of the ciliary vessels, and when the iris was dilated the earliest physical signs of a cyclitis could be detected in the vitreous close behind the iris. By examining this with the direct ophthalmoscope and a high convex lens the centre of the vitreous had a properly clear and unclouded character, but the peripheral region close to the ciliary body was clouded by reason of numberless fine dots; in this change could be seen the effects of an altered secretion from the inflamed ciliary body.

THE SIGNS OF IRITIS, GLAUCOMA, AND CONJUNCTIVITIS CONTRASTED.

Now the iritis in the case I have narrated was one of great severity, the physical signs of iritis were writ large, and in almost dramatic fashion. You will not always get the diagnosis written so boldly on every case you see, yet the signs will be the same, and as recognisable on careful search. Let us go over the more important symptoms, and compare them with those of diseases with which confusion is most likely to arise, glaucoma and conjunctivitis. Conjunctivitis is particularly an affection of the young, acute iritis of adults, and glaucoma of the elders, yet each may occur at any age, and in some points their symptoms may coincide.

The character of the pupil I put first. There is no one condition by which a distinction between iritis, glaucoma, and conjunctivitis may be made; but if you were confined to one point for your diagnosis, the pupil should be your choice. In iritis of even mild degree it is altered in shape; as compared with the other eye it is smaller and less round. When we shade the eye it does not dilate well, and when again exposed to the light it does not contract promptly; its reaction is sluggish, or if the iritis has been of some days duration the pupil may be fixed. These symptoms are due, first, to the inertia of a membrane engorged with blood and exudates; and secondly, and particularly, because the pupillary margin is gummed to the lens capsule by the sticky exudates of inflammation, or fixed by the succeeding adhesions. It is these that cause the irregularity in the contour of the pupil, and they can be seen quite plainly when we attempt to dilate the pupil. By contrast, in conjunctivitis the pupil is unaffected, its reactions are brisk or even excessive. In glaucoma the pupil suffers from the increased intra-ocular pressure, which causes a partial paralysis of the sphincter so that the pupil is larger than that on the normal side, its contour oval, and its reactions lost.

The altered colour of the iris is striking in acute iritis; the blue eye becomes dirty green and the brown becomes muddy. These effects are due to the lymph that exudes on the surface and to the increased vascularity. Similar effects are seen in glaucoma, but not in conjunctivitis.

The character of the injection of the vessels over the surface of the globe is not a sign upon which to put great reliance. In iritis and glaucoma the disturbance is so great as not only to cause engorgement of the scleral vessels, but to involve those of the conjunctiva and eyelids. In severe conjunctivitis the converse may be seen, the conjunctival injection spreading to the scleral vessels. But in cases of lesser severity one could scarcely fail to suspect irritation of the iris and ciliary body when there was present a delicate circumcorneal blush without conjunctival injection.

Pain is present in all three of these acute inflammations. But the character of it as a diagnostic sign may be rather unreliable. Patients differ so greatly in their sensations and in their mode of expressing them. Yet there are broad differences in their sensations. In conjunctivitis their complaint is usually of something under the lids—dirt, sand, or even glass. This is because the nerve terminals in their irritation translate their feelings in terms of their usual warning—dust in the eye! In iritis there is pain within the eyeball, and referred pain over the brow and root of the nose, for the iris gains its nerve-supply from branches of the nasal branch of the ophthalmic division of the fifth. In acute glaucoma the pain is more intense, both in the eye itself and in referred pain, so that it may involve the areas of the first, the second, and even the third divisions of the fifth nerve; it may be so severe as to cause sickness or actual vomiting.

Discharge is, of course, characteristic of conjunctivitis, and it is absent from iritis and glaucoma—there is only excess of tears. But one must beware of mistaking excessive Meibomian secretion for discharge; it can be seen in almost any tearful state as a fine white froth along the edges of the lids and at the inner canthus.

The transparency of the cornea is usually but little affected in the early stages of acute iritis. In conjunctivitis it is clear unless infective ulcers occur. In glaucoma it is "steamy," fluid is driven into it by the excessive intra-ocular pressure.

The depth of the anterior chamber varies so much with age that much stress must not be laid upon it. A very shallow chamber undoubtedly points to glaucoma, although the reverse may occur. In conjunctivitis it should not vary

from the unaffected eye. In iritis it may be normal or slightly deeper, and perhaps filled with turbid contents or even a coagulum, such as in the case described.

Vision is affected in all three conditions, least in conjunctivitis, most in glaucoma. In conjunctivitis the disburbance varies with the chemosis, presence of ulcers, and the character of the discharge. In by far the most cases it is only disturbed by the particles of mucus or pus that stick or float over the surface of the cornea. In iritis vision is clouded by the exudates on the lens capsule. In glaucoma it is rapidly lost by pressure on the optic nerve head, but before this occurs and blindness sets in the steaminess of the cornea gives rise to certain subjective symptoms which anyone can see for himself by breathing on a sheet of glass and quickly looking at a candle flame through the steamed medium.

After we have looked at the eye from every possible point of view we may venture to handle it. By palpation we can determine its sensitiveness and its tension. The globe is tender to pressure in acute iritis, particularly in the ciliary region; it is exquisitely tender in all its parts in glaucoma. By way of contrast, the sensibility of the cornea to light surface contact, such as is produced by the touch of a wisp of cotton-wool, is lost in glaucoma, for the internal pressure of the eye renders the fine terminals anæsthetic. In iritis the cornea does not loose sensibility. Palpation elicits no tenderness in conjunctivitis.

Next as regards the tension of the globe, high tension is the characteristic of glaucoma, and in acute cases the hardness of the eyeball is unmistakable. But it must be borne in mind that a moderate increase in tension is by no means rare in acute iritis; the muddy fibrinous aqueous of inflammation passes through the drainage area with difficulty, its escape is delayed, so that tension within the globe is raised.

Looking over these notes of differential diagnosis one may remark that there are not a few troublesome "ifs" and "buts" that spoil otherwise prime points of distinction. This is true. One symptom does not make a disease any more than one swallow a summer. Yet if there be one symptom upon which I would lay stress it is upon the character of the pupil. It is normal in acute conjunctivitis, small and sluggish in acute iritis, wide and paralytic in acute glaucoma. As I have said, too much care cannot be expended in examining its character with the naked eye, or better with oblique illumination and a good binocular magnifying glass. The glaucomatous pupil can scarcely be confounded with the normal or iritic pupil. But it is possible for difficulty to arise in the case of a pupil contracted by iritis and one that is small by reason of age. Elderly people naturally have small pupils with sluggish reactions, and in such patients a conjunctivitis may be mistaken for an iritis. The systematic examination of the healthy eye of a patient before the affected eye is looked at will insure against many mistakes, and particularly against such an one as this. But there are some cases in which the point can only be determined by the instillation of a drop of homatropine so as to dilate the pupil; an iritis would be disclosed by irregular dilatation; a full round pupil would exclude iritis.

THE CAUSES OF ACUTE IRITIS.

I propose to say very little on this head—not because there is little interest in its discussion, but because by so doing I wish to impress upon you the fact that the primary cause of the inflammation has little or no bearing upon the direct treatment of the inflammation.

Venereal disease accounts for the majority, possibly more than 75 per cent. of all cases. Secondary syphilis accounts for fully half. The coincidence of sore throat, a typical body rash, and iritis is not uncommon, and it is indisputable evidence of a common origin for the three symptoms. It is the only variety of acute iritis which bears anything like a special feature, for in this there are frequently seen small nodules of yellow colour spotted with pink vessels along the pupillary border; these are granulomata, and at their site the inflammation is most intense and massive synechiæ most likely to occur.

Next in order of frequency come gonorrhœal and rheumatic iritis. For the present it is not possible to separate the two. There has always been a conflict of opinion as to how far one or other of these affections determined iritis. Of the causal relation of gonorrhœa to iritis in certain subjects there can be small room for doubt. Vetch appears to have been the first to have seen what might be called the gonorrhœal syndrome. There is his remarkable observation of the liability to the succession in the same subject of gonorrhœal urethritis, purulent ophthalmia, arthritis, and iritis, an observation which Mackenzie, writing 20 years later, stigmatised contemptuously as a "notion" and "a good example of a hasty generalisation in regard to diseases between which no other relation than that of concurrence has been pointed out." The conclusion of Vetch is sure enough to-day, at least so far as the urethritis, purulent ophthalmia, and arthritis are concerned, only we cannot definitely prove the iritis, for the organism recoverable from each of the others of the syndrome has not been recovered in it.

Rheumatic iritis has been scouted by some. It is remarkable how rarely we see iritis in the subjects of acute rheumatic fever; and never an iritis during its progress or convalescence, notwithstanding the frequency of inflammations of other serous membranes. Recently Paine and Poynton have shown that the injection into rabbits of the micrococcus rheumaticus can produce iritis with exudation into the anterior chamber, and from these cases they have recovered the organism. I have seen some cases of these animal infections produced by other workers; there was no doubt of the iritis, but the massive purulent exudate in the anterior chamber suggested rather a pyæmia than an ordinary acute iritis. At present the point cannot be determined, its interest is undeniable, but so far as the direct treatment of the iritis is concerned it does not matter in the least.

Then there remain a residuum of some few cases where iritis has occurred during, or closely after, acute fevers—e.g., malaria, typhoid, influenza, and even mumps; or subsequent to exposure to cold or undue strain. These cases are of milder type than that described above, but they are just as liable to produce synechiæ and endanger the vision. Of malarial iritis I have seen very few cases. One of these I remember well. The subject was a naval pensioner sent on to me with this diagnosis. He denied any venereal infection, but he acknowledged having been an in-patient of a naval hospital with swollen knees and hand-joints, for which the diagnosis "sequelæ of gonorrhœa" was written on his sheet! Of typhoid fever I saw more than enough when on service in the South African War, but in not one case did I see an acute iritis at any stage of the fever or of convalescence, nor did I hear of a case from any of my numerous fellow officers.

The determination of the origin of any given case of acute iritis is by no means easy. When syphilis, gonorrhœa, and rheumatism appear to be reasonably excluded, we naturally fall back upon the nearest untoward incident in the life of our patient as likely to be the determining factor. Considering the structure of the iris it would not be a matter for wonder if all these incidents did set up iritis, so that this inflammation were much more common than it is. But the remembrance of the number of folk in all kinds of states of life and nutrition who suffer these incidents with never a trace of iritis makes us wonder what are the primary causes of these rare cases. If an incident innocuous to the irides of most patients does become a determining excitant in these few, what underlying diathesis or vulnerability favoured the incident? These are speculations which you can pursue in your leisured moments: to follow them now would lengthen this lecture interminately.

THE TREATMENT OF ACUTE IRITIS.

An examination of ancient medical works will show that at different periods systems of pathology have exerted a profound influence upon the principles of treatment. At one period the fashion was all for local applications to an inflamed or sympathetic part; at yet another period the whole body was afflicted with a humour which flamed out in one spot, and the modification or dispersal of that humour could alone relieve the local inflammation. The same ideas are found in folk medicine to-day, and they are no more strange than the action of a learned physician of the eighteenth century, who records with much pride his disastrous treatment of an infant with ophthalmia neonatorum by physicking the mother.

In approaching a case of acute iritis it is well to take sides, not one, but both sides. First be a devotee of direct applications to the eye. Then, when you have set going all that you can on that score, turn about and become a devotee of

the humoral pathology. Let us call the first direct treatment, and the second indirect treatment, and consider these two sides.

Direct Treatment.

Reverting to our similitude of the sponge-like curtain of the iris, let us treat the iris as one would a spongy curtain loaded with sticky fluid and flopped upon the clear glass of the window. To leave the curtain thus would effectually close the window. We should certainly draw back the sodden curtain, and squeeze out the sticky fluid from its texture. We can do this very thing with an inflamed iris. In atropine we have a most effective drug to fling wide the pupil and fold back the iris. That action determined upon, how best can we use the drug? There is no better preparation than an ointment of the sulphate of atropine combined with hydrochlorate of cocaine, 2 per cent. of each, in equal parts of lanoline and vaseline. This is the most effective midriatic known. A small piece should be placed within the lower lid every hour for the first four hours, and then every two hours until the pupil is widely dilated. Later, the strength and the frequency of the application may be reduced to 1 per cent., night and morning. Taken at the outset, the worst case of iritis will react to this treatment, and to this alone; and both pain and injection will abate as the pupil dilates.

But we need not despise adjuvants to this essential treatment. Moist heat is a great reducer of pain and most comforting to the eye, so we employ relays of hot fomentations. Or in the worst cases, such as that of the man cited, we may blanch the region of the eye by withdrawing blood by leeches applied to the outer canthus, and in this way materially hasten the action of the atropine. The severity of the pain may be checked, at least temporarily, by instilling a 5 per cent. solution of dionine, a derivative of morphia, and to some extent the drug acts upon the blood and lymph circulations, but its effects are not constant.

To what length of time may this vigorous action be continued, it may be asked. So far as the atropine and fomentations are concerned, until the injection has declined. The fomentations *ad libitum*, but the atropine in just sufficient strength to keep the pupil open.

But if the pupil will not dilate by reason of adhesions, what then should be done? Here our action must be guided by the character of the adhesions. If they are tough and white, the result of an earlier attack, atropine is useless. We must rely upon fomentations and leeches to reduce the inflammation and then free the occluded pupil by a judicious iridectomy. If the synechiæ are brown or yellowish, and therefore recent, the full strength of the atropine should be employed for at least three days before the attempt to break them down is given up. In this matter practice differs. Bronner does not hesitate to release an adherent and inflamed iris by an immediate iridectomy. Elliot relies upon the reaction of subconjunctival injections of normal saline solution to secure the same result.

Indirect Treatment.

Now turning to the other side, we consider how we can attack the inflamed eye through the body. Part of this attack should be routine treatment in every case; part will vary as our diagnosis of the primary cause of the iritis varies.

In every case at the outset a smart purge should be given. The subjects of iritis nearly always have foul mouths and breath, and are constipated. Any drug that will give a free and watery stool will do, and to aid this plenty of water should be given with and after the draught. Absolute rest in bed in a dark room should be insisted upon, and alcohol and tobacco made taboo.

Lastly, in any case of which the origin is indeterminate or pending its determination an alterative is useful, and there is no better than the iodide of mercury—5 grains of iodide of potassium with a drachm of the liquor of perchloride of mercury. If the case be syphilitic it is first-rate treatment; if it be due to gonorrhœal rheumatism it is good—better than vaccine treatment; only if there be arthritis at the time salicylates or aceto-salicylic acid are better.

At this point your question will be on the use of salvarsan. Should this be injected in a case of indubitable syphilis? That depends. First, is the case bad enough to put the patient to this added discomfort and risk, seeing that without doubt simpler methods will speedily reduce the iritis? Secondly, is he fit enough to be subjected to the treatment, which is undoubtedly severe? The answers to both these points will be qualified by the presence or absence of other symptoms of syphilis; with evidence of the general activity of the poison the case for injection would be strong. But the final choice will rest with the patient, to whom the advantages and disadvantages of the proposition must be fairly put.

In conclusion, no matter how superlative a mode of general treatment may be evolved now or at some future date, general treatment can never oust atropine from the first, the middle, and the last place in our first line of offence against iritis. That was the finding of Teale's paper of 1866, and it remains true to-day.

Two Lectures
ON
THE TREATMENT OF DIABETES MELLITUS

Delivered at St. George's Hospital

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LECTURE II.[1]

GENTLEMEN,—I propose to-day to speak of the treatment of cases of diabetes mellitus in which *diacetic acid is present in the urine*, and, at the risk of repetition, must remind you that the presence of fatty acids in the urine shows that the amount of carbohydrate which can be burnt by the tissues has fallen so low that fat has to be oxidised with great rapidity to supply the needs of the body, with the result that its combustion is incomplete. It is also probable that a certain amount of carbohydrate is essential in civilised man to furnish food to the cells which metabolise the fat. The presence of fatty acids in the tissues would be fatal did not the body possess means of neutralising the excess of acid. This is done to some extent by giving up bases such as calcium, magnesium, potassium, and sodium from the tissues, but chiefly by providing the base ammonia, which, instead of leaving the body as urea, renders the acid harmless by forming an ammonium salt with it, and is passed out in that form. In some cases very large quantities of ammonia may be excreted every day, and when no alkali is being prescribed the amount of ammonia in the urine may be taken as a general guide to the severity of the acidosis.

TREATMENT OF CASES WITH DIACETURIA.

In this condition, the objects of treatment are, first, to maintain nutrition; secondly, to reduce the rate of the metabolism of fat to its former level by increasing the amount of carbohydrate which can be assimilated; and, thirdly, to supply alkali to neutralise the excess of fatty acids produced. The essential feature of the dietetic treatment of diabetes is, of course, exactly the same whether diacetic acid is present in the urine or not—namely, so to order the diet that a maximum amount of carbohydrate may be assimilated. The difference between the two classes of cases is that when diacetic acid is present dietetic restrictions must be made much more cautiously, a liberal supply of alkali being given at the same time. There is no doubt that many patients have passed into coma soon after they have been put upon a strict diabetic diet. If patients really adhered to the diet ordered this would have happened oftener. If any severe diabetic is given such a diet, within a few days he is liable to become drowsy and to suffer from distaste for food, pain in the abdomen, nausea, and constipation. These symptoms commonly pass off, but they may lead to coma. Beddard, Pembrey, and myself[2] have shown that this state is pathologically identical with the early state of coma, as it certainly is clinically, and is associated with a fall in the alkalinity of the blood and in the amount of carbon dioxide in the expired air. In severe cases, then, you must be careful before each

[1] Lecture I. was published in THE LANCET of Oct. 28th, 1911, p. 1184.
[2] See THE LANCET, May 16th, 1903, p. 1366. Brit. Med. Jour., vol. ii., 1910.

restriction of diet to see that the urine is made neutral by giving bicarbonate of soda.

You may say, with all these warnings, Is it essential to restrict the diet? The answer is that it is. Restriction of carbohydrate is, in the present state of our knowledge, the only means by which the power of the body to burn carbohydrate can be restored. It is astonishing what an improvement follows when you have successfully led your patient on to a strict diet; and, on the other hand, how easily the assimilative power is lost again, and all your work undone, if the patient succumbs to the temptation to indulge in an excess of starchy and sugary foods.

ARRANGEMENT OF DIET.

In the cases associated with diacetic acid in the urine, when you have reached the strictest diet which I have mentioned so far—namely, that described in my last lecture, containing 46 grammes of carbohydrate—you will not infrequently find that sugar is still present in the urine. In that case you must put your patient on a protein and fat diet containing only traces of carbohydrate, prescribing at the same time a suitable quantity of alkali. Here is such a scheme:—

Breakfast.—Bacon and eggs; starch-free bread, butter; sugar-free marmalade; coffee, with cream.
11 a.m.—Half-a-pint of sugar-free milk; diabetic biscuits, with butter.
Lunch.—Fish, or lobster; starchless bread, butter, and cheese; sugar-free ginger ale, lemonade, or lime juice, or whisky and water.
Tea.—Tea, with cream; two boiled eggs, with starch-free bread-and-butter; diabetic biscuits and cakes.
Dinner.—Clear soup, fish, meat, poultry or game; egg custard, made with cream and sweetened with glycerine; starch-free bread; cheese; beverages as at lunch.

On such a diet large quantities of meat and fat must be eaten if the needs of the body are to be met. With mixed food we usually derive half of the caloric energy we require from the burning of carbohydrate. All this must be made up with protein and fat. Ordinary helpings of meat and fish are insufficient. The patient should have two or three dishes of meat and fish at dinner, if possible, and eat freely of each.

After a day or two of the strict diet the sugar, if any, persisting in the urine is derived from the tissues and not from the food. The diet should be continued so long as the sugar in the urine is falling in quantity, provided that the general condition of the patient is good.

A further reduction in the sugar may be obtained in some cases if opium is given in doses of half a grain upwards three times a day, or codeine beginning with half a grain twice a day and increasing the dose until 4–6 grains a day are being taken; or, if neither of these leads to much improvement, in some cases aspirin in doses of 15–45 grains a day will lead to a fall of the amount of sugar in the urine. None of these drugs, however, have much effect if the diet is not being regulated.

Lastly, the effect of a day upon a diet consisting mainly of vegetables such as I will detail to you when speaking of the oatmeal "cure" may be effectual in further reducing the sugar.

In cases in which you cannot get rid of all the sugar in the urine attention is then directed to finding out on what diet most carbohydrate is utilised. In such it is of more importance for a good deal of the carbohydrate to be assimilated than it is to get rid of the sugar in the urine. Hence when you add carbohydrate to the diet you must observe carefully not only whether or not there is an increase in the amount of sugar in the urine, but how much that increase, if present, is in comparison with what was added to the food. For instance, if a patient on a strict diet is passing 40 grammes of sugar a day, and on adding 4 ounces of bread the amount rises to 60 grammes, then we know that of the 72 grammes of starch in the 4 ounces of bread 52 were assimilated and 20 added to the unoxidised sugar in the urine. The patient, therefore, has gained 52 grammes of carbohydrate, which will give him over 200 calories of energy and will save him from having to expend a corresponding quantity of fat or protein.

When you have made these observations upon various diets you will be in a position to make regulations which will vary according to the results you obtain and the circumstances of each patient. In some cases the diacetic acid and sugar will disappear and remain absent if the patient takes a diet with moderate restrictions, and will not reappear when most of the restrictions are gradually removed. In others more stringent injunctions must be given. The best way to maintain the assimilative power over long periods is to interpose a day or more of strict diet at fixed intervals. For example, a patient two years ago excreted 60 to 80 grammes of sugar a day and suffered from eczema and boils. The urine gave a strong diacetic acid reaction. Restriction of diet with alkalising of the urine led to very little reduction of the sugar. He was then ordered a varied diet containing about 50 grammes of carbohydrate, since the addition of this amount only led to an increase of 15 grammes in the urine; that is, $50 - 15 = 35$ grammes were utilised. But on one day in every week an absolutely strict diet was taken containing only the foods in List 1 and the various starchless foods sold. Under this treatment the sugar in the urine fell in a year to an average of 40 grammes, and the diacetic reaction was reduced in intensity. The carbohydrate was then reduced to 25 grammes a day with one absolutely strict day a week; nine months later the average excretion in the urine is 20 grammes, the patient being in good condition.

In other patients it is often a good thing to advise one strict day a week and three consecutive strict days a month—say, for example, the last three days of the month.

But some patients not only cannot tolerate great restriction, but do badly on it. In all difficulties the weight of the patient will be an important guide. Do not focus your attention too closely upon the amount of sugar passed out. The general nutrition and the risk of acid poisoning must in severe cases receive first attention. If the weight is falling after dietetic regulation has been tried you will often do wisely in increasing the carbohydrate, especially in the form of oatmeal, or, in some patients, of potatoes.

FULLER EXAMINATION OF THE URINE.

I have so far only spoken of investigations into the disordered metabolism of this disease which you can yourselves carry out. I must not conceal from you, however, that other information can be obtained from a fuller examination of the urine, which is of great value in the prognosis and in the treatment of the disease. The estimation of the ammonia gives information as to the severity of the acidosis and the effect which the administration of alkali has in neutralising the acids produced. The estimation of diacetic acid and acetone, which is carried out as one estimation after converting the diacetic acid to acetone, or of acetone separately, will show what effect the treatment has upon the production of those bodies. The estimation of the total nitrogenous metabolism will give information as to the diet which is most useful in helping you to maintain the nitrogenous balance. For these purposes repeated determinations must be made, and the work will involve the whole time of an analyst so long as the patient is under accurate observation. Such a method of dealing with a case ought to be carried out whenever possible, to the great advantage of the patient, but unfortunately the expense is considerable.

You will see, gentlemen, how individual a matter is the treatment of diabetes. There is no generally applicable rule. Both restrictions and allowances may do good and harm according to the state of metabolism of the particular patient.

BEVERAGES.

Tea and coffee, of course without sugar, water, aerated water, and the sugar-free lemonades, lime-juice, and other beverages now sold may be drunk. The fluids should not be restricted. The cause of the thirst is the accumulation of sugar in the tissues and blood, and abundance of fluid is required to enable the kidney to turn it out with a minimum of labour. As soon as the excess of sugar in the tissues is reduced by dietetic means the thirst is allayed. Opium also reduces thirst, but merely by lessening sensation, and cannot, therefore, be recommended for this purpose.

Diabetes is a disease in which you would expect alcohol to be of value, for alcohol is an oxidisable carbon compound which can to some extent replace carbohydrate or fat in the food. It has been very widely used in diabetes and a good number of observations made, from which it is clear that alcohol has little or no effect upon the quantity of sugar in the urine. The fact is, the amount of food value in the form of alcohol which can be got into the body without causing symptoms of poisoning in an ordinary individual is comparatively small. It has been observed, however, that less of the acetone bodies is passed out when alcohol is taken. The drug must, of course, be prescribed in a sugar-free form, such as that of well-diluted distilled spirit. Excess must be avoided, and has been known to precipitate a fatal ending.

DIABETIC FOODS.

The various diabetic breads and other foods sold are of the greatest value in the treatment of diabetes; indeed, it is only by their help that the proper conduct of many cases is possible. But you must have such foods examined from time to time, for many of them contain a great deal of starch. Some manufacturers are reliable, but you can seldom keep to one kind indefinitely because the patient will desire a change occasionally in order to obtain a variety of diet, and variety, as I have mentioned already, is necessary if the patient is to take a sufficient amount of food. You will recommend patients to keep to a few makers whose breads and biscuits have been found to be what they are represented, and whenever a new food is brought to your notice have it analysed. If your experience agrees with mine, you will also regard it with scepticism until the analysis has been made. The manufacture of starch-free foods, or nearly starch-free foods, is necessarily expensive, and such foods must sell at a high price. There is accordingly a large profit to be made by selling foods which contain a good proportion of starch as diabetic foods. You may regard any foods as satisfactory which contain under 5 per cent. of starch and sugar in the dried sample, as the specimens of Callard's and Protene bread, which Mr. Gardner has analysed for me, usually do.

There are some breads which do not profess to be starch-free, but which contain less starch than ordinary bread. These may be very useful to those cases whom you are allowing a measured quantity of bread, so long as you know exactly what you are prescribing. For instance, a patient who is allowed 3 ounces of ordinary bread in the day may take 6 ounces of Brusson Jeune bread, an increase for which he will often be very grateful. This bread would, however, be quite unsuitable for unlimited allowance among the foods of List 1.

Many patients will tell you that they have been taking brown bread or toast, or bread made from some flour which has a special reputation in the locality. Toast is, of course, equivalent to the quantity of bread used in making it. Nearly all the "special" flours of local fame which I have had analysed so far have contained nearly as much or as much starch as ordinary flour. Genuine diabetic bread is difficult to get in some parts of the continent. I have had several samples of gluten bread and almond bread sent for analysis from abroad which have contained 30 per cent. of starch.

THE "OATMEAL CURE."

I have mentioned that some patients bear one form of starch better than another. The "oatmeal cure" is founded on this fact. It must not be used in severe cases or in cases complicated by nephritis; and is only to be ordered after the course of dietetic treatment has led to a reduction of sugar in the urine to as low a figure as possible. Oatmeal porridge is taken in quantities of 8 to 10 ounces every two hours, while during the day 6 to 8 ounces of butter and 3 to 4 ounces of vegetable protein, or 5 to 8 eggs, are taken, cooked in various ways. Black coffee, tea, lemon-juice, and a little wine or diluted spirit are allowed. After three or four days a diet consisting mainly of vegetables is substituted for a couple of days; this diet includes tomatoes, cucumbers, asparagus, spinach, and cauliflower, with butter, bacon, and five or more eggs. After the two days 6 to 8 ounces of fish are allowed as well, then 6 ounces of meat, followed in a day or two by cheese and cream. The treatment reduces the diacetic acid and the acetone in the urine, and although so much starch is contained in the oatmeal the sugar also may be lessened.

British patients do not enjoy extraordinary changes in the diet so much as Continental ones appear to do, and I have usually applied this treatment in a modified form. The essential feature is to allow no other carbohydrate on the oatmeal days. The rotation of diets may be repeated, the patient returning to his former ordinary restricted diet when the "cure" is over. Diarrhœa may occur and should be controlled with laudanum—œdema is also reported.

EXERCISE AND OTHER MATTERS.

I have already referred to the well-known fact that the circumstances of the patient have a marked effect upon the progress of the disease. Always advise a patient to avoid over-work and, so far as possible, worry, and excessive fatigue, but do not advise him to give up his occupation unless it involves much travelling. Change of all kinds is bad for diabetics. Even the confinement to bed of severe cases when taken into hospital may bring on diabetic coma, as was first pointed out to me by the former sister of the William King ward. I have had the misfortune to see the observation verified since, so that I now never have patients who have been up and about before admission kept in bed the whole day. In private practice you will often find it wise to restrict the activities of the patient, but do not radically alter them. In milder cases the same directions apply, though with less force. Those who are able to choose where they live and what they do should be in the open air as much as possible and have some continuous, though not exacting, occupation or interest. Meals should be regular.

You must find out in the individual patient whether exercise does good or harm. In many cases moderate exercise, such as riding on horseback, cycling, rowing, or walking, is beneficial, improving the appetite and leading to a reduction in the excretion of sugar. In the patients of a severer type, on the other hand, much exertion may do harm. Over-exertion or exposure is harmful in all and may be dangerous.

DIABETIC COMA.

I must say a few words in the short time remaining about diabetic coma. The marked feature of diabetic coma—namely, air hunger—exists for some days before coma itself becomes developed. In all severe cases of diabetes not doing well you should, therefore, examine the exposed chest to see if the expansion is greater than normal. If it is, increase the dosage of bicarbonate of soda to 3 drachms every two hours and allow carbohydrate to be taken freely in some easily assimilable form, such as potato soup made with milk, or oatmeal gruel. You must not attempt to give ordinary "diabetic" or protein foods. The bowels must be well opened by enema, followed by castor oil or a mercury pill, and the patient kept warm. If coma supervenes inject three pints of a 2 per cent. solution of bicarbonate of soda into a vein. Although recovery is very rare, several cases have now been reported in which early recognition of the condition and immediate treatment have led to recovery from coma, and even to the restoration of the patient to his occupation. I have seen such myself. The matter of importance is to recognise the symptoms which precede coma. These are constipation, nausea, loss of appetite, pain in the abdomen, expansile breathing, and drowsiness. When you are not called to the patient until the coma is fully developed, you may usually restore consciousness for a time by the intravenous injection of three pints of bicarbonate of soda solution or of saline solution. I have known such a temporary return to consciousness to be of great value in enabling the patient to give directions as to his affairs.

COMPLICATIONS.

I cannot discuss to-day the treatment of the complications of diabetes. The commoner ones, such as boils, carbuncles, eczema, neuralgia, and sciatica, are usually relieved under dietetic treatment combined with such other measures as are suitable to the particular condition. Retinitis also may disappear when the patient is dieted. Constipation must always be corrected. If dry gangrene appears no operation should be done, but the parts should be protected from infection by suitable dressings. Moist gangrene calls for immediate operation, although the risks of anæsthesia are increased in diabetes. Albuminuria is apt to develop in diabetes, but need not call for special treatment unless actual nephritis, as shown by casts or œdema or a very high blood pressure, be present; in that case the diet must contain less protein and more carbohydrate, milk being given in preference to other protein foods.

In conclusion, gentlemen, it must be admitted that the proper treatment of diabetes will make great demands upon your time and patience. In well-marked cases in the young the task is too often a disappointing one, for the disease, though it may be held back by your efforts, progresses. On the other hand, in the majority of patients who pass out dextrose in the urine and who seek advice in good time, you may expect to be able to give such instructions as may in many cases entirely restore efficiency and in others so regulate the life of the patient that he may continue to enjoy both work and leisure in complete relief from the symptoms which led him to consult you, and with full maintenance of nutrition.

TWO CASES OF SARCOMA OF THE THYMUS.[1]

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AND

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THESE are two cases of primary sarcoma of the thymus occurring in young males, in both of which the chief symptom that caused the patients to seek medical treatment was due to tracheal obstruction. In one, aged 7 years, relief was afforded by opening the superior mediastinum; in the second, aged 18 years, the conditions were more unfavourable, and the patient died soon after being seen.

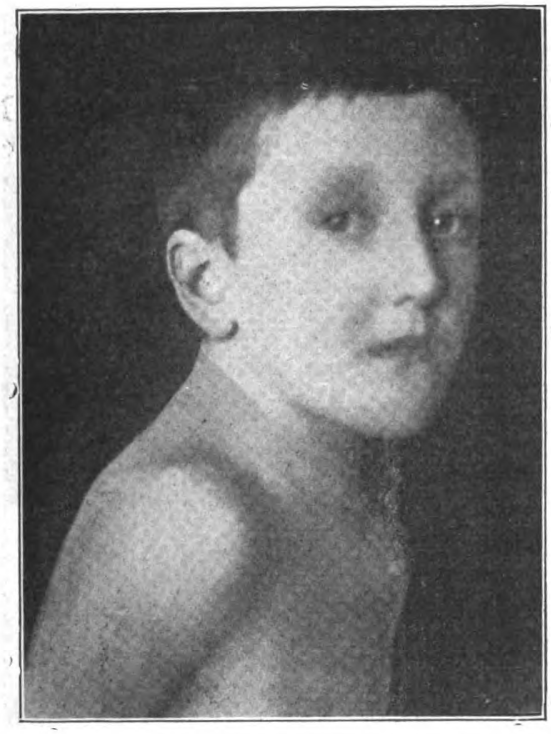
CASE 1. (W. S.)—The patient, a male, aged 7 years, was seen at midnight on Feb. 12th, 1908, in consultation with Dr. T. Anstey-Chave of Cardiff because of threatening suffocation. Fulness of the neck had been noted for a month and dilatation of the veins of the chest for four days. The boy was much as usual, however, until Feb. 10th, when a slight degree of tracheal stridor was noted. This passed off, and on the 12th the child was playing about in comfort, and the parents did not recognise that the boy had any difficulty in breathing until just before midnight, when the symptoms were so urgent that they sent for Dr. Anstey-Chave.

On examination the boy had rapid breathing, stridor, and a constant short cough. There was a general fulness of the neck, most marked in the suprasternal notch; the veins of the neck and temples were enlarged and prominent, and the face was slightly livid. The upper part of the sternum was quite dull on percussion. There was a systolic aortic murmur. Discrete, slightly enlarged glands could be felt in the posterior triangles and in the groins. The spleen was slightly enlarged. The arms were not swollen and showed no enlarged veins. The lungs were normal. The boy breathed most easily in a nearly prone position with the left side lowermost, and in this position the cough was less. Pulse-rate, 100; temperature normal.

It was decided that the dyspnœa was due to intra-thoracic obstruction and that immediate interference was not necessary. The boy was moved into a nursing-home that night and kept under observation for some days, his condition showing little alteration. The severity of the dyspnœa varied, the boy sometimes breathing quite easily. On Feb. 22nd Dr. D. R. Paterson examined the trachea with Killian's tube under an anæsthetic (C.E. mixture), which was taken with little difficulty. The trachea was found compressed antero-posteriorly 7–8 rings down.

On March 1st an operation was performed, Dr. Anstey-Chave giving the anæsthetic and Dr. R. Walker assisting. An incision was made in the middle line from the cricoid to about half-way down the sternum. By dissecting between and dividing very large anastomosing superficial veins and by separating the muscles a hard growth was found projecting above the suprasternal notch; the supraclavicular glands on both sides were enlarged and hard. The manubrium was divided vertically in the middle line, separated transversely from the body of the sternum, and the two halves held apart by strong retractors. Further dissection exposed a hard, irregular tumour which extended beyond the area opened up. The whole process was most difficult and tedious because of the very large veins encountered and because the patient frequently stopped breathing and had to be turned over on to his face before respiration was re-established. The trachea was exposed and the pressure on it relieved by divaricating the lobular portions of the tumour, and removing fragments which lay immediately near the middle line and directly over the trachea. The vascularity of the growth was slight, and therefore allowed this process of *morcellement* to be carried out readily. The two halves of the manubrium were left separated, and the wound was closed with drainage. As a result of this operation the difficulty of breathing was at once and permanently removed.

FIG. 1.



CASE 1.—Reproduction of photograph of the patient.

For two days the patient was in a critical condition, suffering from constant vomiting and showing extreme cardiac weakness. He gradually improved and left the nursing home on March 25th; he then had a good appetite, but was getting thinner. Subsequently there was a progressive failure of health, with signs of secondary involvement of the lungs, liver, spleen, and glands. The difficulty of breathing never returned, the growth extending forwards between the separated halves of the manubrium sterni. The boy died on May 10th, and a necropsy was carried out on May 12th. The photograph shows the scar, and the growth projecting forward through the divided manubrium (Fig. 1).

CASE 2 (C. A. G.).—The patient, a Swiss, aged 18 years, was admitted to the Cardiff Infirmary on Jan. 21st, 1910. Three weeks before admission he noticed a lump on the right side of the neck, which had since grown larger and had been associated with some difficulty in breathing. The dyspnœa was at first in attacks. The patient continued his occupation until three days before admission, when he was seized with a severe attack of dyspnœa while playing hockey. Since then the dyspnœa had been severe and almost continuous. On examination there were well-marked dyspnœa and orthopnœa; the patient breathed with his mouth wide open, and the accessory muscles of respiration were actively working. He was much cyanosed; the tongue and mouth were very dry. There was a diffuse swelling on the right side of the neck reaching from the suprasternal notch to the thyroid; it was hard, and did not pulsate or move on deglutition. There was dulness over and for about 2 centimetres on each side of the sternum, as far down as the fifth rib. The veins of the chest and upper part of the abdomen were enlarged.

Operation was carried out on admission. Under local anæsthesia a horizontal incision was made over the swelling, and the deep cervical fascia was incised. A large vein was cut and bled considerably. The skin incision was closed, and hot fomentations were applied. On the two following

[1] The first of these cases was communicated to the Cardiff Medical Society on Jan. 19th, 1909.

days the patient's breathing was easier and the cyanosis less. On Jan. 24th the patient was much worse and very cyanosed; he was sitting up in bed and breathing with the mouth wide open. The lower intercostal spaces were retracted. Tracheotomy was performed, and a small rubber tube passed with difficulty down the trachea to its bifurcation. A growth was noted spreading across the trachea. There was some relief, but the patient died half an hour later.

Pathological Report (H.A.S.).

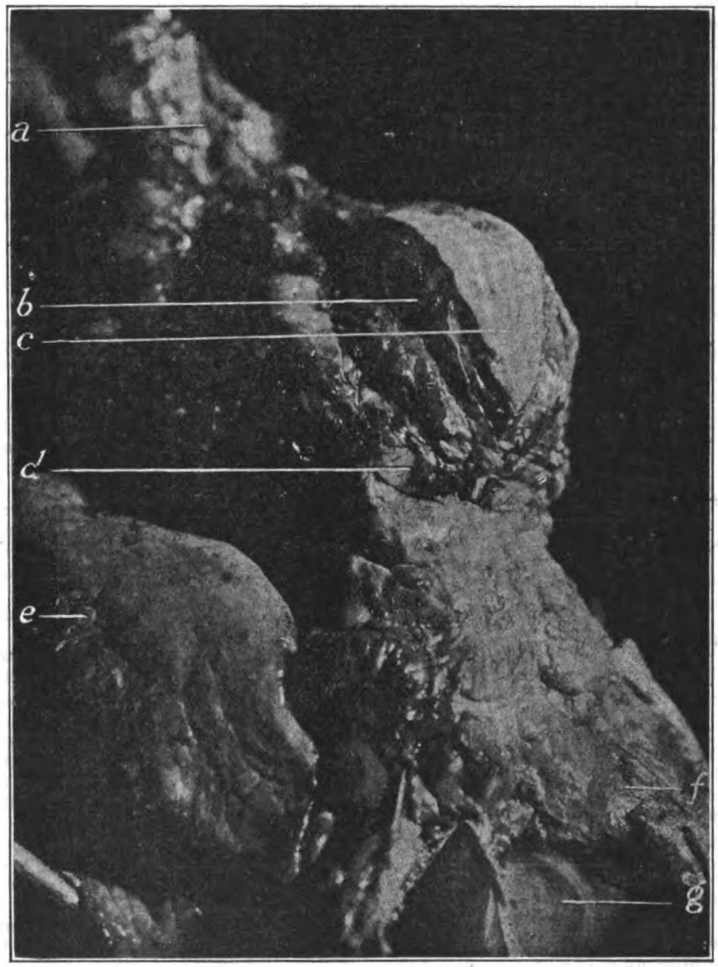
Necropsy.

CASE 1.—A somewhat emaciated, well-developed male child. The operation wound was represented by a linear median vertical scar 7 cm. in length, situated over a hard oval-shaped tumour that hid the sternum from view. The mass projected 3·8 cm. beyond the surface of the bone, and had a maximum transverse diameter of 10 cm.

An exposure of the structures in the neck and thorax showed that the tumour presenting anteriorly infiltrated or enclosed the normal contents of the whole mediastinum, and extended up into the neck, invading the right lobe of the thyroid, and the sterno-mastoid and sterno-laryngeal muscles on both sides as well as the adjacent cervical glands. The main portion of the growth occupied the middle mediastinum and was pyriform in shape. It spread over and infiltrated the pericardium, the apex being attached to the upper surface of the diaphragm. Fig. 2 shows a side view of the growth in the neck and thorax.

Trachea and lungs.—The lumen of the trachea was narrowed along its whole course by the growth, which above lay over and below completely surrounded this structure. The cartilaginous rings just above the bifurcation were infiltrated by the sarcomatous tissue, the infiltration extending downwards along the trachea and bronchi into the substance of both lungs. Both lungs contained scattered nodules of growth. On the left side the obstruction of entry of air into the lower lobe of the lung was complete and had produced a pneumonic condition; only the upper lobe was left functional. On the right side, although the air entry was restricted, the lung was normal throughout except for the nodules of growth already mentioned. The glands at the bifurcation of the trachea were replaced by, and continuous with, the main mass of the tumour. The pleural surfaces of both lungs were studded with growths varying in size from a pea to a walnut.

FIG. 2.



CASE 1.—Reproduction of photograph showing (*a*) the growth on the right side of the neck; (*b*) the mass which has grown through the divided sternum; (*c*) the skin and scar; (*d*) a portion of the sternum; (*e*) a metastatic nodule on the surface of the lung; (*f*) the growth infiltrating the pericardium; (*g*) the heart. (Photograph by Dr. O. Ll. Rhys.)

Heart and great vessels.—The mass of growth lying over the pericardium and heart had a rounded apex like the ventricle. The infiltrated and much thickened pericardial sac contained a quantity of clear serous fluid, and the internal surface was of a dull white colour. The visceral pericardium showed two large plaques of growth which had penetrated the cardiac muscle: one situated at the apex of the right ventricle had a maximum diameter of 2 cm.; the other, 7·5 cm. long by 1–1·5 cm. broad, extended from near the apex to the base of the left ventricle. All the great vessels entering and leaving the heart were embedded in growth, but although the walls of the vessels were infiltrated their calibre was but slightly diminished.

Œsophagus.—This in the neck was normal, but in the thorax from just above the bifurcation of the trachea it was compressed and surrounded by growth down to the cardiac origin of the stomach. At this point the growth infiltrated the walls of the œsophagus, the diaphragm and the adjacent lung substance, fixing these structures firmly to each other.

Abdomen.—The metastases present included secondary nodules in the liver and kidneys, and in the lymphatic glands in the neighbourhood of the cœliac axis. The liver showed in addition a few small areas of congenital cyst formation (the spleen and kidneys, however, being normal in this respect). There was no ascites.

CASE 2.—Well-nourished, muscular subject. The structures of the neck and thorax were exposed in the usual way. The tracheotomy wound had divided the cricoid and the first two rings of the trachea. A massive nodular growth was found, which extended from the level of the lower border of the thyroid cartilage above into the thorax, filled the superior thoracic opening, and hid the great vessels and heart from view and pushed the lungs on one side.

Neck.—The growth, while occupying the anterior and posterior triangles on both sides of the neck, was larger and extended further upwards on the right than on the left side. The lower pole of the right lobe of the thyroid was infiltrated, and the great vessels of the neck on both sides were surrounded and infiltrated by growth. The sterno-mastoid and sterno-laryngeal muscles were firmly blended with the tumour.

Trachea and lungs.—The trachea was compressed from before backwards along its whole course, the lumen of this tube and of the bronchi being narrowed right up to the entrance of the latter into the lungs. The walls of the trachea and bronchi were but slightly infiltrated, the growth chiefly enclosing these structures all the way from above where it hung over the tracheotomy wound down to the roots of the lungs. The glands at the bifurcation of the trachea were much enlarged and replaced by malignant growth. The lungs were normal and showed no metastatic nodules.

Heart and great vessels.—Lying over the pericardium was a smooth hard pyriform mass which had the appearance of a second superimposed heart. The apex of this portion of the tumour was free, while the base blended with the main mass, enclosing the great vessels. The external surface of the pericardium was infiltrated with growth, but in no place had it pierced the wall of the sac, the internal surface of which was smooth and glistening. There was no fluid in the pericardium. The heart showed no metastatic growths.

Abdomen.—This was normal. There was no ascites, nor were there any metastatic growths or naked-eye evidence of any congenital abnormality.

Anatomy of the Growths.

CASES 1 AND 2.—The *naked-eye* appearances of the main masses in the thorax and neck were identical; in both they occupied the same position and possessed in the chest the same lobate contour and hard smooth surface. A median section showed the same characters—namely, a firm, uniformly solid, avascular growth without any areas of softening or cyst formation. Both extended in a similar way up into the neck, following the line of the position of the thymus. The most striking difference between the two cases was that in one, the younger patient, the sarcomatous growth was disseminated, while in the older patient it remained localised.

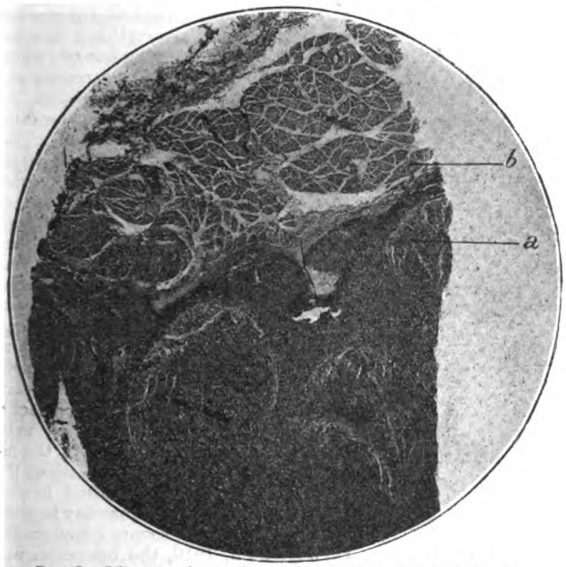
The *microscopic* characters of the growths were identical in both, and without reference to the record on the slide it was not possible to distinguish one from the other. The tumours consisted of closely packed, small round cells with a deeply staining, relatively large rounded nucleus and a scanty protoplasmic content. The stroma was very poorly developed, and the blood-vessels were small and very sparsely distributed. The morbid anatomy and microscopic appearances were those of a small round-celled sarcoma. The micro-photographs show from Case 1 the metastatic nodule near the apex of the right ventricle of the heart (Fig. 3) and from Case 2 the infiltration of the vena azygos major by the growth (Fig 4).[2]

[2] For these micro-photographs we are indebted to Mr. E. Barton White, and for the facilities for producing them to Dr. E. Goodall, medical superintendent of the Cardiff City Mental Hospital.

Commentary.

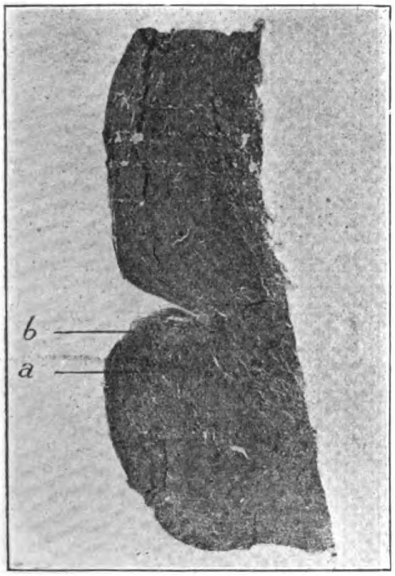
Clinical.—These two cases are examples of a rare condition. In the first case the bilobate character of the growth as revealed at operation, coupled with microscopic examination of some of the pieces of growth then removed, allowed a probable diagnosis of sarcoma of the thymus to be made during life. Both cases were in young males and showed an acute onset; dyspnœa, at first in attacks; dilated veins of the neck and thorax, swelling of the lower part of the neck, and dulness over the manubrium. Direct laryngoscopic examination was of value in determining the site of the obstruction. Division of the manubrium sterni and the removal of portions of growth pressing on the trachea permanently relieved dyspnœa. The clinical conditions unfortunately seem to show that there is little hope of ever getting a case so early that the growth can be entirely removed.

FIG. 3.



CASE 1.—Microscopic section of the metastatic nodule at the apex of the right ventricle. (*a*) Sarcomatous deposit; (*b*), heart muscle. (Photograph by Mr. E. Barton White.)

FIG. 4.



CASE 2.—Microscopic section of a portion of the vena azygos major. (*a*) Sarcomatous growth extending right up to (*b*) the endothelial lining. (Photograph by Mr. E. Barton White.)

Pathological.—That these two cases were sarcomata arising primarily in the thymus is suggested by the fact that the main mass of the growth in the chest occupied the situation and had the shape of the thymus. The character of the growth in the neck likewise supported this interpretation, for both cases showed an asymmetric distribution in which the chief bulk of the tumour was on the right side in the position occupied by the thymus when it is found in the cervical region. The microscopic characters, too, were consonant with a sarcoma arising in the lymphoid tissue of the thymus, and the malignant nature was established by the destructive infiltration of the surrounding structures and the distant metastases.

THE OPERATIVE TREATMENT OF BADLY UNITED FRACTURES.

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PERHAPS no operation in surgery may make a greater demand on the skill, resources, and ingenuity of the surgeon than that requisite to restore a badly united, useless bone to its normal form and functions. If an operation is resorted to at the time the injury is sustained the difficulties which the operator has to meet are relatively small, however great the comminution, since the fragments can be fitted accurately together and retained in position by plates and screws, if only the surgeon has enough patience and experience.

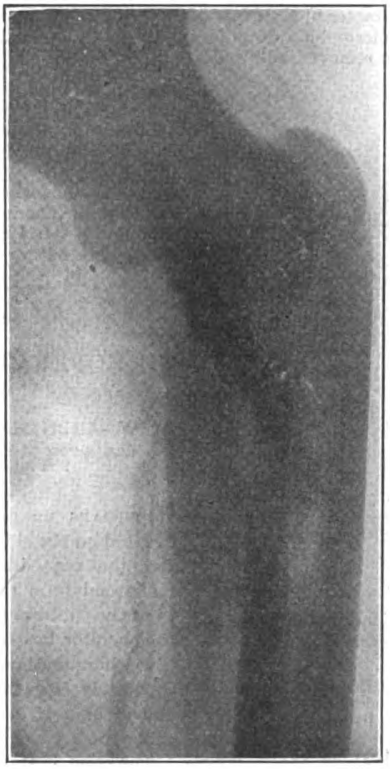
The chief obstacle that has to be overcome in many cases is the approximation of the edges of the skin incision and their retention in accurate apposition. This difficulty is experienced more commonly in fractures about or above the ankle-joint, but it may be met with in many fractures where there is much laceration of the soft parts, and especially when some time has been permitted to lapse since the receipt of the injury and the tissues have become inflamed. The earlier the operation is performed after the receipt of the injury the easier it is to carry it out effectually and rapidly. Michel's clips form the most effectual means I know for retaining the skin edges in accurate and efficient apposition. If accurate apposition is not established the wound may become fouled and the plates may come out. Such an accident means disaster to the patient. At the best it entails delayed union and probably some necrosis. In consequence of the softening of the bone in order to eliminate the screws, non-union of fragments is likely to occur. Again, such non-union is difficult to deal with by operative means, since the organisms which get into the wound lie quiescent for a very long time in and about the bone, and only become active when a plate and screws are introduced. The length of time these organisms will remain quiescent is remarkable and most disappointing to the surgeon who attempts to deal with a case that has once been fouled.

Surgeons are learning by painful experience that they cannot fix fragments in fractures by foreign bodies with the casual amount of asepsis they find sufficient for abdominal and other operations. Personally I believe that for some time the results that will be obtained by operation on simple fractures will at least be as hopelessly unsatisfactory as are those following non-operative treatment. Indeed, some surgeons seem to regard as normal the necessary removal of screws and plates by a process of suppuration, and are inclined to consider the infection as resulting from the presence of organisms in the blood rather than from their own insufficient precautions. This trouble will gradually be eliminated by increased experience.

I think it worth while to illustrate some of the difficulties one may meet by the consideration of two typical cases of badly united fractures. One represents a badly comminuted fracture of the femur which was operated on five months after the bone had been broken, and the other multiple

fractures of the tibia and fibula operated on 12 weeks after the injury. Both cases had been under the care of very eminent surgeons, and in neither, apart from operation, was there the slightest prospect of restoring the patient to active usefulness. Both cases are illustrated by radiograms taken at intervals. They are of particular interest since they show the manner in which callus serves to render secure the junction of a broken and deformed bone in which it has been impossible to obtain any large area of bone apposition without shortening the limb very materially and so reducing its usefulness and the symmetry of the individual in a corresponding degree. They also show that the crystallisation of lines of force, which I showed to be a striking feature in the fractures of young life, takes place progressively in a marked manner later in life and for a long period after the union of the fractured ends has been effected. This entails the careful retention of the leg for a considerable time in an apparatus by means of which the weight of the body is transmitted from the tuberosity of the ischium to the boot. Such an apparatus enables the patient to get about at an early stage of convalescence, while the gorging of the limb with blood consequent upon the dependent position of the leg during locomotion assists very materially in the formation of callus. Great care should be taken to encourage this engorgement within reasonable limits and to avoid any direct pressure on the seat of fracture which is likely to reduce its blood-supply. Such a splint was made for me in both these cases by Mr. C. A. Hoefftcke, and it served its purpose perfectly.

FIG. 1.



CASE 1.—Skiagram taken July 4th, 1910, showing condition of femur before operation.

The first case was that of a man, aged 46 years. On Feb. 1st, 1910, he fell in an aeroplane accident and sustained a very severe comminuted fracture of the upper part of the shaft of the right femur. Everything that was possible was done by means of splints, &c., but he was left with a useless and deformed limb. Fig. 1 shows the condition of the bone when he came under my care five months after the receipt of the injury. It is apparent from an examination of the radiogram that the junction was unsatisfactory in the extreme. The comminuted fragments were united by callus at a very bad angle, the union being scanty and imperfect. It also shows that, owing to the splitting of the shaft vertically and to the comminution of the fragments, in order to restore the limb to anything approaching its normal length only a portion of the segment of each bone could be employed to effect a junction, and that some delay must necessarily take place before the interval that would remain between the broken spikes could be filled in with new bone in sufficient quantity to make the femur perfectly secure functionally. On July 13th, 1910, the operation was performed. As was expected, it was only possible to utilise the blunt end and side of a spike of the lower fragment, which was placed in contact with a similar spike and blunt surface on the upper fragment. In this manner the length of the shaft was reduced

FIG. 2.



CASE 1.—Skiagram taken August 22nd, 1910, showing early results of operation

FIG. 3.



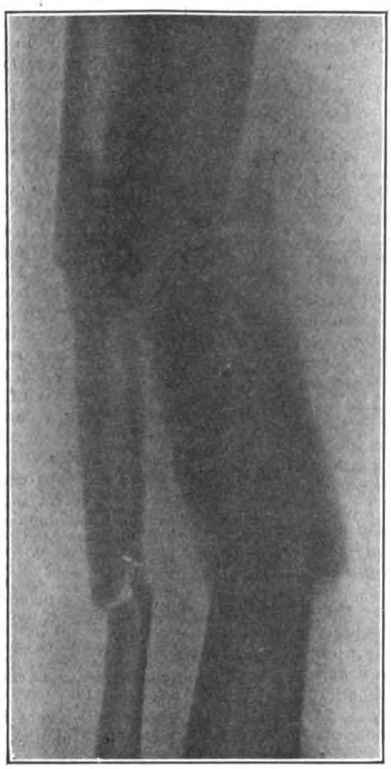
CASE 1.—Skiagram taken May 25th, 1911, showing firm bony union.

by only half an inch. A very stout steel plate, secured by means of eight No. 7 screws, three quarters of an inch in length and threaded up to the head, was placed in position so as to retain the fragments immoveably and firmly together. Fortunately the bone was very dense and strong. The patient made an uninterrupted recovery. On Sept. 13th Mr. Hoefftcke fitted him with his splint and the patient gradually got about with increasing comfort and facility. He was finally able to discard the splint after wearing it for some months. He now gets about easily and leads a very active life. Figs. 2 and 3 show the condition of the bone at intervals. Fig. 2 was taken in August, 1910, a little more than one month after the operation, and Fig. 3 in May, 1911, nine months later. They speak for themselves and hardly need any description. The amount of callus which was formed, and filled in the interval which existed between the fragments after the operation, has increased considerably and now exists in sufficient quantity to render the bone perfectly strong and efficient.

The second case was that of a powerfully built man, aged 56 years, under the care of Dr. Henry Menzies. He had sustained a severe comminuted fracture of the left tibia and fibula in December, 1910. The fractures were produced by direct injury, and there was much damage to the soft parts. The tibia and fibula were each broken in two parts, so that there were six separate large fragments of bone. Besides these there were several smaller pieces. The fragments had been so displaced that their several axes differed very greatly in direction and there was much overlapping, so that at none of the four fractures was there anything approaching apposition of the broken parts. The imperfect junctions between the tibial fragments were cleared, and their opposing surfaces were sawn so as to enable us to restore the bone to its original form; the cut surfaces were placed and secured in accurate apposition. To retain the fragments in position it was necessary to use six steel plates of varying sizes and strengths. No attempt was made to unite the fibular fragments. This would have increased the risks of the operation very much, while it would have afforded no sufficient compensation, as the fibular fragments would unite as soon as the tibia was functionally secure. As in the first case, the successful result was chiefly due to the skill and care of my assistants—most important factors in the performance of these operations. The patient made an uninterrupted recovery. Mr. Hoefftcke fitted a splint on May 8th, 1911, and the patient soon learnt to use it. Figs. 5 and 6 show the condition of the bone at intervals of five and seven months after the injury. The amount of new bone that continued to form even after the fragments of the tibia had apparently become firmly united was considerable. Fig. 6 showed that union is perfect between all the fragments of the tibia and fibula. The radiograms illustrated by Figs. 4 and 5 were taken by Mr. A. H. Greg, the others by Mr. W. A. Coldwell.

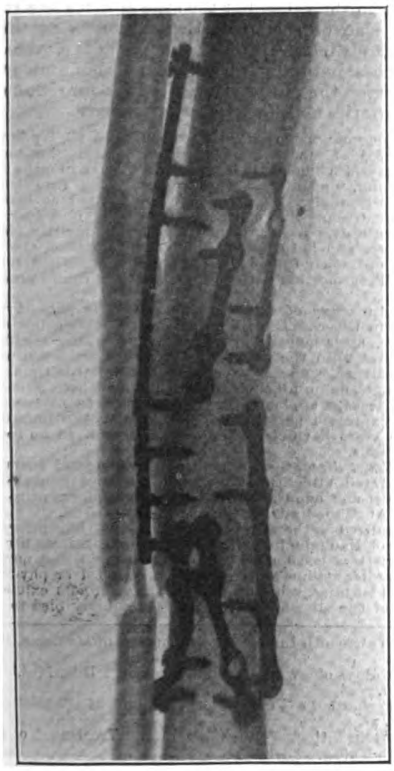
Cavendish-square, W.

FIG. 4.



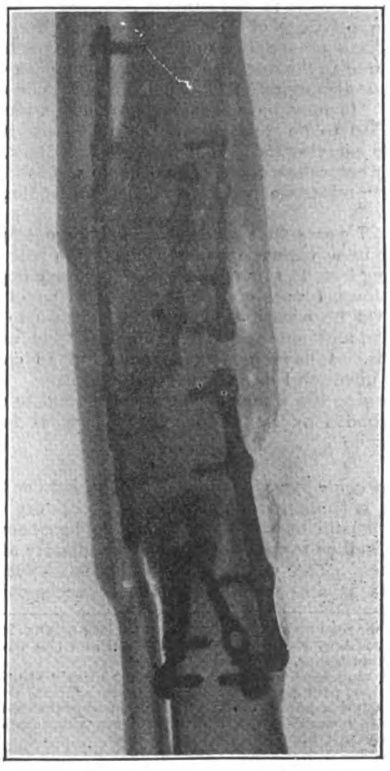
CASE 2.—Skiagram taken Feb. 5th, 1911, showing condition of tibia and fibula before operation.

FIG. 5.



CASE 2.—Skiagram taken April 26th, 1911, showing reposition of parts after operation.

FIG. 6.



CASE 2.—Skiagram taken Sept. 11th, 1911, showing results of operation.

CASES ILLUSTRATING THE USE OF VENESECTION.[1]

BY R. FORTESCUE FOX, M.D. LOND.

IT would be difficult to find a parallel to the sudden revolution in treatment under which venesection disappeared from medical practice in the middle of last century.[2] Action and reaction are equal and opposite, even in the domain of opinion and custom, and no doubt it was inevitable that after ages of unquestioning and excessive depletion there should follow a period of scepticism and expectancy in treatment. But why did the tide go out so fast? At all events, in that ebb we trust there have been laid the foundations of scientific therapeutics. Specific methods, such as vaccine-therapy and organo-therapy, are being found for acute and specific diseases. The more complicated problems of chronic disease are being met by various forms of physical therapeutics, which bring the organism into effectual contact with the energies—whether thermal, electrical, chemical, radio-active or otherwise—by which we are surrounded.

Similarly I would venture to submit that increasing knowledge has shown us that there are both acute and chronic conditions of toxæmia, and disorders of the vascular system and of the distribution and pressure of the blood, in the treatment of which venesection has its proper and essential place. Both clinical experience and *a priori* reasoning have shown that no other treatment can here produce the same immediate and beneficial effects.

During the latter half of the last century there have been many authoritative voices to warn us that this potent method of treatment was too much neglected by the profession, and that lives could be saved by venesection that would otherwise be lost.[3] In this country Paget, Broadbent, Hughes Bennett, Heywood Smith, B. W. Richardson, H. G. Sutton, Hale White, Wilks, and Newton Pitt are among those who have advocated its employment. The test of practical experience has, moreover, not been wanting. Few years have passed in which there may not be found in the medical journals records of the use of venesection in various emergencies, and of the good results obtained even in apparently hopeless cases.

My own interest in the subject dates from the time when I had the privilege of serving as house physician to Sir Andrew Clark at the London Hospital. A series of cases then occurred in his wards in which a recourse to venesection brought astonishing relief in what seemed to be a desperate condition. It may be added that the house physician was himself glad to be relieved of the responsibility he had incurred in carrying out this measure when Clark, discussing the matter before the class, handsomely expressed his thanks to him for "reintroducing the practice of bleeding into these wards."

In the 27 years that have elapsed I have employed this treatment in a variety of conditions, often with immediate and striking benefit, sometimes with temporary improvement, and sometimes, I must confess, too late to be of any signal service. On no occasion have I found cause to regret the venesection, and never has any ill effect been noticed as a result of it. I have preserved records of 18 cases and 28 occasions in which I have had recourse to it.

In reviewing the whole it seems convenient to arrange the morbid conditions in which venesection is indicated as follows.

A. *Acute Cases.*

1. Some *acute pyrexial diseases* of a sthenic or fulminating character, with dangerous nervous or circulatory excitement. The severe pain of very acute pleurisy has been found by others as well as myself to subside immediately after a small venesection. The violence of the inflammation in sthenic pneumonia is also relieved by timely venesection.[4] It is indeed remarkable how rapidly the nervous and circulatory tension are relieved.

The so-called "physiological effects of venesection" give but a very imperfect idea of the effects produced by a small loss of blood in pyrexia and toxæmia.[5] According to A. Robin, it exerts an immediate action on nutrition and the organic exchanges; it increases pulmonary ventilation and oxidation, and is therefore indicated where nutrition is compromised by an insufficiency of oxygen.[6]

Recent observations also suggest that the natural power of resisting infective disease may be substantially increased by venesection. In certain circumstances bloodletting increases the production of antitoxins. Schröder of Copenhagen, by means of small bleedings of patients with enteric and paratyphoid fever, brought about a rapid increase of the agglutinative power of their serum. The immunity of animals to bacillus coli or bacillus typhosus may be in the same way restored or heightened. It is probable that the beneficial effects of venesection in acute disorders can be, therefore, to a great extent attributed to a similar augmentation of immunity.[7] From this point of view it is interesting to note that many cases of pulmonary tuberculosis in which hæmorrhages occur at an early stage very often run a favourable course.

2. *Toxæmias*, uræmic or otherwise, resulting in sudden attacks of dyspnœa, coma, or convulsions.

CASE 1.—A man, aged 50, with chronic Bright's disease and nearly blind from albuminuric retinitis, became suddenly comatose on April 1st, after headache and vomiting. Blood pressure was high, the left ventricle much hypertrophied. After bleeding to 6 oz. the attack rapidly passed. The second seizure on April 30th yielded promptly to venesection to 12 oz. He died from bronchitis on June 24th.

CASE 2.—A girl, aged 22, with cirrhosis and endocarditis. I was called to find her unconscious with epileptiform convulsions affecting the left hand, with deflection of the head and eyes to the left. The circulation was excited, the pulse 150, of a peculiar thrilling or purring character. Pulsation was also present in the veins on the dorsa of the hands, and the twitchings synchronised with the beat of the heart. I bled to 6 oz. with immediate relief.

Many observers have noted beneficial effects from venesection in uræmic seizures and puerperal eclampsia. "In no other way can one so quickly terminate the uræmic convulsions or cause the disappearance of uræmic coma."[8]

3. *Threatening asphyxia* and cyanosis, or dangerous circulatory embarrassment in heart disease, thoracic aneurysm, bronchitis, carbonic acid poisoning, &c. In this condition it would seem that not only does the blood accumulate in the veins, but that the arteries are contracted. The right side of the heart therefore acts at the greatest possible disadvantage. The opening of a vein in such circumstances naturally relieves cyanosis, and, judging by its effect upon the pulse, it appears in some reflex manner to relax the arteries and lower arterial pressure.

CASE 3. *Thoracic aneurysm.*[9]—A woman, aged 29, lay in the London Hospital in 1884. She was married, without children, one miscarriage, and had signs of a mediastinal tumour. For six months she had had cough, wasting, and attacks of dyspnœa. The case led to many diagnostic discussions. By most it was regarded as malignant, by myself as aneurysm. She continued for nearly one year, frequently seized by acute dyspnœa. At such times I frequently bled to 4 oz., 6 oz., or more, and have noted that on one occasion the pulse sank during the operation from 138 to 108 with immediate relief to the breathing. Post mortem a large aneurysm was found pressing on the trachea.

CASE 4. *Aneurysm of subclavian artery.*—The patient was also a woman, but in this case the dilatation was probably congenital. At 34 years of age, after mental and physical strain, the swelling became larger and rose into the neck with increased pulsation and distress. Mr. C. A. Ballance, who saw the case with me at this time, feared that a rupture might be imminent. The patient had been already confined to bed and icebags applied. She was now on two occasions bled to 10 oz., and expressed herself as delighted with the immediate relief. Nearly two years have elapsed, and there has been no return of the acute symptoms.

CASE 5. *Heart disease.*—A woman of great mental energy, but full-blooded, suffered after the change of life from gouty symptoms—"burning feet and hands," inactive skin, anginiform pains and winter bronchitis. At 60 the heart was found slightly dilated, the pulse 114, and dyspnœa occurred on the slightest exertion. With ordinary treatment and the use of Nauheim baths she managed to continue her active life, but at 64 matters became worse. There were noted now, frequent attacks of cardiac asthma on the slightest mental or physical fatigue, skin dry and burning, veins over-full, heart's dulness extending to the right edge of the sternum. She was accordingly bled to 14 oz., and

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[1] A paper read before the Hunterian Society on Oct. 25th, 1911.

[2] See Mr. D'Arcy Power on "Marshall Hall and the Decay of Bloodletting," Practitioner, 1909.

[3] "Were high tension in the pulse more closely studied, and were less attention paid to the public prejudice against venesection, it (cerebral hæmorrhage) would be anticipated and prevented in hundreds of cases every year." W. H. Broadbent on "The Pulse," Croonian Lecture, March, 1887.

[4] See Hughes Bennett, THE LANCET, 1869, vol. i., p. 603; J. W. Ogle, 1891, vol. i., p. 1029; Hale White, Clinical Journal, March 31st, 1909.

[5] Hayem: Thirteenth International Congress of Medicine, Paris, 1900.

[6] A. Robin: Ibid.

[7] See the Physiology of Bloodletting, edit. Brit. Med. Jour., 1910, vol. i., p. 104.

[8] F. A. Packard in Venesection, System of Physiologic Therapeutics, vol. xi.

[9] See Newton Pitt on Venesection in the Treatment of Symptoms arising from Thoracic Aneurysm, Hunterian Society's Transactions, 1893-4.

after the operation returned home in a cab rather faint. The relief to respiration was marked, and the attacks did not return for four months. A year later she died from general cardiac failure.

Such cases presenting painful circulatory embarrassment, which ordinary remedies have failed to relieve, cannot be uncommon. But in this, as in other instances, it was impossible not to regret that one did not resort to venesection sooner, so great was the benefit obtained from it, even at a late stage. A remarkable example of the restoration of the circulation by means of timely venesection in a case of gunshot wound of the chest with hæmothorax has been recorded by Captain F. J. W. Porter, R.A.M.C.[10]

4. *Cerebral hæmorrhage, actual or threatened.*—How many lives in the full exercise of mental if not physical power are terminated by this accident. How many brain-workers, physicians and statesmen, have died at a little over 60 years of age from the sudden paralysis induced by the pressure of blood upon the brain! In some families the fatal liability belongs almost to a particular year. We shall presently consider to what extent this liability may be overcome and accidents prevented. The following cases, like others that have been published,[11] show that life may be saved by venesection even when there is reason to believe that hæmorrhage has taken place. There is no condition in which venesection is more appropriate than an apoplectic seizure in cases of chronic arterial hyperpiesis. It is difficult for those who have not witnessed its effect to credit the rapid fall in blood pressure and the restoration of tranquillity to the circulation and nervous system that often ensue.

CASE 6.—A patient, nearly 70 years of age, stout and plethoric, suffering from indigestion, shortness of breath, and discomfort in her head, went to a certain sulphur spa and drank the waters without advice. The congestive symptoms were dangerously increased, and one afternoon, whilst sitting on the sofa, she suddenly lost her speech, became confused, dropped the book she was reading, fell back, and became unconscious. I saw her a few minutes later and found the unconsciousness deepening into profound coma. The face was purple, the pupils fixed and dilated, the limbs moved convulsively at intervals, and the right cheek flapped in respiration. I bled her immediately from the left arm. The force with which the stream came was extraordinary. Presently the convulsive movements ceased, and the pulse, which had been very excited, sank in frequency and force. Believing that no half measures could suffice to check the hæmorrhage probably taking place in the brain, I determined to go on almost as long as the blood would flow. In the end I took 35 oz. In eight hours she regained consciousness, and on recovery declared that she was better than she had been for years. Her right leg and arm were weak for some months afterwards and she was liable to confusion of speech and some want of memory for words when taxed with conversation. For several years afterwards, leading a guarded life, she remained quite well.

CASE 7.—With regard to this patient several members of her family on either side had died from apoplexy at from 60 to 65 years of age. Since the climacteric at 50 she had suffered from high tension and occasional tachycardia and gouty symptoms. At 54 she had hæmorrhage into the retina, and epistaxis occurred on several occasions during the following years. At 59 she was very unwell and restless; the blood pressure was found to be 190, the heart was dilated and hypertrophied with a ringing second sound, and the patient especially complained of liability to "congestion of the head" and pulsation. This condition was in a measure relieved by absolute rest, abstinence from meats, and the use of nitrites and calomel. The seizure occurred at 61 years of age. It came on with difficulty of speech, and consciousness was not entirely lost for two hours. I saw her 30 hours afterwards in consultation with Mr. E. A. Bullmore of Wisbech. She was profoundly unconscious, the heart labouring. After bleeding to 14 oz. the pulse fell from 114 to 90. The next day the patient recognised her children and raised her right arm, but died with œdema of the lungs three days after the onset.

In connexion with cerebral hæmorrhage it is interesting to recall that venesection has been successfully employed in cases of fractured base with hæmorrhage.[12]

B. *Certain Chronic Disorders with Habitual High Arterial Tension.*

Many of the emergencies for the relief of which venesection may be properly employed occur in persons who suffer from chronic arterial hypertension. It is now an easy matter by instruments of precision to measure and record variations of blood tension with far more exactitude than when the *tactus eruditus* of the physician was his sole guide. Increased tension constitutes one of the commonest of chronic disorders, even at a comparatively early age, and it is associated with many of the more serious maladies of middle and later life. It is unfortunately subject to progressive increase and to sudden and dangerous exacerbations. The most effectual treatment of hypertension must therefore be by way of prevention, and it is as a preventive treatment in many cases that periodical venesection plays an important part. We know that in nephritis a natural relief is frequently obtained by epistaxis, and in cirrhosis by hæmorrhage into the bowel. In a middle-aged man now under my observation a decided improvement in health has followed a smart hæmorrhage from the urethra. The same effect can be seen when the menses are re-established in cases of amenorrhœa. Even in young subjects with chronic ailments, and especially in nephritis, it is probable that, *a fortiori*, where hæmorrhages have occurred or retinal changes or circulatory embarrassment are present, an occasional small venesection would be helpful.

In middle life, especially at or after the climacteric epoch in women, there is often—particularly in persons of gouty family—a marked increase of blood pressure, with a variety of discomforts. Severe and intractable headaches, vertigo, vertical pressure, depression, restlessness and nervous prostration, flushing and burning heat, with præcordial pain and palpitation, swelling of the limbs, fulness of veins, stiffness and pains in the muscles or the joints, are among the symptoms that indicate a condition to which the word plethora used to be applied. Sometimes relief is obtained by profuse perspirations or catarrhs, diarrhœa, or epistaxis.

CASE 8.—A lady, aged 47, of gouty inheritance, who had had rheumatic fever at 29, suffered from a uterine polypus with frequent hæmorrhages. The heart presented a systolic murmur with a highly accentuated second sound. She complained of occasional giddiness and dyspnœa and anginiform pain during the cold winds of winter. At 49 the polypus was removed and the hæmorrhages ceased. There followed a sense of heat, flushing, præcordial pain, depression, restlessness, gouty swellings, and neuritis. Treatment at Aix-les-Bains relieved the high tension, as also in the following year prolonged baths at Loeche-les-Bains (130 hours in the baths). Two years later, in May of the present year, the congestive symptoms having returned, I bled to 12 ounces, with marked relief of all symptoms.

CASE 9.—A patient, stout, sanguine, and energetic, presented herself for spa treatment on account of tender feet and breathlessness on exertion. She came of a gouty family, the catamenia had ceased four years, and she had undergone much strain in nursing a relative. Some relief was obtained from baths. The following year there were attacks of vertigo, heat, and pain in the head, also occasional præcordial pain and accentuation, her condition suggesting the note "post-menopausal congestion, threatening apoplexy." For two years she continued under strict diet, the use of calomel and salines and thyroid extract. Later, subconjunctival hæmorrhages occurred, and the venous system being turgid and the symptoms again threatening, I bled to about 15 oz. The resulting relief was so marked that the patient herself requested a repetition of the same treatment at the hands of another medical man twice in the following year. Four years having elapsed, this lady writes that "the bleeding has done her a great deal of good," and that the vertigo has not returned.

CASE 10.—Three members of this patient's family had died from apoplexy, the father at 62. She had persistent high arterial tension under my own observation for ten years, with occasional præcordial pains and an aortic murmur; also frequent complaints of anxiety, tightness, and breathlessness, and sometimes vertigo and tinnitus. At 66 there was a return of anginiform attacks and increasing blood pressure, for which she resorted with benefit to Royat. The following year the pressure again rose to 155, and later to 170, with a distressing sense of fulness, pressure, and apprehension, "as if she were going to have a stroke." A venesection was done to 10 ounces with great relief. Within two days the pressure fell to 122, and six months later remained at 110 to 115, the general condition being in every way satisfactory.

CASE 11.—This is the case of a friend whom I have advised medically for more than twenty years. At the age of 48, she had every sign of general plethora with vertigo and slight articular symptoms. The latter were regarded as a serious arthritis, but afterwards cleared up. At 54, the catamenia ceased and slight attacks of angina occurred. The arteries were contracted and "hypertonic." At 57, a hæmorrhage from the rectum; at 58, a transient right hemiplegia and aphasia, and an increased liability to vertigo, faintness, and dyspnœa. The skin was dry, inactive, and chilly, but all these symptoms were mitigated in the warm climate of Egypt where she wintered. The next year the heart was more uneasy, markedly hypertrophied, the peripheral vessels everywhere contracted, the head hot and flushed, and the extremities habitually cold. The blood pressure was 160. The late Mr. Marcus Gunn reported that the retinal vessels were small and evidently sclerosed. It was obvious that the irregular distribution of the blood and the inequality of vaso-motor tone imposed increased labour upon the heart and threatened the integrity of the brain. I therefore determined on venesection, and this was repeated generally twice in the year for about six years from 10 to 20 oz., and on one occasion 24 oz. being taken. At the same time the diet was reduced and meats of all kinds avoided. Marked and immediate relief of the symptoms attended every venesection. There has been now up to the present time (age 69) no return of the paralytic symptoms, the health is fairly good, and the pressures range from 140 to 160.

In conclusion, it will be seen that this ancient method of treatment, which so suddenly disappeared from medical practice, has been again employed in a guarded manner and with good results in a variety of cases. The chief indication for venesection has been stated by Dr. R. J. Pye-Smith and others to be "cyanosis with distension of the right heart."[13]

[10] Brit. Med. Jour., 1901, vol. i., p. 954.

[11] See Broadbent: Loc. cit. B. W. Richardson: Medical Times, 1874, vol. ii., p. 397. Stretch Dowse: Brit. Med. Jour., 1879, vol. i., p. 608. R. F. Fox: THE LANCET, 1890, vol. i., p. 723. Wilks: THE LANCET, 1891, vol. i., p. 1139. Russell Forsbrook: THE LANCET, 1892, vol. i., p. 1181, &c.

[12] See Mr. Stephen Paget, Brit. Med. Jour., vol. ii., 1903, p. 190.

[13] Pye-Smith, THE LANCET, 1891, vol. i., p. 252; Hale White, loc. cit.

To this is attributed its beneficial action in mitral disease and in some cases of bronchitis and pneumonia.

No mere mechanical relief to the heart can, however, explain the observed effects. We have seen that venesection in some cases appears to influence in a favourable manner the progress of specific diseases, both acute and chronic, probably by heightening the natural resistance of the tissues; that it helps to restore the balance of the circulation and the normal distribution of the blood by a dilator effect on the arterial system; that a small venesection may have a powerful and apparently disproportionate influence, not only in quieting the circulation, but the nerve centres also. This is witnessed in uræmic coma or convulsions and in the crises of pain and dyspnœa in aneurysm. We have noticed that excessive blood pressures have been more or less permanently reduced by venesections far too small to produce such effects in a direct manner. Such facts as these suggest that the respiratory and vaso-motor centres are concerned in these actions; and that there are, in truth, morbid states of the circulation and the nervous system, both acute and chronic, which are in some unknown manner peculiarly sensitive to a slight reduction in the amount of the circulating blood.

Wimpole-street, W.

THE PREVENTION OF ANTHRAX INFECTION DUE TO IMPORTED HIDES AND SKINS.

(THE SEYMOUR-JONES FORMIC-MERCURY PROCESS.)

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WORKMEN who handle imported hides and skins run a certain risk of contracting the dangerous disease set up by the spores of B. anthracis. Though goods from certain countries, such as China and the Straits Settlements, have a bad reputation in this respect, from our knowledge of the conditions under which the disease has been contracted we can scarcely describe as absolutely free from blame those of any particular country. The number of cases reported is not large—roughly, one case occurs annually among every 1600 engaged in tanning, and about 1 in 7000 die from the disease every year, but its dramatic acuteness and high mortality give it an importance not indicated by the actual figures.

Many attempts have been made to find a method suitable for disinfecting hides, but none hitherto suggested has survived the criticism of bacteriological or technical experts; either the process has failed to destroy the spores, coated as they may be by protective albuminoid material, or, on the other hand, it is condemned for its injurious effect on the hide and skin substance.

In this paper I wish to bring before the notice of the profession a method for which it is claimed that effective disinfection is brought about at a reasonable cost without damage to the material. This method is due to the suggestions of Mr. Alfred Seymour-Jones of Wrexham, a practical tanner and leather trades chemist. Before discussing Mr. Seymour-Jones's method, however, it will be as well to consider briefly the manner in which hides and skins convey the infection, the state in which they are imported, and the general conditions under which workmen contract the disease, matters with which I have dealt more fully elsewhere.[1]

I think it extremely probable that in hides and skin, as Dr. Eurich[2] has so plainly demonstrated to be the case in imported wool, the spores occur in their most dangerous form in blood and blood-stained material which has dried on the surface of the fur and skin; it certainly is fair to assume as a hypothesis that spores protected in this way are as resistant to disinfection as any, and if we are able to deal with these effectually there is not much danger from others that are present on the skin under slightly different conditions. In the animal dying from anthrax there is every chance of the skin and fur becoming contaminated with blood-stained discharges, which after drying are liable later on to form an infective dust; there is much evidence to show that spores do not form in the substance of the skin.

When the skin is removed from the animal it may be treated for preservation in several ways; we may divide these roughly into two classes. 1. Methods in which the skin is dried in the air or sun, and in which certain earths or chemical materials may or may not be rubbed in to prevent putrefaction. (The chemical materials in use may be assumed to have no action on the spores of B. anthracis, as infection from skins so treated has often taken place.) These methods may be called "dry-curing." 2. Methods in which the skin is soaked or treated with common salt or a strong solution of brine, so that, owing to the hygroscopic nature of this substance, real drying does not take place. This method of cure is known as "wet-salting."

Now experience has shown that very few, if any, cases of anthrax have been traced to infection from "wet-salted" goods, and the reason for this may be fairly easily conjectured. In the first place, they are not dusty, and so the spores are not so likely to gain access to the most susceptible parts—the face and neck. (Contrary to the general belief, hides and skins are practically never carried on the shoulder.) Then, again, the spores under damp conditions may tend to develop into bacilli and perish, as has been suggested by Spear.[3] We must, however, bear in mind that "wet-salting" is not the usual method employed in places such as China, where anthrax-infected skins are likely to be more common from the fact that no control is exercised over infected stock, but in places like Australia and North and South America, where anthrax-infected skins are not so likely to be brought in for cure.

Why, it may be asked, has not "wet-salting" become the usual method of cure? The answer is because the process must be carried out immediately after flaying the animal and it is difficult and expensive to carry salt to the semi-civilised places from which many skins are brought down; the freight of "wet-salted" goods is rather higher as they naturally weigh more; and, finally, the primitive methods of the natives are not easily changed. As a counter-balancing advantage to the increased cost, however, is the fact that "wet-salted" goods are better preserved, their condition and value can be more correctly estimated, and they are easier and safer to handle in the early processes of tanning. As a fact, no improvement in this direction is indicated by import statistics, the relative proportions having remained fairly constant during the last decade.

TABLE I.

Year.	Imports in hundredweights.		Percentage imported as "wet-salted."
	"Dry."	"Wet-salted."	
1899	446,725	763,548	63
1909	463,993	737,602	60

From the examinations I have made of dust, dirt, and blood-stained material taken from dry hides, I have come to the conclusion that the proportion infected is larger than one would have expected. For example, 25 samples of dirt, &c., were taken from dry hides lying exposed for sale in the Bermondsey hide wharves; no discrimination was used beyond choosing dirty and low-quality hides. Agar plates were made from emulsions in which non-sporing organisms had been killed, and from the first 31 satisfactory plates—that is to say, those which were not overgrown or showed hardly any growth—two undoubted colonies of B. anthracis were obtained. The finding of these isolated spores suggests that they were carried in contaminated soil rather than that the skin was taken from the carcass of an animal that had died from anthrax. It is interesting to note that one also very frequently met with organisms that were only distinguished from B. anthracis after a careful examination of their cultural and pathogenic characters. From the above-mentioned 31 plates 16 distinct types of anthracoid organisms were so obtained; these were indistinguishable from B. anthracis in the primary cultures.

[1] C. W. Ponder: A Report to the Worshipful Company of Leathersellers on the Incidence of Anthrax amongst those Engaged in the Hide, Skin, and Leather Industries, with an Inquiry into Certain Measures aiming at its Prevention. Published by the Company, 1911.

[2] F. W. Eurich: Annual Reports of the Bradford Anthrax Investigation Board, 1906–10.

[3] J. Spear: Anthrax in London Hides and Skins. Report of the Medical Officer to the Local Government Board, 1882.

If any process of disinfection is to be completely effective it is obvious that it must be carried out at a stage before opportunities of infection arise. In connexion with hides and skins it is essential that the goods should be disinfected at a stage previous to their being unloaded from the vessels, for statistics show that workmen in dockyards and warehouses are even more frequently infected than are those who handle the skins after they reach the tanyard. Thus, of 113 cases of anthrax during the seven years 1903–09 that were considered to be due to handling hides or skins, 60, a proportion of 53 per cent. of the total, occurred among those working in dockyard or warehouse, while only 42, or 37 per cent., occurred among tannery workers; it would clearly be therefore only a half-measure to disinfect the goods in the tanyard.

Before export the goods are collected by shippers at the ports of shipment and are there roughly cleaned, sorted, and baled, so that if a simple process of disinfection could be devised, there should be no difficulty in carrying it out at this stage, and this being done, all the cases of anthrax in the country of import would be prevented. Many suppose that certain outbreaks amongst animals in this country are due to the food-stuffs becoming contaminated when carried in the holds of steamers, trucks, &c., which have previously carried dry hides; if disinfection were carried out before shipment, this possible source of infection would also no longer exist.

To summarise the requirements of an effective disinfecting process for hides and skins:—

1. It must be capable of destroying the spores of B. anthracis when present on hides and skins under any of the conditions in which they may be supposed to occur naturally—e.g., when protected by blood dried hard.
2. It must not injure the hides or skins or interfere in any way with the subsequent processes by which they are converted into leather.
3. It should be simple, so that it can be carried out at the ports where the skins are collected and shipped.
4. It must not add considerably to the cost of the raw material.
5. It should not involve the use of substances of a nature dangerous or poisonous to those who have to carry it out.

Mr. Seymour-Jones's "Formic-Mercury" Process for Disinfecting Hides and Skins.

The "Formic-Mercury" process consists in placing the dry hides for 24 hours in a "soak" which is made up to contain 1-2 per cent. of formic acid and 0·02 per cent. of perchloride of mercury and then "salting" them with sodium chloride. The action of the "soak" is to swell up the fibres of the hide by causing them to absorb water, the result being that the hide returns to a condition closely resembling that in which it was when taken from the animal's carcass. This swelling action also affects the dry albuminous matter which may be supposed to protect the spores, the perchloride of mercury therefore permeates the protecting material and its full action can be exerted. Moreover, as has long been known, the presence of the weak acid prevents the rapid deterioration of the germicide from the formation of insoluble albuminates. After the "soak," the "salting," by again abstracting water, converts the hides into a condition which differs very little from the "wet-salted" state of a hide which had been so treated immediately after flaying.

By this process, essentially simple, we have a combination of factors which would seem to act harmoniously towards accomplishing the desired disinfection. In the first place, a good deal of cleansing must take place; then the hides are converted into the "wet-salted" state, a measure in itself of extreme value; finally, the spore is attacked by the perchloride of mercury, the action of which is accentuated by the swelling and penetrating effect of the acid and by the fact that under these conditions its germicidal power is not minimised by the formation of insoluble albuminates.

Let us consider how this process meets each of the requirements which, as stated above, are demanded by an ideal disinfecting method.

1. *Efficiency.*—Having followed the development of this process since its inception, I have had the opportunity of testing many combinations of different acids with perchloride of mercury and other salts on anthrax-infected materials and have satisfied myself that the action of this combination on the spores of B. anthracis is very profound. It is unnecessary here to recapitulate these tests, and it is sufficient to say that they led to the adaptation of the strengths described below, and confirm the final results.

The method that I adopted is fully described in the report previously referred to; it was briefly as follows:—

Test preparations were made by cutting out pieces of dry hide to a given weight. In the centre of each piece a drop of blood freshly drawn was allowed to fall, and before it clotted a loopful of emulsified spores of B. anthracis, taken from a strain obtained from a cow dead from anthrax, was thoroughly incorporated. The preparation was then dried and kept some weeks until required. When disinfection was attempted the proportion of the fluid to the weight of the hide was always the same as it would be under practical conditions. After disinfection the clot could be easily removed with a scalpel from the hide and introduced under the skin of an animal. Introduction into a culture medium was not found to be a satisfactory indication of the vitality of the spores, even if the free perchloride of mercury were neutralised with ammonium sulphide. Control tests with untreated clots always caused the death of a guinea-pig in less than 48 hours.

The results of tests on animals, kindly conducted by Dr. Graham Smith at Cambridge, are given in the following table:—

TABLE II.—*The Disinfecting Action of a Solution containing Perchloride of Mercury and Formic Acid on Anthrax Spores protected by Dried Blood on a Hide.*

(Weight of pieces of hide, 2·5-3·0 grm.; fluid used in disinfecting each, 25 c.c.; temperature of room, 60° F.; time of treatment, 24 hours; soaked in brine, 24 hours.)

Series.	Experiment.	$HgCl_2$.	Formic acid.	Result.
1	Two guinea-pigs inoculated with clot from hide treated with brine only (control).	—	—	One died in 36 hours; the other in 48. In both the appearances were typical and anthrax was confirmed by microscopical and cultural tests.
1	Ten guinea-pigs inoculated with clots from ten hides treated by full process.	0·01%	1·0%	Nine survived. One died after three days; the appearances were typical and anthrax was confirmed by microscopical and cultural tests.
2	Two guinea-pigs inoculated with clots from hides treated with brine only (controls).	—	—	One died in 36 hours; the other in 48. Appearances typical and anthrax was confirmed by microscopical and cultural tests.
2	Ten guinea-pigs inoculated with clots taken from ten hides which had undergone full process.	0·02%	1·0%	Six survived with no ill-effects. Four died; one after 6½ days, one after 7½ days, and two after 9 days. Anthrax confirmed by tests in every case.
3	One guinea-pig inoculated with clot taken from a hide treated with brine only (control).	—	—	Died in 36 hours. Typical appearances of anthrax. The disease was confirmed by microscopical and cultural tests.
3	Nine guinea-pigs inoculated with clots taken from nine hides treated by the full disinfecting process.	0·1%	1·0%	All survived with no ill-effects.
3	Two guinea-pigs into *each* of which clots from *ten* hides which had gone through the full disinfecting process were inoculated.	0·1%	1·0%	Both survived with no ill-effects.

We see in these tests that using a 0·1 per cent. solution of $HgCl_2$ in what amounts to 29 tests on guinea-pigs the clots were disinfected in every case. When 0·02 per cent. $HgCl_2$ was used in ten tests six clots were disinfected, whilst in the other four the spores were so altered that the death of the guinea-pigs only took place after about a week or more. With 0·01 per cent. $HgCl_2$ in ten tests the clots were disinfected nine times, but in one the guinea-pig died after only three days.

It would therefore appear that to ensure perfect safety one should recommend that a strength of 0·1 per cent. $HgCl_2$ (1 in 1000) be used. I think, however, that this is unnecessarily strong, for it must be remembered that one cannot

decide what strength of a disinfectant is appropriate for practical purposes by an opinion based on laboratory tests alone. Other considerations, such as expense, must be carefully taken into account. I am personally of the opinion that the most suitable strength to use would be 0·02 per cent. $HgCl_2$ (1 in 5000); I base this opinion on the following points:—1. The tests are as stringent as I could devise; in actual practice many of the conditions would be more in favour of the disinfection than in my tests—e.g., the higher temperature of the water in places like India, China, and the Straits Settlements. 2. The other factors in the disinfection—namely, the cleansing and the conversion into the "wet-salted" state—I regard as more important even than the actual destruction of the spores by perchloride of mercury. 3. Though the spores treated with 0·02 per cent. $HgCl_2$ in a small proportion of cases were able to kill a guinea-pig after the delayed period of seven days it does not follow that they would even set up the disease in man, who, there is evidence to show, is much more resistant to anthrax than the guinea-pig.

Little need be said as to the way in which this process is calculated to meet the further requirements of an ideal disinfecting method.

Injury to hides and skins.—In the opinion of the leading leather trades chemists and practical tanners who have experimented with this process no damage whatever is done to the goods, but, on the contrary, they are better preserved, easier to evaluate, and less likely to give trouble at the early stages of tanning since they are better preserved against putrefaction. The damage which $HgCl_2$ by itself does to the skin is prevented, since the formation of insoluble albuminates is inhibited by the acid which is present.

Application.—The process is a simple one, and it is clear that it could be carried out by unskilled labour in the ports of shipment. The necessary materials for the "soak" could be sent out in a concentrated state.

Cost.—Mr. Seymour-Jones estimates that the total inclusive cost of the process per hide would not exceed 3·75*d.* even in remote ports. When it is remembered that the value of a raw hide is roughly £1, the extra cost of disinfection cannot be considered appreciable. The process is not patented.

Danger to workmen.—There would be no danger in using $HgCl_2$ in the required dilutions; the goods would need very little handling.

A practical method having been suggested, how can its application be ensured to those goods which constitute a potential danger to our workmen? The American Government has led the way by making it illegal to import hides and skins into their country unless accompanied by a Consular certificate stating that there is no anthrax among the cattle in the district from which they are exported or that the goods have been submitted to a disinfecting process. As regards the first requirement, it is ineffective because the skins come to the port from far inland, whilst the second is useless because no effective applicable disinfecting process is suggested.

Civilised Governments should forbid the importation of hides or skins unless either (1) they have been submitted to the ordinary "wet-salting" process immediately after flaying; or (2) if cured by drying they have been converted back to the "wet-salted" state by the "formic-mercury" process before leaving the country of export. If such regulations were adhered to I am convinced we should hear no more of anthrax amongst the dock labourers and warehousemen in Bermondsey and Liverpool, nor of those sporadic cases which are continually cropping up in the tanneries in different parts of the country.

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SERVICE FOR MEDICAL WORKERS IN BRIGHTON.—The annual special service for medical practitioners, nurses, and others engaged in medical work was held in Brighton parish church on Sunday evening, Oct. 22nd. The Rev. Dr. Upcott, head-master of Christ's Hospital, was the special preacher. In the course of his sermon he declared that the occupations which those in his congregation so well represented that evening were the purest and noblest in mankind if used in the right way and spirit, for it was pre-eminently a life of service. The collection was in aid of the Queen's Nurses' Fund.

THE TREATMENT OF BUBONIC PLAGUE BY THE IMMEDIATE INCISION OF THE GLANDS.

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WHEN plague first appeared in Bombay in 1896, owing to mistakes in diagnosis, plague glands were occasionally removed. The patients were found to improve greatly for a few days, but ultimately invariably died from plague septicæmia. For this reason the removal of plague glands has been strongly condemned.

In 1905 I published the case (*Indian Medical Gazette*) of a Sowar of the 6th Bengal Cavalry who developed plague in Benares. On arrival in camp he fell off his horse and was found to have a large painful gland in the left groin. His temperature was 103·4° F. and his pulse was fast, weak, and dicrotic. He had severe headache and some delirium. The bubo had not been noticed six hours previously. An incision was made into the gland, which cut like a raw potato, and serum and blood escaped which showed swarms of the typical bipolar-staining bacilli. Iodine lotion (1 drachm of tinct. iodi to 2 ounces of water) was put into the wound, and a dressing soaked in this lotion applied. Two hours later the headache had disappeared, the temperature was 99°, and the patient was much better. Two days later the temperature rose again, but fell on opening the lips of the wound with a director. The patient recovered, and was able to continue his journey in three weeks' time. The case was a most severe example of bubonic plague. The gland was incised with the object of setting free the enclosed toxins.

During the severe plague epidemic in Lucknow in 1907 I treated 87 cases of plague in the cantonment. Sixty-two of these cases were bubonic and 25 pneumonic, septicæmic, and what might be termed splenic. All the bubonic cases (Lucknow cantonment) were treated by the immediate incision of the swollen glands. By this method the great majority of the truly bubonic cases seen within 48 hours of the appearance of the buboes recovered. But it should be noted that some people dead of the disease were seen for the first time in their houses, having died overnight, so that those brought in alive to hospital with buboes may be looked upon as showing some resistance to the disease. Of the 62 cases treated in this way eight died and 54 recovered, giving a mortality of only 15·3 per cent. A few of these were old-standing cases, and would probably have recovered without treatment, but some were hopeless on admission, and some were picked up miles away from their homes, having wandered during the night; these wandering cases generally died, so that a mortality of only 15·3 per cent. is remarkably good, and I believe better than any recorded. Surgeon-Captain Thomson gave a mortality of 62·7 for cases with buboes, and 78·6 for cases without palpable buboes in the Parel hospital in 1896–97.

There was every opportunity for studying these cases very thoroughly, as many of them were private servants, and notice was frequently given on the first sign of fever, and thus it was possible to see them from the beginning. The special feature of the bubonic cases was a one, two, or three days' fever, with rambling speech at night, restlessness, headache, backache, and vomiting, together with a normal or subnormal pulse tension. During this stage these cases resembled ordinary Indian fever, which one usually calls malaria, but with the difference that in malaria the pulse tension is high during the fever and there is no marked restlessness, headache, or rambling speech and there is sweating on remission.

After a day or so of this preliminary fever a large painful gland suddenly appeared in the groin, axilla, neck, behind the internal malleolus, the popliteal space, or behind the internal condyle of the humerus. The condition of the patient now became acute, the delirium very marked, headache very severe and the pulse very fast and dicrotic. Without treatment death usually results in these cases in from 3 to 48 hours.

Professor R. T. Hewlett in his "Manual of Bacteriology" states that 70 per cent. or more of the bubonic cases begin with the two or three days' initial fever.

Assistant Surgeon Thos. Whyte, of the Bombay medical staff, describing a case of plague in Káthiáwar in 1820, says: "She was in the ninth day of the disease, and had a bubo in the upper part of each thigh, both very painful to the touch, which came on the second or third day of a fever, which had deprived her for a time of her senses."

In General Gatacre's report of the epidemic in Bombay in 1896 the following sentences appear: "The glandular or bubonic is the common form of plague, and comprises 80–90% of all cases. ..... The swellings *sometimes* appear at the onset, *usually* on the second or third day, and often not until later in the course of the attack. They consist of single glands, or two or more separate glands agglomerated into a mass. ..... A sudden rise of temperature in the course of an attack generally indicates a fresh bubo."

Septicæmic type.—Enlarged glands may appear in several regions later on.

Pneumonic or thoracic type.—This type is very fatal, and in some cases is occasionally complicated with the development of external buboes, which arise from a secondary extension of the virus.

Dr. J. F. Payne in Clifford Allbutt and Rolleston's "Tropical Diseases" says: "Buboes are in some instances the first symptoms to attract the attention of the patient, perhaps by a sudden lancinating pain. More usually they occur after the onset of fever, on the second, third, fourth, or even the fifth day of the disease."

Special attention in this article is called to the preliminary fever as bearing on the true pathology of the disease and justifying incision. One is inclined to look upon the bubo as the initial lesion, and very naturally so, as a little fever is such a common event as to be overlooked by the native patient; moreover, one generally sees him for the first time with a swelling of a few hours' duration, frequently rambling in his speech and nearly moribund. The common conception of the pathology is that the bacilli enter by a skin lesion, travel up the lymphatics, and are arrested by the related superficial lymphatic glands. This is supposed to contra-indicate incision. It may be that a few bacilli lodge in the gland related to the inoculated area, though why they should, when the lymph channels are large enough for the passage of leucocytes, requires explanation. None of my cases had any local lesion; the Indian Plague Commission has altogether only reported four, so that the bacilli on first entering cannot be irritating. It is far more probable that they do not lodge locally, but enter the general circulation as rapidly as morphia when injected hypodermically. In some cases with a local cutaneous lesion the related gland is normal and a non-related gland is enlarged.

Plague should not be compared with an ordinary septic process, with a local cutaneous or subcutaneous inflammation and swelling of the related glands. It compares more closely with typhoid fever or acute osteomyelitis.

* Staff-Surgeon Wilm (Hong-Kong epidemic 1896–97) expressed the opinion, that infection through the skin is not common, "*for, on the one hand, in the great majority of cases, buboes do not appear until after the onset of the severe symptoms, and, on the other hand, were such a mode of infection common, we should expect to see much more frequently local affections of the skin.*"

I think that infection through the skin is the general rule, but the bacilli pass rapidly into the lymphatic and general circulation. The flea, prior to sucking blood, injects saliva to act as an anti-coagulant; the bacilli, which must be few at the most, are injected with the saliva, possibly directly into a capillary lymphatic or blood-vessel. The anti-coagulant, possibly by paralysing the local cutaneous and endothelial cells, may assist the bacilli. During the incubation period of two to ten days the bacilli probably develop in the spleen or elsewhere, and are probably responsible for the prodromal symptoms of lethargy and headache. They probably enter the general circulation again during the initial fever, as occurs during the first two weeks of typhoid. But immune bodies being also present the bacilli soon succumb, the few survivors settle down in a superficial lymphatic gland, just as typhoid bacilli settle down in the lymphoid tissue of the small intestine, and staphylococci in the epiphysial line of a growing bone in acute osteomyelitis. The election for the superficial glands is probably due to the fact that they are frequently the seat of small inflammations.

In No. 10 district, Bombay 1896–97, 85 per cent. of the plague cases were bubonic, and of these in 60 per cent. the femoral and inguinal glands were enlarged, in 17 per cent. the axillary and inguinal glands were enlarged, and in 9 per cent. the cervical and inguinal glands were enlarged. This is about the order and proportions in which these glands suffer from small inflammatory conditions. The organisms in the glands being shut off from the blood-stream, as in acute osteomyelitis, develop rapidly, and elaborate toxins, which in the case of plague may produce death in a few hours. Septicæmia tends to ensue as the disease progresses and the resistance of the body is broken down. In all cases of plague examined after death bacilli were found in the spleen. An acute attack of osteomyelitis can be cut short and the bone saved by early excision of the periosteum and opening the medullary cavity. Septicæmia is not produced by this interference; why, then, should one be afraid of septicæmia when opening a plague gland in the earliest stages?

Mr. James Cantlie, on p. 28, vol. ii., "The Plague in India," Government of India Home Department, says, "Plague is a polyglandular disease of an extensive nature." This is certainly not the case clinically in India. Nor have I seen swelling of the internal glands or mesenteric. The teaching that the disease is an extensive polyglandular one tends to make the physician feel that all attempts at treatment are futile; it is an untrue and over-melancholy aspect; as shown above, a very great deal can be done towards curing plague. Inoculation experiments on guinea-pigs (preparations in the College of Surgeons Museum) generally show post mortem an enlargement of the axillary and inguinal glands alone and great enlargement of the spleen. Post-mortem examinations of rats also demonstrate this point.

In addition to the bubonic cases there were 8 pneumonic cases with 6 deaths, 10 septicæmic cases with 6 deaths, 4 splenic cases with 3 deaths, and 3 mixed cases with 3 deaths. The total mortality of the 87 cases was thus 29·87 per cent. The mortality in the city of Lucknow during the same period was between 80–90 per cent., as it was a particularly severe epidemic.[1]

In nearly every case when a gland was incised the fluid was examined under a microscope; bipolar-staining bacilli were always present. The most favourable cases were those in which the gland swelling developed suddenly, and in which the gland tumour was large. In many cases after incision of one gland others developed in various parts of the body, sometimes in three or four places. In each case the swollen glands were incised as soon as they appeared. These secondary glands remote from the supposed original lesion prove that bacteria were present in the circulating blood. In some of these cases of multiple buboes B. pestis was found in a drop of blood from the finger. Most of these multiple cases recovered.

The pneumonic cases were mostly of a broncho-pneumonic type, the dull patches coming and going from day to day. The special features of these cases were blood-stained sputum (full of B. pestis) and great mental distress and horror. They were treated by frequent dry-cupping over the dull areas, absolute rest, and iron and digitalis internally.

The septicæmic cases always developed, sometimes only an hour before death, an œdematous swelling over some superficial gland. Other cases of a more chronic type developed true but smaller buboes than the strictly bubonic cases. These buboes as soon as they appeared were incised. The septicæmic cases appeared to be due to a primary or, at least, marked focus in the spleen, and perhaps these cases should more accurately be termed splenic plague. It is doubtful whether the B. pestis can flourish in the blood-stream without support from a localised lesion elaborating toxins; and there is reason to think that this focus is in the spleen.

There were 4 cases with special pain over the spleen, which I think were due to the spleen being involved in place of the superficial glands.

Every patient received the following mixture four times a day: Tinct. ferri perchlor., ♏xxx.; tinct. digitalis, ♏y.; glycerine, ℥i.; aq. ad ℥ii. The iron was given because it is so useful in diphtheria; the toxæmia of plague is not unlike that of diphtheria. In addition the patients were given 6 oz. of rum during the 24 hours and were fed hourly through the day with condensed milk and Horlick's malted milk. As much water and lime-juice as desired were given. The patients were kept absolutely at rest.

The management of plague cases is a difficult matter on account of the marked restlessness and in some cases actual mania. One boy of 18 wandered away at night, and was found in the morning under a tree more than a mile away. Three cases developed paralysis of the pharynx, and had to be fed with an œsophageal tube; many required catheterisation, while six had severe diarrhœa, with blood. Two cases

[1] It is very difficult to obtain the true plague mortality of a district, as the returns are compiled from police information. This year the mortality shown in some districts of the United Provinces was 100 per cent., in others 90 per cent.

never recovered their mental balance, and left the hospital insane. Morphia is the best remedy for the mania of the acute stage.

The Method of Making the Incision and the Dressing.

The skin was cocainised by intradermic injections of ½ per cent. cocaine and adrenalin; it was then freely incised, and the swollen gland or glands laid well open by two incisions crossing each other at right angles. The gland and subcutaneous tissues were not disturbed except for the clean-cut incisions. The wounds were dressed with absorbent wool, wrung out of iodine lotion (℥ 1 ad ℥ ii. water). The wool was then covered with oil paper and a layer of perchloride wool and bandaged. The wounds were dressed once or twice a day, depending upon the exudation.

The experience obtained from these cases shows that early incision into a plague gland produces an immediate improvement in the patient's condition. The temperature is lowered and the severe headache alleviated, and if the patient is seen during the first 24 hours the probability of his recovery is very great.

The theoretical reasons for immediate incision of the glands are as follows:—1. Toxins and bacilli are set free and exude into the dressings in place of the blood stream or lymphatics. 2. The incision relieves the intracapsular pressure (which is very great), re-establishes the glandular circulation, and thus the germicidal substances of the plasma are brought into the stronghold of the bacilli. 3. The incision produces a copious flow of serum containing alexin and plague antibodies. As is well known, alexin (complement) is a powerful germicide for cholera, typhoid fever, and plague bacilli that have been prepared by their specific antibodies. Bordet and Gengou demonstrated these antibodies in 1901, and their antimicrobic nature was demonstrated by Yersin. 4. Bordet, Gengou, and Levaditi clearly demonstrated that there was no alexin in circulating plasma; I was able to demonstrate this point also by mixing blood with 9 volumes of 1·5 per cent. salt and centrifuging immediately. The supernatant plasma contained no alexin, and did not clot on diluting with an equal part of water; hence the great value of serum over circulating plasma. 5. Never once were bacteria found inside leucocytes in smears taken from the glands. But leucocytes will readily take up B. pestis in the presence of serum from a plague patient. One must conclude from this that there are no opsonins (alexin?) in the intact gland, though these are present in the serum exudate of the divided gland. Hence division of the gland not only liberates toxins and bacteria, but also produces a flow of serum, lymph, and leucocytes containing immune bodies, alexin, and opsonins; so that the bacilli are not only destroyed directly, but are also engulfed by phagocytes.

The theoretical objection to incision is that the gland forms a barrier between the bacilli and the general circulation, any disturbance to this barrier being therefore fraught with great danger. As shown above, the plague bacilli reach the gland from the blood, and not *vice versâ*. It is probable that many reading this article will not be convinced of the very great benefit derived by immediate incision, but no one should be afraid of the experiment, for whatever other measure is undertaken eight to nine patients will die out of ten, while by employing incision only one or two will die out of ten.

In the Government of India's treatise on Plague, 1896–97, vol. ii., p. 28, Mr. James Cantlie states the following, which I wish to refute:—

> The result of experience gained by local, radical, or tentative treatment of the glands does not lead one to expect much benefit from them. That abscesses should be opened when they point, or when fluctuation is perceptible, is of course natural; but that local remedial steps should be undertaken for the purpose of affecting the course of the disease by acting on the gland is, from what we know of the pathology of the disease, scarcely rational. Injection of a swollen gland when it is accessible, as in the groin, with such substances as carbolic, perchloride of mercury, or a solution of the perchloride of mercury and iodide of potassium, has perhaps a theoretical basis of justification, but practically little good can be ascribed to it. The latter-mentioned solution may have a higher claim, as in several cases in which it has been administered, the temperature falls and the patient seems easier. *It may be, however, that the mere pricking of the tense capsule of the gland* even by needle punctures may serve to relieve tension and thereby pain. This leads one to the belief that subcutaneous incision of the gland may be attended with beneficial results, and it is a method of surgical procedure not without precedent. *Early free incision of the gland is not to be recommended*, nor can excision in any way be justified. The disease is a p lyadenitis of so extensive a nature, that eradication of infected glands is an impossibility. A gland, when swollen, red, and painful, may be smeared with glycerine and belladonna, or poulticed to relieve pain, and when fluctuation is perceptible it should be opened, but further procedure is useless.

Mr. Cantlie suggests that pricking or subcutaneous incision does good, but he prohibits a free incision. It would be interesting to know what experimental proof he had for the latter statement.

Identification of Plague in a Corpse.

Take a darning-needle, and drive the point into a penholder. Make a small cut in the skin over the spleen, and drive the darning-needle (eye forwards) into the spleen. On removing it, the eye will be found to be filled with spleen pulp. Smear this on a slide and stain with 1 per cent. watery methylene blue. Typical plague bacilli will always be found in a case of plague.

Protection against Infection.

None of the attendants or myself contracted plague, in spite of very intimate contact. The following precautions were taken: 1. Before examination the patient was brought out of his house into the open. In the plague hospital grass huts holding two patients only, and open at two ends, were employed. 2. Camphor was carried in the pocket, and the native attendants in addition were made to smear eucalyptus oil 1 part, sweet oil 60 parts on their calves, and all over their bodies once a day. No one was inoculated because in 1906–07 the vaccine was under preparation.

Mussoorie, United Provinces, India.

ACETONURIA IN CHILDHOOD:

A STUDY OF ITS PREVALENCY IN THE MEDICAL WARDS OF A CHILDREN'S HOSPITAL; WITH AN INQUIRY INTO ITS CAUSE.

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THE acetone bodies, consisting of B. oxybutyric acid, aceto-acetic acid, and acetone, have long been recognised as occasional constituents of the urine in children, and their occurrence has been associated with more or less well-defined clinical groups. These groups may be classified as follows: 1. In diseases in which gastro-intestinal symptoms (diarrhœa, vomiting, or constipation) are prominent—e.g., in pneumonia, tuberculous meningitis, infantile diarrhœa, &c. 2. In cases of so-called "cyclical vomiting" where recurrent attacks of vomiting occur, associated with diarrhœa or constipation, and the presence of acetonuria. 3. In conditions in which fever is present. 4. Lastly, there is the toxic group, including diabetic coma, post-anæsthetic poisoning, and salicylic acid poisoning.

The discovery of acetone in the urine of children suffering from diseases not included in such a classification led me to make a more extended investigation into this subject, and the results are herewith set forth.

For the past year or so the urine of all children admitted to the medical wards of the Hospital for Sick Children, Great Ormond-street, where specimens were obtainable, has been tested for acetone. The cases were in no way selected, and so comprise instances of most of the diseases met with in children varying in age from a few days to 12 years old. In all, the urine of 662 children was so examined.

Method Employed.

At first only the specimen passed within 12 hours of admission was examined; in the latter cases, in addition, specimens passed about 36 and 60 hours after admission were also tested. Rothera's test for acetone, slightly modified by Dr. A. E. Garrod, was used in every case.

Rothera's test.—5 c.c. of urine are saturated with ammonium sulphate crystals, 2 c.c. of ammonia are added, and then a few drops of a freshly prepared 5 per cent. solution of sodium nitroprusside. Acetone gives a slowly developing permanganate colour. Dr. Garrod's modification consisted in adding to the urine an equal quantity of a saturated solution of ammonium sulphate in place of saturating the urine with $(NH_4)_2 SO_4$ crystals, thus enabling the test to be performed more quickly, without affecting its accuracy, as proved by numerous controls.

In the urine of children who have had rhubarb or senna a pink colour develops on the addition of the ammonia, due to

the presence of chrysophanic acid, but this is readily distinguished. The rapidity of the development of the permanganate colour gives a rough estimate of the quantity of acetone present.

In specimens obtained just after admission acetone was rarely found; those passed 12 hours after admission frequently gave a positive reaction. The maximum was found in the 36-hour specimens, and after that a gradual diminution occurred, all trace being gone by the fourth day usually. In cases in which the acetone was never very marked, it was in the specimen passed 36 hours after admission that it was most marked, sometimes being found in this specimen only. In those cases in which the acetone reaction was markedly positive the presence of aceto-acetic acid was also found by the use of the ferric chloride test.

Using the above method, the urine of 662 cases was examined, and in 408 of those, that is in 61·6 per cent., acetone was found. One is therefore justified in saying that acetonuria is of common occurrence in hospital children.

When an attempt was made to allot those cases to the groups mentioned at the beginning of this paper the result was unsatisfactory. There were two cases of diabetic coma, none of post-anæsthetic poisoning, none of "cyclic vomiting," 150, or 22·5 per cent., associated with definite gastro-intestinal symptoms, leaving 38·5 per cent. unaccounted for under such headings.

How, then, is the fact to be accounted for that 61·6 per cent. of all the children admitted to hospital develop acetonuria? In the first place the appearance of acetone in the urine is caused by abnormal fat katabolism depending on "carbohydrate starvation." This "carbohydrate starvation" may result from (1) deficiency or absence of carbohydrates in the diet, (2) a diminished power of absorption or assimilation of the carbohydrates, or (3) inability to digest the carbohydrates. It is therefore necessary to determine under which subdivision the "carbohydrate starvation" occurring in children on admission to hospital should be placed.

1. *Deficiency or Absence of Carbohydrates in the Diet.*

This is a well-known cause of acetonuria, examples of which are seen in the following two cases:—

CASE 1.—A male, aged 5½ years, a case of recovered empyema. The patient, who had been eight weeks in hospital and whose urine contained no acetone, was put on diabetic diet for 24 hours. Nine hours later a faint trace of acetone was present, which became very marked after 17 hours, and extremely marked with a trace of aceto-acetic acid after 23 hours.

CASE 2.—A female, aged 5 years, who had recovered from chorea after having been 11 weeks in hospital and whose urine contained no acetone, was put on diabetic diet for 24 hours. After 17 hours acetone was present, and it became very marked with a trace of aceto-acetic acid after 30 hours.

Examples are also seen in cases of general starvation, and a certain number of those are found in my series; but here the acetonuria would be present on admission, and this could account for but a small number of the cases. After admission this source can be eliminated, for their diet then, in all cases, consisted almost entirely of carbohydrates for the first 24 hours, being either milk only, or rice pudding, bread and butter, and milk.

2. *Diminished Power of Absorption or Assimilation of the Carbohydrates.*

Under this heading the two cases of diabetic coma would come, but not the majority of the remaining cases, for on numerous occasions dextrose, which requires no inversion but can be absorbed at once, was administered, and without exception the acetone had disappeared in about 12 hours, whereas in similar cases which were not so treated the duration was about 36 hours longer.

3. *Inability to Digest Carbohydrates.*

We have thus found that the "carbohydrate starvation" necessary to produce the acetonuria is not caused by deficiency of carbohydrates in the diet, nor is it due to a diminished power of absorption or assimilation, therefore it follows that it must result from an inability to digest the carbohydrates in the diet.

The carbohydrates of the diet given consist of two forms, lactose or milk sugar and cane sugar, both disaccharides, and starch, a polysaccharide. Before absorption can take place these must be converted into monosaccharides. This change takes place in the small intestine, lactose and cane sugar undergoing inversion, and giving as a result dextrose and galactose, and dextrose and levulose respectively, and these can be absorbed as such. Starch requires a more lengthy process, first undergoing digestion which produces maltose and dextrin, next these are inverted to dextrose, and absorption can then take place. A more elaborate process is thus necessary to prepare starchy foods for absorption than is required in the case of milk, and anything interfering with digestion should give more marked results in those fed on starches than in those getting milk. In other words, in the case of children under 2 years, whose diet is almost entirely milk, the percentage of those developing acetonuria should be lower than in those over 2 years, who are having a starchy diet, and this is just what one finds.

Under 2 years of age specimens from 99 cases were examined. and of those 47 per cent. developed acetonuria, whilst in specimens examined of children between 2 and 9 years, 68 per cent. gave a positive reaction. The minimum percentage, 41 per cent., was found in children under 1 year, the maximum, 84 per cent., occurring between 3 and 4 years.

The "carbohydrate starvation" thus being due to an inability to digest the carbohydrates, it was next sought to ascertain the cause of this temporary derangement. Naturally the disease from which the child was suffering was thought of as a cause, and an analysis was made of its prevalency under two groups: 1. According to the system affected. 2. In certain well-defined diseases.

1. *According to the system affected.*—(*a*) Diseases of the digestive system, including stomatitis; œsophageal constriction, two cases; pyloric stenosis; diarrhœa, acute and chronic; cirrhosis of liver; intestinal parasites; and abdominal tuberculosis, &c. Of 99 such cases 63 per cent. had acetonuria. (*b*) Diseases of the respiratory system, including pneumonia, lobar and lobular; pulmonary tuberculosis; pleural effusion, serous and purulent; foreign body, &c. Of 168 such cases 62 per cent. had acetonuria. (*c*) Diseases of the circulatory system, including congenital and acquired heart disease. Of 59 such cases 61 per cent. had acetonuria. (*d*) Diseases of the nervous system, including meningitis, various forms; mental deficiency; chorea; poliomyelitis; myopathy, &c. Of 123 such cases, 65 per cent. had acetonuria. (*e*) Diseases of the urinary system, including nephritis, acute and chronic; calculus; pyelitis, &c. Of 46 such cases, 63 per cent. had acetonuria.

The remarkable uniformity of the percentage under the different systems at once negatived the idea that the acetonuria was in any way due to the disease from which the child was suffering.

2. *In certain well-defined diseases.*—The same fact became evident when one analysed certain of the more prevalent diseases—e.g., pneumonia and broncho-pneumonia, 67 per cent.; tuberculosis, all forms, 62 per cent.; and the rheumatic group, 60 per cent. In fact, the only exception found was in the case of typhoid fever, and such cases showed a remarkable decrease in the percentage that developed acetonuria. I have records of 13 cases, occurring over a period of three years, and of these 2 only, or 15·3 per cent., gave a positive reaction. This fact is, I think, of considerable help in the differential diagnosis of typhoid fever, which is often very difficult in children, especially as Widal's reaction is frequently not positive until convalescence has been established. Further, the presence or absence of fever, which Pawlow[1] has shown diminishes the digestive secretions and might thus account for the derangement, seemed to have no effect, for in cases where fever was present (e.g., tuberculosis, pneumonia, &c.), and in those in which there was no fever (e.g., myopathy, cerebral diplegia, chronic nephritis, &c.), the percentage remained about the same, whilst in the case of typhoid fever it was markedly diminished.

The acetonuria, therefore, was not influenced at all by disease. What, then, was the cause? We have seen that it tended, in the majority of cases, to come on after admission to hospital; that it lasted about three days; that it occurred more frequently in children over 2 years than in those under that age—i.e., it was more marked in those who had before admission received the more complex diet and in whom the change of diet after admission would be greater than in those who were getting a simple diet, chiefly milk, both before and after admission; and, finally, that it was unaffected by disease. It remained, therefore, to inquire into the effect of change of diet. Such an investigation gave very instructive results and afforded the most satisfactory explanation of its occurrence.

[1] Pawlow: The Work of the Digestive Glands, 1902.

The most complete data were obtained in the case of children under 1 year of age. Of such cases I had more or less definite information regarding the diet before admission in 49 instances. Eleven had been breast-fed until admission and were then put on milk and water, the milk being in some cases peptonised, in others "humanised," and in yet others citrated. Every one of these cases developed acetonuria, and it disappeared in the usual way. The remaining 38 cases had been bottle-fed before admission, the chief food used being milk and barley water. Of these, 6 only, or 15 per cent., developed acetonuria.

Here, then, I believe lies the explanation of this temporary acetonuria, for in cases where a change in the diet was made acetonuria resulted; in those in which no change, or but little change, was made acetonuria was comparatively rare. Further, in children under two years the diet before and after admission was more closely allied than in children over that age, and the percentage was lower in consequence. Another factor which would also keep it lower at this age I have already drawn attention to—namely, that the carbohydrate was in the form of a disaccharide, and therefore more easily dealt with. When, however, we look at the case of children over 2 years we find a markedly higher percentage, and here the carbohydrates are chiefly polysaccharides, and the change in diet would thus be greater. It is thus apparent that mere change of diet in childhood is sufficient to bring about carbohydrate starvation and the resulting acetonuria, and that this is caused by a temporary failure of digestion in those cases. Further, as the accompanying chart shows, the change is more marked the younger the child, and there is a steady diminution in this defect as age advances. That it is greatest in

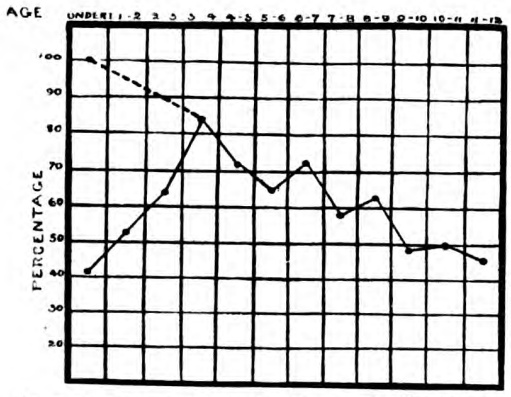


Chart showing percentage of acetonuria at different ages. The dotted line is drawn from the percentage in babies who had been changed from breast feeding to artificial feeding.

the youngest cases is shown by the fact that 100 per cent. develop acetonuria when the diet is changed from human milk to cow's milk. The comparatively low percentage under 3 years of age is not due to an absence of this defect, but is explained by the fact that there is less change in the diet given before and after admission at that age than at any other.

Lastly, as to the association of acetonuria with gastro-intestinal disturbance, it has been shown by Macfadyen[2] that if absorption of the carbohydrates does not take place in the small intestine the sugars are liable to undergo acid fermentation from the bacteria always present in the intestine, with the formation of acetic, lactic, and butyric acids, &c., and that these may cause irritation of the intestines, with the production of diarrhœa, &c. Thus the gastro-intestinal disturbances and the acetonuria may be explained by one and the same cause—viz., the digestive derangement—and the one is not necessarily a result of the other.

Conclusions.

1. That acetonuria occurs in childhood with great frequency.

2. That in the large majority of cases the carbohydrate starvation necessary for its production is caused by a temporary failure of digestion.

3. That this loss of digestive power can be brought about by mere change of diet.

4. That it is more easily set up the younger the child, and that the digestive instability becomes less marked as age advances.

5. That about three days are required before the digestive processes can accommodate themselves to a change of diet.

6. That disease, with few exceptions, has no influence on the production of acetonuria in childhood.

Great Ormond-street, W.C.

[2] Macfadyen: Nencki and Sieber, Archiv für Experimentelle Pathologie und Pharmakologie, 28, 311, 1891.

EXPERIMENTS ON THE CAUSATION OF BERI-BERI.

(PRELIMINARY COMMUNICATION.)

BY E. A. COOPER, B.Sc.,

AND

CASIMIR FUNK, PH.D.

(*From the Lister Institute of Preventive Medicine.*)

THE conclusion that beri-beri was due to a diet in which rice bulked too largely was arrived at by Wernich,[1] Van Leent,[2] and Takaki.[3] Acting upon this conclusion the latter, by modifying the diet of the sailors, has succeeded in practically eradicating the disease from the Japanese Navy. The vast amount of epidemiological evidence collected by Braddon[4] showed conclusively that beri-beri was associated with the continuous consumption of a diet composed too exclusively of decorticated (polished) rice. Braddon's observations brought out the further important point that natives, whatever their race, consuming rice which had been parboiled previous to removal of the pericarp (such as that used by the Indian Tamils) were not in danger of contracting the disease. One difference between these rices consists in the amount of subpericarpal layer remaining on the grains after the various manipulations to which they have been subjected prior to consumption.

An important fact for the investigation of beri-beri was the discovery of Eykman[5] that a polyneuritis in birds (fowls and pigeons) analogous to the human beri-beri is induced by a diet of polished rice, whereas fowls fed on undecorticated rice remained healthy. Eykman also showed that the latter variety of rice could cure fowls suffering from polyneuritis induced by a diet of the former. The next advance was due to Grijns,[6] who showed that the addition of pericarp and subjacent layers removed during decortication (polishings) to the diet of decorticated rice prevented the occurrence of polyneuritis. Neither Eykman nor Grijns adopted the simpler interpretation of their facts that beri-beri was a disease due to the deficiency of some essential dietetic constituent in the decorticated rice, but suggested that the endosperm contained some poison, the antidote to which occurred in the cortical layers removed by polishing.

The solution of the problem has been materially advanced by the work of Fraser and Stanton.[7] These authors having confirmed the preventive and curative results obtained with polishings sought to separate from them the active substance. They extracted the polishings with 0·3 per cent. HCl and precipitated the extract with alcohol. By this means the greater portion of the phosphorus was removed in the form of phytin. By the suitable addition of this phytin to a diet of polished rice they failed to prevent in birds the occurrence of polyneuritis. The alcohol extract, however, possessed protective properties. The alcoholic extract contained proteins, but these were found to be devoid of action. The inactivity of the alcohol-soluble proteins has since been confirmed by Chamberlain and Vedder,[8] who found that the dialysate of the alcohol-soluble fraction contained the active substance.

Schaumann[9] has recently published a comprehensive study of the subject containing the results of many interesting and important experiments undertaken during the past three years. Schaumann's results may be briefly summarised as follows: 1. Inorganic phosphates had no curative properties. 2. Phytin, which had been credited by Aron[10] with some preventive properties, gave entirely negative results. 3 Complex mixtures, such as yeast, rice polishings, Katjang-idjoe beans, if administered in sufficient quantity to pigeons far advanced in the disease, produced a cure. 4. Although an impure

commercial sample of yeast-nucleic acid cured the disease in 3 out of 14 cases (pigeons), it was not possible to obtain conclusive results with all kinds of simple phosphorus-containing substances, such as lecithin, glycerophosphates, and phospho-proteins. For these reasons Schaumann suggests (*l. c.* p. 347) that phosphorus compounds can only exercise curative effects when acting in conjunction with certain other substances.

With this we conclude the *résumé* of the more important work on the problem of beri-beri and pass to the consideration of the results of our own experiments.

We have repeated feeding experiments of former workers upon birds (fowls and pigeons) with the various kinds of rice and have confirmed them, and have also confirmed the preventive action of rice bran (polishings). Experiments with an exclusive diet of various pure carbohydrates—starch, inulin, cane sugar, and dextrin—have been carried out, and it was found that such diets induced polyneuritis with the usual symptoms. These results disprove any intoxication hypothesis concerning beri-beri in birds. A daily ration of 0·5 gramme phytin administered to pigeons fed on white rice did not prevent polyneuritis, and attempts to cure polyneuritis by the addition of phytin, edestin, casein, and egg-yolk were unsuccessful. As the latter two substances are relatively rich in organically combined phosphorus the negative results are important. One gramme of dried pressed yeast per day prevented the development of polyneuritis in fowls, and we were also able to confirm the curative properties of pressed yeast. Yeast-juice obtained by squeezing the ground cells with kieselguhr in a press was found to exert a curative effect like the original yeast. *We have also found that pressed yeast hydrolysed with 20 per cent. sulphuric acid for 24 hours still retained its curative properties.* As all organic phosphorus compounds are completely hydrolysed under such conditions, and phosphoric acid has been shown to be without influence, it is very improbable that the polyneuritis is the result of a deficiency in phosphorus compounds.

After confirming the results of Fraser and Stanton concerning the beneficial effects of the alcoholic extract of rice polishings, we precipitated a water solution of the extract by means of phospho-tungstic acid, and found that the active substance is precipitated entirely by this reagent and that the filtrate is completely inactive.

The curative effect of the precipitate decomposed by baryta in the usual way, which is wholly devoid of phosphorus and also free from carbohydrates or protein groups, was tried upon ten pigeons; it was found to be extraordinarily active and cured the birds even when they appeared moribund, striking improvement occurring in from three to ten hours. In several instances birds which were completely paralysed and supposed to be dying in the evening were found next morning with but some trace of lameness.

Polishings appear to contain only a very small amount of the active substance, and for further progress a very large quantity of polishings must be dealt with.

In conclusion, it appears that the polyneuritis induced in birds by a diet of decorticated and polished rice is not due to the deficiency of phosphorus compounds, but to the absence of some substance not of protein nature, devoid of phosphorus, soluble in water and acidulated alcohol, dialysable, and precipitated by phospho-tungstic acid, and the precise nature of which is being at present investigated by one of us (C. F.).

We are glad to have this opportunity of expressing our best thanks to Dr. C. J. Martin, F.R.S., Director of the Lister Institute, for drawing our attention to this subject, and for help and advice in the course of the investigation; and to Dr. Leonard Braddon of Seremban, Malay States, to whom we are indebted for kindly furnishing an adequate supply of different kinds of rice and rice polishings.

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A NOTE ON THE CARBOLIC ACID COEFFICIENT OF DISINFECTANTS.

BY F. T. MARCHANT, M.R.S.I.,
LECTURE ASSISTANT IN THE PUBLIC HEALTH DEPARTMENT OF UNIVERSITY COLLEGE, LONDON.

THE Rideal-Walker method of determining the carbolic acid coefficient of a disinfectant often furnishes results which are discrepant—viz., a subculture tube often shows a growth when another tube, containing the same culture exposed to the same dilution of a disinfectant and for a shorter period of time, fails to do so.

It must be assumed that if the same organism in similar numbers is present, then concordant results should always be obtained; but owing to the small amount of fluid which the platinum loop employed in the process for inoculation purposes can hold (and it may also be that there is a diminution in the number of living organisms surviving the action of the disinfectant) it is quite possible that occasionally none of these may be picked up with the loop, and therefore no growth can result. To overcome the discrepancy alluded to, amongst other suggestions, THE LANCET Commissioners[1] advocated the use of a platinum spoon which would hold about three times as much inoculating material as the platinum loop. But, as they pointed out, three or four spoons must be employed; each one being used in turn after being placed on a rack to cool subsequently to sterilisation. This modification has the advantage of employing a larger dose of the organism, but it increases the danger of the diluted disinfectant containing the organism getting contaminated from outside sources. That this contamination does take place is demonstrated by the fact that organisms other than those experimented with are sometimes found in the subculture tube.

THE LANCET Commissioners also pointed out that according to their method no disinfectant had a higher carbolic acid coefficient than about 13. The probable explanation of this is, again, the fact that a larger dose of organism is added with their spoons than with the platinum loop. Also when working with the separating flask a lower coefficient is obtained than by the Rideal-Walker method as performed in the usual way.

I have recently contrived a small apparatus which works very successfully. By its employment there is no fear of contamination from the air, a large dose of the organism is added, no platinum loops or spoons are required, and the test can on the whole be expeditiously carried out. The apparatus consists of a small glass separating flask; the part above the stopcock is open to the air, cylindrical in shape, 3 in. long, and nearly 1 in. in diameter; the stem below the stopcock is narrowed down to a very fine point, so that only a very small drop of fluid can escape. The top is kept plugged with cotton-wool (which is only momentarily removed to enable the disinfectant to be added); and on making an experiment the requisite number of these small appliances are sterilised and clamped to a stand. One drop of the typhoid broth is then added, followed by 1 c.c. of the disinfectant solution; and if the worker thinks it necessary he may mix the contents by stirring with a platinum loop. The subculture tubes are inoculated at the proper intervals of time by turning the stopcock, allowing one drop to fall into the tube, and then gently shaking the tube.



When the experiment is finished the whole of the small apparatus may be washed through with a dilute acid, then thoroughly washed in water, the stopcock smeared with glycerine (not vaseline) to make it turn easily, re-plugged, and again sterilised in the hot-air oven, after which they are arranged ready for use.

It may be argued that the addition of as much as one drop of the mixed culture and disinfectant might include an amount of disinfectant which would inhibit growth in the subculture tubes; this, however, is not the case when culture tubes are employed containing about 10 c.c. of medium.

[1] THE LANCET Commission on the Standardisation of Disinfectants. See THE LANCET, Nov. 13th, 20th, and 27th, 1909.

NOTE ON LEISHMANIA AND MOSQUITOES:

THE LEISHMANIA DONOVANI CAN LIVE AND DEVELOP IN THE INTESTINAL TRACT OF THE ANOPHELES.

BY PROFESSOR GIUSEPPE FRANCHINI.

From the Anolin Laboratory of Spedale Maggiore of Bologna, directed by Professor G. VANNINI.

CONSIDERING the great lacuna still existing in our knowledge of the transmitting agents of Leishman's bodies, and considering the negative results obtained from experiments on cimex lectularius, pulex irritans and serraticeps, and pediculus capitis, as I have shown elsewhere, it was evident that our studies must turn to other blood-sucking insects. Starting from the fact that kala-azar often develops in malarial countries, I wished to begin my researches on mosquitoes, choosing the anopheles species (claviger variety)—that is to say, the same which has already been shown capable of transmitting human malaria.

The mosquitoes I chose came from the malarial zone of the province of Ferrara, and in a small part from that of Bologna. These were placed in vases at the bottom of which was a stratum of culture from 10 to 15 days old, pure and well developed, about as thick as a penny. Upon this was spread a disc of thick gauze adhering to the culture material. In this manner the insects could suck the culture through the gauze without contaminating it with their feet and wings. Some others, after having had the extremities of their wings cut off, were put into contact with culture placed on a moveable object glass. In the long series of experiments I could see for certain that some of the mosquitoes had fed upon the culture, because externally a sort of pink swelling was visible projecting beneath the insect's abdomen immediately below the restriction which separates the thorax from the abdomen. It was evidently a question of the so-called "ventricolo succhiatore" dilated by the liquid of the culture. The mosquitoes were then put under large glass bells and left there till their death, which took place at the most within 60 hours.

With the insects which had been in contact with the culture after half an hour, and after 1, 2, 3, 6, 8, 12, 16, 24, 36, and 48 hours, preparations, fixed in methyl alcohol and coloured with Giemsa, were made for smearing. It is needless to say that before smearing the mosquitoes had been frequently and carefully washed. Some of them were imbedded and sectioned, and I made many preparations to compare the smears and sections. I assured myself also that the leishmaniæ outside the culture tubes could live for a quarter of an hour, half an hour, and longer; and with the cultures I made smears to see which were the prevalent forms. After ½–2 hours

Series I.

FIG. 1. FIG. 2. FIG. 3. FIG. 4.

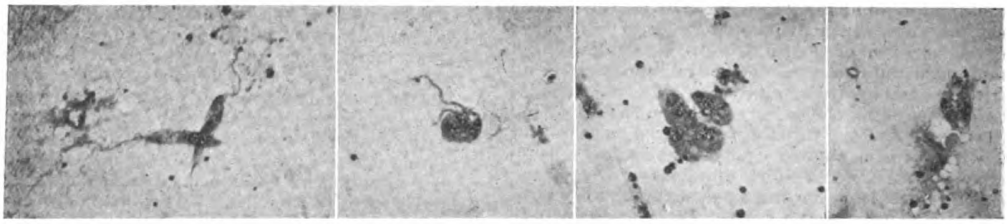
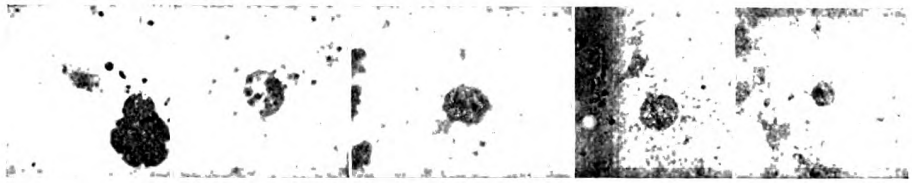


FIG. 5. FIG. 6. FIG. 7. FIG. 8. FIG. 9.



Explanation of the Figures.—Figs. 1 and 2 represent flagellated leishmaniæ of the digestive tube of the mosquito within the first three hours. Fig. 2 is evidently about to divide. Fig. 3 after about five hours; in one leishmania a slight flagellum is still evident. Figs. 4 and 5, aflagellated leishmaniæ of the elongated form met with within the 12 hours. Figs. 6, 7, 8, and 9, leishmaniæ of different dimensions with very clear nucleus and blepharoblasts and chromatic granulations met with within the 24 hours. All the microphotographs have been taken with a two-millimetre Zeiss objective, aperture 1·30, homogeneous immersion, and a Zeiss compensating eyepiece No. 4. Length of tube 160 millimetres. Bellows of the apparatus opened to 43 centimetres.

Series II.

FIG. 1. FIG. 2. FIG. 3.

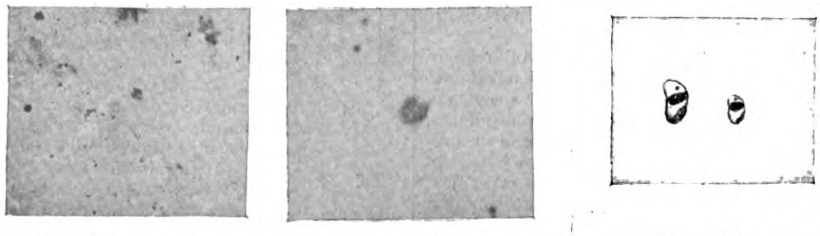


Fig. 1. Magnification as Series I. Fig. 2. Compensating eyepiece No. 12 was used. Fig. 3 represents two illustrations made with a Zeiss microscope, homogeneous immersion—the first with compensating eyepiece No. 4 and the second with compensating eyepiece No. 8. They represent forms of small Leishman bodies with nucleus and blepharoblast as in the organs of patients suffering from kala-azar, and as met with after 24, 36, or 48 hours.

I could observe in the smears from the intestine numerous leishmaniæ in great part flagellated with well-coloured protoplasm, nucleus, and blepharoblasts. In some rare forms the pale protoplasm presented vacuoles, some were in division, presenting two flagella, protoplasm with large well-coloured granulations, two nuclei, and two very clear blepharoblasts. In from 5–8 hours the flagellated forms were very rare, and where they existed the flagellum was short and the leishmaniæ had taken in part a more globular form, but without signs of degeneration. After 10–12 hours the Leishman bodies were less and less common, with light blue protoplasm and well-coloured nucleus and granulations and without flagella. Near these, other forms were evidently degenerating. After this period of time I have never seen elongated forms of leishmaniæ, but roundish ones, some big, others smaller, very rare, with visible nucleus and blepharoblasts, and with grains of chromatin. After 24–36–48 hours I was able to observe small forms, still very scarce, with nucleus and blepharoblasts of the identical form and structure of Leishman's parasites which are met with in the hematopoietic organs of those suffering from kala-azar illness. I made some smears with the dejecta of mosquitoes which had certainly sucked the culture for a relatively short time, and in two preparations I met with two typical leishmaniæ of the elongated form, sufficiently well preserved but without flagella. The above experiments were made at a temperature which varied from 28° to 30° C.

In conclusion, I claim that the leishmania donovani can live and develop in the digestive tube of the anopheles, at least in those of the above-named districts. I think I can affirm this, because if it were not so the parasite would be destroyed in a short time by the digestive juices of the mosquito and by the numerous bacteria. The leishmaniæ themselves, on culture outside the tubes and in their own liquid, although protected from their external surroundings, only live for a short time. Smears of bugs and fleas (dog fleas and human fleas) which had certainly sucked, when fixed and coloured, even after a quarter to half an hour, have not presented any form which could resemble leishmaniæ even from afar. They were evidently destroyed as soon as introduced. My experiments on this subject have been recently confirmed by Basile of the laboratory of Grasse. That leishmaniæ could develop I deduce from the most varied forms observed in preparations of mosquitoes, making comparisons with the smears from the cultures. Moreover, in cultures of 10–15 days there could not be the small forms which I met with after 36–48 hours, and which appear only in tubes of very old culture.

These results appear to me of great importance if we remember that the "flora batterica" is very abundant in the digestive tube of the mosquito, and that the leishmania donovani in culture *does not develop if the medium is contaminated, nor can it live long when any contamination supervenes in an already well-developed culture.* Note again the tendency of the leishmania shortly after its introduction into the mosquito to lose the flagella and become aflagellated like the forms which live in human organism.

I wish these researches of mine to be made known because they are new and may open a fresh field of inquiry on the agents (insects) which transmit kala-azar. These, in short, are the results I have obtained; other studies are requisite, and, in part, have already been begun. It is necessary, in order to determine in which part of the digestive tube the leishmaniæ live best and undergo modifications, to inject emulsions of infected mosquitoes into animals, and to put these in cages with close metallic network together with susceptible animals. By putting the mosquitoes in larger spaces than those I employed, and by feeding them also with blood, it will not be difficult to make them live longer than I succeeded in doing.

UNIVERSITY OF SHEFFIELD.—The Council at its meeting on Oct. 27th made the following appointments: (1) Mr. Percival E. Barber, B.A., M.R.C.S. Eng., L.R.C.P. Lond., to the Professorship of Midwifery; (2) Mr. Miles H. Phillips, M.B. Lond., F.R.C.S. Eng., to the post of Lecturer in Gynæcology; (3) Mr. Mackenzie Douglas, M.A., M.D. Edin., to the post of Junior Demonstrator in Pathology; and (4) Mr. P. F. Kendall, B.Sc., to the post of Assistant Curator of the Zoological Museum. At the same meeting Emeritus Professor R. J. Pye-Smith was appointed to represent the University on the General Medical Council.

DRILL AND DEVELOPMENT: A PLEA FOR UNIVERSAL MILITARY TRAINING.

BY LEONARD B. CANE, M.D., B.C. CANTAB., M.R.C.S. ENG., L.R.C.P. LOND.,

LIEUTENANT, ROYAL ARMY MEDICAL CORPS (TERRITORIAL FORCE); SURGEON ATTACHED TO INNS OF COURT OFFICERS' TRAINING CORPS; ASSISTANT PHYSICIAN TO THE PETERBOROUGH INFIRMARY.

THE value of organised drill and discipline has long been recognised in our public and national schools, and has recently received additional acknowledgment from those responsible for the formation and rapid growth of lads' brigades, boy scouts, and similar organisations. That these are of benefit in developing the physique and to some extent the characters of their members is undoubted; in fact, were it not so it would be difficult to account for the widespread support they have received from all quarters. Such results must be attributed, not only to the healthy exercise which is so prominent a feature of the training, but also to some extent to the organised drill and the habits of obedience and collective action which are thereby acquired, and which cannot fail to have some influence upon character in after-life. Mr. J. L. Hughes, who as inspector of schools in Toronto has had for more than 30 years exceptional experience in noting the effects of drill in the Toronto Schools, considers that "during their period of adolescence boys' moral natures may be developed by drill more definitely than by any process of teaching. ..... It develops them physically, and gives them freedom and grace of step, and a manly and dignified bearing. It trains them to be responsively obedient and ..... defines in a boy's mind a consciousness of the need of coöperation. ..... Drill makes boys executive, and executive training is the highest training. I sincerely hope," he writes, "that the boys of the whole Empire may be encouraged in every legitimate way to learn military drill for their own development, and to qualify themselves for their duty as citizens."[1] To ensure the best results, however, organised drills and other training of a military nature should be incorporated in the school course and be made compulsory on all. Otherwise the training will too often be avoided by just those weaklings who require it most. Its permanent value would be greatly increased if every boy on leaving school and before settling down to earn his living had to pass through several months of camp training on lines similar to those laid down for the Territorial Army. All who have had charge of the health of Territorial units must have been favourably impressed by the great improvement in health noticeable after only a fortnight's training, and many must have regretted that similar opportunities were not open to all. The extension of physical drill systems in schools, followed by a short period of military training for all youths of sound physique, would do much to raise the standard of national health, and arrest the acknowledged tendency towards physical deterioration.

The object of this brief article is to show, without reference to detailed statistics, the immense improvement in development that may be expected from even a few months' military training, and to strongly advocate that some such system should be universally adopted in this country. It will be shown that even a few months' training results in marked improvement, not merely in muscular growth but in weight, chest measurement, and general development, and it is clear that such progress must be accompanied by strengthening of the whole body and increased resistance to disease. "Military service," writes Dr. Erich Wellmann, "improves and hardens the physical condition and the efficiency of recruits, puts an end to habits injurious to health, and gives the soldier who passes into the reserve the stamp of a strong, healthy, and agile man. Thus the individual soldier has his health improved, and through him the improvement is communicated to the nation."[2]

In this country but few opportunities for noting the effects of a short course of military training upon large numbers of men have hitherto been available. The following brief extracts from various British and foreign sources may, however, serve to indicate some of the results that may be expected. In 1906 the *Spectator* raised an "experimental company" of 100 men for a six months' course of military training. The men were selected almost at random, and "represented all classes of the community. There were two

sons of clergymen, one yeoman farmer, one son of a shopkeeper, several clerks and shop assistants, three club servants, one stevedore from the London Docks, one sailor, sundry artisans, and a large majority of labourers. The average age on enlistment was 19 years and 10 months, the ages ranging from barely 17 up to 24. The average height on joining was 5 ft. 7¾ in., the chest measurement 35 in., and the weight 134 lb. At the end of the course the average height was 5 ft. 8¼ in., the chest measurement 36¾ in., and the weight 140½ lb. Hard work during the very hot weather brought down the weight, which at the end of three months had been 142 lb."[3] More recently some recruits who had joined together were measured on enlistment and again after eight weeks' training. The results in every case showed an improvement, the increase in height varying from ¼ to ½ in., in weight from 11 lb. to 16½ lb., and in chest measurement from ½ in. to 1¼ in.[4]

At the annual meeting of the British Medical Association in 1904 some instructive statistics from foreign sources were given by J. Ellis Barker,[5] which showed conclusively the excellent results obtained in comparatively short periods of military training. In the German Army 392 men were measured on four occasions—on enlistment, and after four, 7½, and 12 months' service. The increase in capacity of the lungs after successive periods of training was remarkable; on joining the army 16·6 per cent. were found to have a lung capacity of from 2000 to 3500 c.c.; 67·3 per cent. with capacity from 3500 to 4500 c.c.; and 16·1 per cent. with capacity of 4500 c.c. and over. At the end of four months' service the percentage of men with lung capacity of less than 3500 c.c. had fallen to 9·9 per cent, with a corresponding increase in number of men with larger lung capacities, 70·4 per cent. having from 3500 to 4500 c.c., and 16 8 per cent. from 4500 c.c. upwards. After seven and a half months' service this improvement was continued, only 8 per cent. of the men having still the low capacity of from 2000 to 3500 c.c., whilst those with capacities of 4500 c.c. and over had risen from 16·1 per cent. (on joining) to 26·4 per cent. After this period additional progress was but slight, the proportion of men in the three classes at the end of the year being approximately that found after seven and a half months.[6]

In the French army similar measurements taken by Dr. Frilley (6435 men) showed that after only six months the average height had increased by 0·1 in., the weight by 3¼ lb., and girth of chest by ½ in.[7] In the Japanese Army detailed annual statistics show clearly that the greatest improvement takes place during the first year of service, and that after that period there is but little further progress.[8] In the United States detailed measurements of recruits at Columbus Barracks show the following changes after a course of about three and a half months' instruction: average gain in weight, 2·81 lb.; average gain in chest expansion, 0·6 in.; average gain in size of chest inflated, 0·65 in.; also increase in size of muscles of the arm, and a diminution in waist measurement.[9]

These and similar extracts show conclusively that even a few months' military training is responsible for definite and well-marked progress in physical development. Not only this, but the enforced discipline and regular habits cannot fail to be of benefit and to prove of distinct value in after life. Dr. A. Shadwell, in "Industrial Efficiency" (vol. ii., p. 406), referring to the universal service in Germany, states that he has "met with no two opinions about its educational value to the individual and its industrial value to the nation. Perhaps the most striking effect is the physical benefit derived from the exercises, drill, gymnastics, and regular life. It turns a weedy anæmic lad into a well-knit, upstanding young man with sound organs and well-developed limbs. It further teaches him cleanliness, discipline, order, authority, self-respect, and respect for others. The effect in the workshop is visible at every turn. It is not too much to say that military service has been in a great measure the making of industrial Germany. Employers and employed have gone through it together; they have learned in the same school, and they equally understand that order is essential to every organised force, industrial as well as military."[10] It is interesting to note that at Krupp's work at Essen a man who has been through his training earns 2*s.* a week more wages than one who has not. As Blatchford says, "A training which produces such results is good for any youth, and the nation would be richer materially and morally if every English boy could be so trained."[11]

The very moderate proposals brought before the House of Lords by Lord Roberts in July, 1909, would if adopted be quite sufficient to ensure a lasting improvement in national physique with consequent increase in mental and moral fitness, and capacity for work in all classes of the community. The National Service Bill provides for a *single* continuous course of from four to six months' training for every able-bodied youth between the ages of 18 and 21 (with certain necessary exceptions), to be followed in the next three years by a fortnight's training in camp with the Territorial Army (and liability up to the age of 30 to be called out for home defence only in case of national danger).

With the military aspects of this scheme it is not my purpose here to deal. Suffice it to mention that it is estimated that about 150,000 youths would be available for training every year, so that in a few years' time we should have prepared a potential army of a million men for home defence. From a health point of view, however, I am convinced that in universal military training we should find a partial solution to one of the greatest problems of to-day; and that with its introduction into this country an effective check would be given to the progressive deterioration in national health. The definite increase in weight, strength, and lung capacity which I have shown may be expected would be accompanied by general improvement in health and power of resistance to disease, and at the same time habits of discipline, cleanliness, and healthy living would be acquired, which in many cases would persist throughout life and prove of permanent value both to the individual and to the state.

It is to emphasise the value of compulsory drill in schools and to advocate the adoption of universal military training in this country that this article has been written.

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Peterborough.

Medical Societies.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Two New Major Operations.—Exhibition of Cases and Specimens.

THE first meeting of the session was held on Oct. 20th, Mr. H. LITTLEWOOD, the President, being in the chair.

The PRESIDENT delivered an address, taking as his subject Two Major Operations devised by himself—namely: (1) interscapulo-thoracic amputation; and (2) supra-trochanteric amputation of the femur. 1. The interscapulo-thoracic amputation differed entirely in principle from Professor Berger's operation, in which the subclavian vessels were ligatured as a preliminary step; in the operation now described the vessels were exposed and secured as they were met with during the course of the operation. A cervico-scapular flap was first turned back, the scapula and the muscles attaching it to the spine were exposed, and the muscles divided. The clavicle was next divided near the sterno-mastoid attachment by a Gigli's saw. The whole limb now fell away from the trunk, putting the brachial plexus and the subclavian vessels on the stretch, so that they stood out and could easily be seen. The brachial plexus was divided with scissors, and first the axillary artery, then the vein, was clipped with forceps and divided. The anterior or pectoro-axillary flap was now cut and reflected as far forwards as necessary, the pectorales were divided, the fore-quarter was removed, and the flaps were sutured. Mr. Littlewood had performed the operation in 25 minutes. He claimed that it was a much shorter and easier method than Berger's operation. 2. Supra-trochanteric amputation of the femur, which could either be done for trauma or sarcoma of the lower end of the femur, was

performed in the following manner. The patient was brought to the top of the table, resting on the sound side. Two flaps were cut, an antero-internal and a postero-external, the length of each corresponding to one-third of the circumference of the hip-joint. The antero-internal was first marked out and turned up for about two inches, and the femoral vessels were exposed and ligatured. The muscles were divided and the neck of the femur was exposed. The postero-external flap was next cut and the muscles were divided; last of all those attached to the great trochanter. The capsule was stripped up from the anterior intertrochanteric line for half an inch without opening the hip-joint. A Gigli's saw surrounded and divided the neck of the femur close to the inner side of the trochanter. The limb was now removed. The smaller vessels were secured as soon as they were divided. It was suggested that this operation should be performed in certain cases instead of the regular amputation at the hip-joint, a moveable, and so more useful, stump being formed; it was also thought the shock might be less. Recurrence after sarcoma generally took place in internal organs and not in the stump. It was not likely to recur in the head and neck of the femur, the bony parts left in this operation. In the cases operated on in this way there had never been any recurrence in the stump. The operation was first performed in 1897. Mr. Littlewood strongly advocated the method of securing the main vessels at the point of division in forming the flaps and deprecated the use of tourniquets. The subject of shock was fully discussed, and the ethics of performing major operations in difficult and doubtful cases were considered. Two patients were shown on whom the operations had been performed.—A vote of thanks was proposed by Mr. PRIDGIN TEALE, seconded by Dr. A. G. BARRS, and supported by Mr. LAWFORD KNAGGS.

Dr. BARRS showed a case of Acute Infective Poliomyelitis in a boy aged 16. All four limbs were involved in a complete loss of use without sensory disturbance, but with total loss of reflexes. The faradic reaction had not disappeared at the end of a month, and would probably not now be lost.

Dr. T. WARDROP GRIFFITH showed a case of Poliomyelitis with Paraplegic Distribution of the Palsy in a man of about 24. The symptoms had been ushered in by pains, and there had been some transitory affection of the sphincters. There was complete palsy of the lower extremities without any vestige of sensory affection; the muscles were flaccid, the reaction of degeneration was present, and the deep reflexes absent. Attention was called to the alarming frequency of these cases during the last few years, to the fact that many of them had occurred in groups, and to the gravity of the prognosis. The distinction from paraplegia due to a non-discriminating myelitis was dwelt upon.—Dr. T. CHURTON said that the advantage of recognising the disease in its early stage—the second or third day—would be the isolation of the patient until all possible danger of infection was past, and also that the proposed treatment by urotropine might be put in force in the acute stage. In febrile cases occurring in young children the limbs should be closely observed by the nurse during washing operations.

Dr. GRIFFITH also showed three specimens in illustration of Combined Cardiac Valvular Lesions. The cases had been carefully watched during life, and the rhythm of the heart and the character of the venous pulse in the case of two of them showed that the condition of auricular fibrillation had been present. The influence of digitalis, the use of which had for long been of marked benefit in slowing the cardiac action and in inducing the occurrence of coupled beats, the second of which did not reach the wrist, was well demonstrated by the tracings of the venous pulse.

Dr. CHURTON showed a case of Disseminated Sclerosis of Oppenheim's Sacral Type, with anæsthesia in the second sacral root area, in a man aged 47.

Dr. C. OLDFIELD showed a patient on whom a New Radical Cure Operation for Prolapse of the Uterus had been performed. The patient was a healthy woman, 64 years of age, who had suffered for many years from complete genital prolapse. A pessary no longer gave her relief, and she pressed for radical treatment. None of the ordinary operations for this condition appeared to be suitable, and so a new operation was designed. After complete resection of the uterus and vagina, followed by shortening of various ligaments of the uterus and vagina and the uniting of corresponding ligaments of the two sides, the margins of the levatores ani were sutured from just behind the urethra as far back as the anus, and finally the superficial muscles and fasciæ were approximated. No shock or trouble of any kind followed, and the successful immediate result, with a substantial and unyielding pelvic floor, suggests that the patient has obtained a true radical cure.

Cases and specimens were also shown by Mr. H. COLLINSON (with Dr. J. B. HELLIER), Dr. ALEXANDER SHARP, and the PRESIDENT.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Liverpool on Oct. 20th, Dr. J. B. Hellier, the President, being in the chair.—Dr. Hellier related the history and showed the specimen of a case of Carcinoma of the Cervix, complicated by pregnancy and treated by abdominal panhysterectomy. The operation necessitated the division of one ureter which was subsequently implanted in the bladder. The patient made a good recovery.—Dr. W. E. Fothergill (Manchester) described the case of a patient whose first pregnancy ended in early abortion. Early in her second pregnancy abortion was threatened, and it was found that the uterus contained three fibroids, one on either side and one behind, which occupied the pelvic cavity. At the sixth month there was an attack of pain and fever. The pregnancy continued, however, until within a week of time, when the membranes ruptured without the onset of labour. The child was delivered with forceps after manual dilation, and after the fibroid which occupied the pelvis had been pushed up. The patient's pulse and temperature remained normal for six weeks after the confinement, when pain, fever, and vomiting occurred. Supra-vaginal hysterectomy was done, and the fibroids were all found to contain pus. Dr. Fothergill also showed the corpus uteri and both appendages removed from a virgin, aged 42, by the abdominal route on account of pain of long standing and hæmorrhage which remained excessive after curetting. The organs were buried in adhesions, and the patient's old pelvic peritonitis doubtless dated from an attack of appendicitis with suppuration, which was relieved by operation in 1902. The uterus contained a fibroid polypus of the size of a hazel nut, which accounted for the hæmorrhage. Its existence was not suspected.—Dr. Arnold W. W. Lea related a case of Fibromyoma which obstructed labour at full term in a multipara, aged 36, with a history of four previous deliveries. She was admitted to hospital during labour, the membranes having ruptured. The cervix admitted two fingers, but was pressed back to the sacrum by a large myoma occupying the pelvis and reaching to the level of the umbilicus. The child lay in the upper portion of the uterus. As delivery through the vagina was impossible Cæsarean section was carried out, followed by supra-vaginal hysterectomy. The child was living and weighed 6½ lb. The patient made an uneventful recovery.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—A meeting of this society was held on Oct. 20th.—Dr. R. Barclay Ness showed a boy, aged 10 years, who during the past ten months had suffered from an unusual series of manifestations of acute rheumatism. Eight weeks before admission to the Western Infirmary he had had a mild attack of rheumatic arthritis affecting the larger joints of the arms and legs, and five weeks later subcutaneous nodules appeared in various situations. On admission in February last these nodules were found to be the fibroid nodules commonly associated with the rheumatism of childhood; they were situated in the neighbourhood of the small joints of the hands and of most of the larger joints of the arms and legs, and in the occipital region. In the latter site they were as large as green peas; elsewhere they were much smaller. The boy also presented evidence of endocarditis. He was dismissed apparently well, except for a valvular lesion, at the end of March. A month later he was readmitted with severe chorea accompanied by another crop of nodules similar to the first. Two months later, when still in hospital, he developed pericarditis and left-sided pleurisy, with reappearance of nodules a little later. This illness almost proved fatal, but by the end of a fortnight all immediate danger from the pleurisy and pericarditis was over. His convalescence was interrupted on two occasions, when he was allowed out of bed, by a slight return of the chorea. The nodules reappeared towards the

end of August and had persisted since then, though gradually diminishing in size. The chief interest of the case lay in the long series of rheumatic manifestations, which included within ten months articular rheumatism, subcutaneous fibroid nodules, endocarditis, pericarditis, pleurisy, and chorea.—Professor R. Stockman, in a paper on the Vaccine Treatment of Gonococcal Arthritis, reviewed the literature on the subject, from which it appeared that while some observers had written enthusiastically of the curative results of vaccine treatment in all forms of gonococcal infection others had found it valueless. He then reported the results obtained by vaccine treatment in nine cases of urethritis or vaginitis with arthritis. The gonococcus was isolated in every case, and autogenous vaccines were mostly, but not exclusively, used. In all cases the treatment was at first exclusively by the vaccine, but in most cases no distinct improvement followed, and ordinary local treatment was added or substituted. This was always followed by immediate and distinct improvement in the local and general conditions, and to it cure was finally due. In only one case did recovery take place under vaccine treatment alone, but improvement was so rapid and marked after only one dose of 5 millions as to be hardly attributable, in view of the results in the other cases, to the vaccine. In two cases fresh joints became infected while the vaccine treatment was being given, which should not have happened had the vaccine been capable of conferring immunity or even of increasing substantially the resistance to infection. Comparison of these results of vaccine treatment with the results of ordinary treatment by means of copaiba given internally and local applications led to the conclusion that the administration of dead gonococci exerted no curative influence on gonococcal arthritis. The reaction that followed a sufficient dose of vaccine could be used as a method of diagnosing gonococcal infection, but its variability seriously impaired its value.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The autumn meeting of the Northern and Midland Division of this society was held at the kind invitation of Dr. E H. O. Sankey at Boreatton Park, Baschurch, Salop, on Oct. 19th, Dr. Dawson, the President, being in the chair.—Dr. Pierce, in a paper entitled "Some Remarks on the Diploma in Psychological Medicine," pointed out that four universities—Edinburgh, Durham, Manchester, and Leeds—had already instituted a diploma in psychological medicine and that others were seriously considering the subject. After giving a brief *résumé* of the curriculum required at the various schools, he said he thought it might safely be concluded that the new diploma had come to stay, and would in time take a position corresponding to that held by the D.P.H. He went on to show how the new departure would affect those engaged in the treatment and care of the insane, improving their status. At present the position of assistant medical officers in asylums was highly unsatisfactory, many of them being obliged to live celibate lives and having little or no recognised legal status. He thought the association should point out to county councils and others engaged in lunacy administration the importance of the diploma.—An interesting discussion followed, in which the President, Dr. Sankey, Dr. White, and others took part. The general feeling was one of agreement with the points brought forward in the paper.—Dr. Sankey then read a short paper introducing the subject of the Treatment of Acute and Early Cases of Insanity, with special reference to the number of patients in asylums. He was forcibly struck, he said, with the fact that the recovery rate was nearly stationary. He considered that asylums were too big, and that in future building should be in the form of hospitals or receiving houses for acute or curable cases; that all cases should be first admitted to these, and that the failures and incurable cases only should be transferred thence to the asylum. He thought that the smaller number of patients under care with a large medical and nursing staff would result in more recoveries.—Dr. White, Dr. Cox, and Dr. J. Middlemass took part in the discussion, and reference was made to the fact that some large county asylums had hospitals for acute cases attached to them.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—The committee of management has arranged for the reception of paying patients at the Northwood sanatorium. Applications should be made to the secretary, at the offices, 7, Fitzroy-square, London, W.

Reviews and Notices of Books.

Biographical Reminiscences of Sir Samuel Wilks. London: Adlard and Co. 1911. Pp. 200. Price 3*s.* 6*d.* net.

Sir Samuel Wilks, one of the most widely known and deeply respected of the veteran leaders of our profession, has written in his biographical reminiscences, which have just been published, a memoir of a very interesting and, as might be expected from the personality of its author, of a very original sort. The memoir does not aim to give a mere personal account of the author, indeed, the purely autobiographical record is all contained in three short pages. It is rather, what the author terms it, his medical history; that is to say, that Sir Samuel Wilks has recorded the personal part which he has played in the development of medicine during an active career as hospital physician and consultant authority between the years of 1851, when he took the Membership of the Royal College of Physicians of London, and 1901, when he retired from the practice of his profession full of honours at the ripe age of 77. The 50 years over which his biographical reminiscences extend, we need hardly point out to our readers, were years of continuous progress in scientific medicine, and especially has that progress been made in the direction of morbid anatomy. The microscope, for example, was not used for the benefit of medicine and in the diagnosis of disease until shortly before Sir Samuel Wilks became a medical student, and then only in a limited manner. We are inclined to forget, having regard to the part played by the microscope in the study of modern bacteriology, that what we should now term quite coarse pathological changes were absolutely misunderstood or unrecognised before the use of the microscope became a matter of clinical routine, and that until this use was established the meaning of perfectly obvious pathological processes was unrevealed to medicine. Sir Samuel Wilks's method in writing this book of his personal medical biography has been to go steadily through the Guy's Hospital Reports, and through our columns and those of our contemporaries, and observe firstly how far he had a personal knowledge of any interesting conditions recorded, and secondly (although he is too modest to say it in so many words), how far his own work in ward or post-mortem room led to accepted conditions of medical knowledge. We can see throughout that he was in some of our most important pathological departures a vigorous and clear-sighted pioneer. In the special references which he makes to certain cases of Bright's disease, Addison's disease, Hodgkin's disease, pernicious anæmia and syphilis, his method has been to select from the Guy's Hospital Reports cases recorded by various distinguished members of the staff—for example, the great Bright, Astley Cooper, Wilkingson King, Bransby Cooper, Golding Bird, Norman Chevers, Addison, Gull, Hilton, Pavy, and S. O. Habershon. In all the pathological conditions of these cases, many of which at the time that the notes were taken must have been quite obscure, Sir Samuel Wilks had something to say that was entirely original, and whether the researches started with himself, or whether they owed their origin to the acumen of his colleagues, his comments are equally uncompromising as well as illuminating.

He records the work which he himself did on the syphilitic affections of the internal organs as the most noteworthy, and in the end the most fruitful of his observations. It must be remembered that when Sir Samuel Wilks joined Guy's Hospital as a student, although post-mortem examinations were made for the purpose of ascertaining the nature of the disease from which the patient had died, the number of such examinations was much smaller than that made now

while the autopsies were conducted far less thoroughly and without the same intention to found upon them a scientific system or to collate any findings with investigations undertaken at other times or places. The autopsies were made as a rule only in isolated instances of what appeared to be specially interesting cases; the result found on the post-mortem table was regarded as the answer to a difficult question that had been set in the wards, and the physician went to look at what the pathologist had to show him in much the same spirit as that in which a boy, having done a sum, looks at the end of the book to see if he has solved the problem aright. But Sir Samuel Wilks, who at the very outset of his career at Guy's Hospital felt himself attracted towards the subject of morbid anatomy because it offered something more positive than did the symptoms of disease, regarded no time as wasted which was spent in the post-mortem room, if only because the sedulous and systematic comparison of clinical symptoms with post-mortem discoveries must be the way of all ways to produce accurate treatment upon broad lines. As showing how much work remained to be done when he began his medical career, he records that when he first examined the body of a man who had died from syphilis he could find no account in medical literature of such an examination having been previously made, while the results of the necropsy were a complete revelation to himself as he had never expected the internal organs of a body could be affected in the manner that later came, largely through his work, to be described generally as lardaceous degeneration. A very interesting passage in the book refers to a paper published by the author in 1856 on "Lardaceous Disease and Some Allied Affections," the subject being pursued some nine years afterwards in a communication connecting the lardaceous condition with the cachexia of protracted bone trouble. The alliance of these conditions had been previously pointed out by Thomas Hodgkin in a paper read before the Royal Medical and Chirurgical Society in 1832, and when Wilks was credited with a new discovery he alluded to Hodgkin's paper, and was responsible for affixing Hodgkin's name to the condition known as Hodgkin's disease.

We have said enough to show that Sir Samuel Wilks's professional reminiscences contain matters of interest, not only to all pathologists, but to all members of the medical profession who like to regard their work in a philosophical spirit, to trace its progress, see its errors, and note the manner in which real success follows intelligent failure, and in which grave disappointment waits upon hasty presumption. We have here the notes of an actual observer upon Jenner's classical differentiation between typhus and typhoid fever, with a contribution by the author to the perfecting of this distinction; an excerpt from what Sir Samuel Wilks believes to be the first paper ever written upon excision of the joints (the paper was written for the Guy's Hospital Reports for 1833 by a Mr. Blackburn, a pupil of Aston Key); a description of four cases of cæcitis, showing that the condition now generally, and as Sir Samuel Wilks suggests inaccurately, known as appendicitis, had been well described by Addison in 1836—Sir Samuel Wilks considers Addison's account as excellent as any to be found in modern treatises; some interesting remarks upon the tests for albumin in urine; notes on Addison's disease, Hodgkin's disease, pernicious anæmia, Jacksonian epilepsy, and phosphorus poisoning, and records of the only two fatal cases of nicotine poisoning reported in this country.

We do not attempt to give the contents of this fascinating book in more detail; many of our readers will assuredly read it for themselves with profit, interest, and amusement. If a further edition is called for we plead for the inclusion of an index. It is true that the book only contains 200 pages, but the pages are closely packed.

Municipal Chemistry. Edited by CHARLES BASKERVILLE, Ph.D., F.C.S., Professor of Chemistry and Director of the Laboratory, College of the City of New York. New York and London: McGraw-Hill Book Company. 1911. Pp. 526. Price 21*s.* net.

THIS is a very interesting book containing a series of 30 lectures by experts on the application of the principles of (chiefly) chemistry to municipal matters.

The lectures were delivered at the College of New York City last year, and the course was authorised by the Honourable Board of Trustees of the College, the public being invited to attend. Each lecturer was an admittedly distinguished exponent of the subject, and the ground covered proved so interesting that it was decided to collect the lectures for publication in book form. Where no preparation had been made for publication especially prepared articles on the subject of the lecture were substituted. The result is, as we have said, a very interesting book, dealing with matters of the greatest importance to the citizen. The editor contributes an admirable article on Sanitation and the City; Dr. Pitt Mason, in two articles, deals with Drinking Water and Disease, and Purification of Water; Mr. Douglass Flinn writes on Municipal Water-supply; Dr. Thomas C. Darlington on Milk; Dr. Harvey Washington Wiley on Food Adulteration; Mr. William Allen Hamor on Food Inspection; Dr. Virgil Coblentz on Drugs and their Adulteration and Methods of Detecting Adulteration; Dr. Lyman F. Kebler contributes an article full of common-sense writing on Habit-forming Agents. Then follow Streets and their Construction and Modern Road Construction, both by Dr. Allerton S. Cushmann; Street Sanitation, by Mr. William H. Edwards; Methods of Street Cleaning, Waste Disposal, by Edward D. Very; the Disposal of City Sewage, by C. A. E. Winslow; Making Illuminating Gas and the Valuation of Illuminating Gas, by Dr. Arthur H. Elliott; the Smoke Problem, by Dr. Payn B. Parsons; Ventilation, by Dr. Herbert R. Moody; the Chemistry of Personal Hygiene, by Dr. Thomas A. Storey; Textile Materials and their Service to Man, by Louis A. Olney; Combustibles and Explosives, by A. A. Breneman; Paint, Iron and Steel, Cement and Concrete, by Maximilian Toch; and Parks, Gardens, and Playgrounds, by Dr. Nathaniel Lord Britton.

We have not met with a more interesting collection of authoritative opinions on these special problems of the city. The way in which medicine, chemistry, and engineering are coping with numerous problems under each of these headings is admirably exemplified throughout the pages. The work is a very practical and important contribution to the sanitary sciences.

Essays and Clinical Studies. By F. G. CROOKSHANK, M.D. Lond. London: H. K. Lewis. 1911. Pp. 245. Price 7*s.* 6*d.* net.

IN these days of systematic text-books, statistical articles, and experimental research, the art of essay-writing upon matters of clinical interest is in some danger of becoming a lost one. Dr. Crookshank has collected together in this little book a number of essays which he has published at various times in periodical medical journals. They have been written, as he explains in his preface, "in the odd moments allowed by the pre-occupations of general practice and the duties of public appointments." They cover a wide range of subjects, but all are of interest, and show evidence of careful thought and observation.

The first is entitled "Ramazzini and His Book." This is the only one of the essays devoted to medical history, and it deals

with the "De Morbis Artificum," which contains a number of acute observations upon diseases of occupation. Certain aspects of insanity are then considered by Dr. Crookshank in a series of notes and short essays. He lays considerable stress upon the physical signs of mental disease, and makes suggestions for the treatment and management of insane patients that should be valuable to general practitioners in regard to the early stages, which come usually under their notice. Among these essays upon the subject of insanity is one in which the frequency, causation, prevention, and treatment of phthisis pulmonalis in asylums are considered, and suggestions are offered as to the separation of tuberculous from non-tuberculous patients and as to the establishment of asylum-sanatoriums.

The next notes and articles are on the subject of the diagnosis and treatment of pulmonary tuberculosis, which Dr. Crookshank prefers to call phthisis; indeed, he somewhat unkindly alludes to those who use the more scientific term as "arrogantly superior persons." His only ground for preferring the older name appears to be that "pulmonary phthisis is not only a tuberculosis, but a septic necrosis as well." We are not conscious of any arrogant assumption of superiority, but there appear to us to be many advantages, not least of which is that of convenience and uniformity, in adopting the etiological designation of the condition.

Scarlet fever and diphtheria are discussed in another series of papers. The isolation hospital is defended as the most satisfactory method of dealing with cases of the former disease and as a means of reducing its incidence. Dr. Crookshank describes a system of bed isolation which he has employed and found of great value in avoiding the troubles incidental to isolation hospitals, troubles which he regards as entirely preventable. Dr. Crookshank's views on these points have been commented on at length already in our columns.

One of the most interesting and valuable of the essays is the concluding one on the examination of bodies found in the river. This contains many useful hints and practical suggestions. There are also a few notes or papers dealing with general subjects, to which specific reference need not be made.

Dr. Crookshank possesses a keen critical faculty and a philosophical turn of mind which accepts nothing on trust. He has a pleasing and easy, though at the same time incisive, literary style. His book is interesting and suggestive, and though his readers may not always agree with his contentions, they will probably realise that they are the outcome of honest and careful thought.

Pediatrics. By JOHN ZAHORSKY, Clinical Professor of Pediatrics, Medical Department, Washington University. With an Introduction by E. W. SAUNDERS, M.D., Emeritus Professor of Diseases of Children, Washington University. London: George Keener and Co. 1911. Pp. 284. Price 10*s.* 6*d.*

THIS little book is written for the practitioner in the form of a series of golden rules which cover the ground of diagnosis, prognosis, hygiene, infant feeding, and treatment. Each sentence is practically an aphorism in itself, and it would be difficult to discover elsewhere in medical literature a more sententious and axiomatic series of apothegms. We in this country are accustomed to aids and breviaries for the immediate purposes of examination and for the ultimate confusion of those who attempt to put their contained knowledge into practice, but this book of aphorisms comes under a totally different category. It would be of little value to the student as an aid to examination, whereas we are of the opinion that it would be of very great value to the practitioner as enabling him to crystallise the knowledge that he has acquired in the days of his studentship and exercised in the practice of his calling.

Not only is the book good reading, but it is so well arranged as to facilitate reference at a moment's notice. All those who purchase a copy can be strongly recommended to commit the more important of these golden rules to memory. There are very few statements made by the author with which we find ourselves in disagreement. We do not, however, consider the diagnosis of disease in infants as easy, nor do we regard enlargement of the thyroid as an uncommon phenomenon in children. Also, the statement that laryngospasm coming in repeated attacks is most commonly symptomatic of tetany is confusing. Both these conditions are manifestations of a hyper-excitable state of the nervous system—commonly called spasmophilia—but neither of them is symptomatic of the other according to the view of present-day authorities.

It is satisfactory to note that the psychological factor is not forgotten, either in treatment or in prognosis, and in the section on the nursing mother the statement that if the mother is to produce good milk her own personal taste must be consulted commands approval. The amounts of food stated to be requisite for normal infants are much too large; an infant 9 months old does not require three pints of fluid in the 24 hours, no matter what be the degree of concentration or dilution of its solid contents. The faults, however, of Dr. Zahorsky's book are few and its virtues manifold; and it is a book that doubtless will be improved and polished with each of the many new editions which may be expected for it.

Die Massenverhältnisse des Herzens unter Pathologischen Zuständen. Von SOFUS WIDEROE. Christiania: Jacob Dybwad. 1911. Pp. 142. (Price not stated.)

THIS investigation on the size of the heart in different pathological conditions was carried out in the hospital at Christiania. The scope of the work, which is based on the examination of a large amount of pathological material, will be best understood by quoting the chief questions dealt with. The author devotes over 30 pages to a consideration of the size of the heart, its relations, and its physiological variations, and deals also with the relative size and weight of the individual parts of the heart. The special or pathological part includes such subjects as hypertrophy and dilatation, and the changes effected by chronic conditions, such as cachexia, adiposity, pulmonary tuberculosis, kyphoscoliosis, chronic renal disease, arterio-sclerosis, valvular disease, and chronic pericarditis. The author also deals very briefly with changes of the heart in acute diseases and the condition of the heart in experimental hydræmia. The table of literature is very full. The whole investigation will prove interesting and useful to pathologists.

Disease in Bone and its Detection by the X Rays. By EDWARD W. H. SHENTON, M.R.C.S. Eng., L.R.C.P. Lond., Senior Surgical Radiographer, Guy's Hospital. With illustrations. London: Macmillan and Co., Limited. 1911. Pp. 72. Price 4*s.* 6*d.*

IT is not sufficient for the purpose of diagnosis merely to obtain good skiagrams of diseased or injured bones; it is necessary that the surgeon should be able to interpret the appearances presented. The light of nature is not sufficient, and even a good knowledge of anatomy needs supplementing by a practical knowledge of X ray pictures. In this work by Mr. Shenton, who has had a very extensive experience in X ray photographs, are given a number of actual skiagrams of injured and diseased bones, and in the text he discusses the appearances seen, and explains their significance. The amount of callus formed around a fracture depends in great part on the maladjustment of the fragments, and Mr. Shenton points out that fractures treated by Mr. Arbuthnot Lane by "plating" show hardly any callus. A good skiagram of a normal hip shows clearly the "diagnostic line" first

described by Mr. Shenton; it is of much importance in recognising injury or disease of the hip-joint. This book is useful, and though it contains 46 skiagrams we cannot help wishing for more.

Lehrbuch der Pathogenen Mikroorganismen. Die Pathogenen Bakterien. Für Studierende und Aerzte. Von Dr. PAUL V. BAUMGARTEN, Professor der Allgemeinen Pathologie und der Pathologischen Anatomie an der Universität Tübingen. Mit 85 zum teil farbigen abbildungen und 1 steindrucktafel. Leipzig: S. Hirzel. 1911. Pp. 955. Price, paper, 24 marks; half bound, 26.50 marks.

THE students and physicians for whom, as set forth in the title, this book has been written owe a deep debt of gratitude to Professor Baumgarten. His classical "Lehrbuch der Pathologischen Mykologie" appeared more than 20 years ago, and the present work, which in some sense may be regarded as a new edition of the older book, has been undertaken because the author holds that such a point of clearness and unanimity with regard to the problems of immunity and infection has now been reached that their presentation in text-book form is more than justified. The material available has been compressed as much as possible, but notwithstanding this the present volume is limited to a consideration of the pathogenic bacteria. A second volume dealing with the pathogenic moulds and protozoa is, however, promised, and to its appearance all students will look forward with eagerness.

The task of the reviewer of such a work lies chiefly in a presentation of the plan adopted by the author in dealing with his material. The literature of the subject occupies, as was to be expected from Professor Baumgarten, an important place. Each chapter is followed by a carefully selected bibliography. The general arrangement of the book does not differ strikingly from that of the usual text-book. The first third is occupied by a consideration of general problems and general methods of research, while the remainder deals with individual micro-organisms. There are throughout, however, a crispness of statement and a critical weighing, in the light of very full knowledge, of the evidence bearing on the problems dealt with, which are of the utmost value to those for whom the work is intended, and even the specialist will be grateful for the opinion of such an authority as Professor Baumgarten. The problems of immunity are treated as part of a general consideration of the action of agents inimical to micro-organisms, and the chapter which begins with the effects of chemical and physical agents and deals with disinfection ends rather unexpectedly in the subject of immunity and immunisation. In dealing with disinfection we may warn the reader that the author uses the terms disinfectant and antiseptic in a sense differing from that used in English works; "kolyseptics" are the equivalents of our antiseptics.

In his treatment of immunity it is hardly necessary to say that it is the theory of Ehrlich rather than that of Metchnikoff which finds favour with the author, and indeed he allots to the phagocyte a very minor part. It is suggested, in fact, that even the strictly antitoxic sera possess a bacteriolytic activity, though one easily destroyed and difficult to demonstrate. Agglutinins are considered to possess a constitution more closely allied to that of a cytolysin than of an antitoxin, and they may possibly be identical with precipitins. Valuable chapters on immunising methods and on the demonstration and valuation of immune substances follow; cholera and diphtheria are used as examples of the method. Serum diagnosis occupies an important place. Practical directions for carrying out the investigations are given, with examples drawn from the most usual and suitable cases. The subject of opsonins meets with full recognition.

The special part of the book has some individual features. The organisms are grouped according to their pathological relationships without regard to their morphology. The primary division is into blood and tissue parasites, and these are further differentiated into obligate and facultative. The obligate tissue parasites are subdivided into toxic and infective organisms, and these latter into groups characterised by their exudative or proliferative activity. The first place is therefore occupied by the spirilla found in diseases of the relapsing and African tick fever type, and these are followed by the group of hæmorrhagic septicæmias. It is suggested that possibly the M. melitensis has the same lack of connexion with Mediterranean fever that the B. suipestifer and B. suisepticus have with the diseases in which they are found, but the evidence, especially that drawn from immunity, is of a much less cogent character. There are excellent and long sections on cholera and tubercle; the latter occupies a hundred pages, and various aspects of the subject are dealt with. The facultative blood parasites, with which the book closes, are the pneumococcus, the B. anthracis, and the spirochæta pallida.

This is a book of reference for all who want an authoritative opinion on bacteriological problems. There are many illustrations, none of them photographic, and many of them are well known and have become classical.

LIBRARY TABLE.

Dispensing Made Easy. By W. G. SUTHERLAND, M.B. Aberd. Fourth edition, revised by F. J. WARWICK, B.A., M.B. Cantab., M.R.C.S. Eng., L.S.A. Bristol: John Wright and Sons, Limited. Pp. 102. Price 3*s.* 6*d.* net.—This little volume has involved a good deal of work to make it trustworthy, and the busy practitioner will recognise its value as an aid in quick and accurate dispensing. A reference to it saves time, and the formulæ are of the approved modern type. We have noted one misprint on p. 95, where alcohol is spelt alcodol. We note also that under "Points Worth Remembering" a suggestion made by us in a previous notice has been adopted.

Urine Examination Made Easy. By THOMAS CARRUTHERS, M.A., M B., Ch.B. Glasg. Second edition. London: J. and A. Churchill. 1911. Pp. 47. Price 1*s.* 6*d.* net.—This book is primarily intended for nurses, the methods described being of the most elementary description and the ultimate diagnosis being left to the physician. The nurse, by following the clear directions given, can render a useful preliminary account of the case. The chemical testing of urine offers obvious pitfalls to the uninitiated, and the author is right in insisting upon careful observation and accurate description. On the whole, he does not expect or ask too much, and when a result of doubtful or serious significance appears the direction is, "Refer to doctor."

Forty-Seventh Annual Report of the Boston City Hospital, including the Report of the Superintendent, Feb. 1st, 1910, to Jan. 31st, 1911, inclusive. Published by the City of Boston Printing Department. 1911.—In this report attention is called to the approaching completion of a pathological histology, written from a biological point of view and based on an analysis of the material collected in the hospital during the past 14 years. Reference is made to four papers, two of which were read in May, 1910, before the American Association of Pathologists and Bacteriologists, of which publication is promised in the *Journal of Medical Research*, and two which were published last year in the *Journal of the American Medical Association*. A fifth paper, read in November, 1910, before the Johns Hopkins Hospital Medical Society, gives an analysis of many cases of cirrhosis of the liver, and opens up several important points. It shows that, apart from cancer, five different types of lesions, due to as

many varieties of causes, may lead to cirrhosis. While alcohol is the most common cause, bacterial infection among the bile-ducts, especially in children, may bring about a typical form of cirrhosis, which in later stages causes ascites and death. It has also been found that the alcoholic type of cirrhosis is characterised by a peculiar form of hyaline degeneration of the liver cells preceding necrosis. Among other points suggested in this group of five papers is the fact that the disappearance of the liver cells in the centres of the lobules around the hepatic veins is due, not to pressure, as is ordinarily taught, but to a central necrosis of toxic origin. Under ordinary conditions these necrotic cells are fully restored by regeneration, but such regeneration is prevented when chronic passive congestion is present. Also the peculiar type of cancer known as rodent ulcer has been found to arise from a hair matrix, and to be characterised by the production of epithelial fibrils, which in the hair fuse together, become hyaline, and form the hair shaft. It is further stated that the so-called giant-cell sarcomata are not tumour cells at all, but foreign body giant cells, due to the fusion of endothelial leucocytes attracted into tumours, and other lesions involving bone, by dead bone, which needs to be dissected and removed. They are identical with the osteoclasts of normal bone, which arise in the same way. The importance of this fact is pointed to in the case of epulis, which is often not a true tumour, but only a tumour-like mass of inflammatory tissue containing giant cells around disintegrating particles of bone or lime salts. In such a case, it is stated, thorough curetting would seem to be all that is required.

Plague at Home and Abroad. The Annual Public Lecture on the "Laws of Health" delivered at the Midland Institute, Birmingham, Oct. 6th, 1911, by DAVID FRASER HARRIS, M.D. Glasg., D.Sc. Lond., F.R.S.E., Professor of Physiology in the University of Halifax, N.S.; formerly Lecturer on Physiology in the University and on Hygiene at the Midland Institute, Birmingham. Birmingham: Cornish Brothers, Limited. 1911. Pp. 17. Price 3*d.* net.—This interesting lecture has a value of a wider scope, doubtless, than was originally contemplated. By its detailed account of the way in which the various steps in the knowledge of plague have been acquired, it should serve the two-fold purpose, firstly, of enlightening the public generally on those apparently mysterious methods of science, concerning which they are usually so hopelessly ignorant—an ignorance that is the cause of most of the obstruction to the application of the scientific measures of preventive medicine; and, secondly, of increasing the public respect for the profession of medicine. It is through the study of the methods of scientific medical research as exemplified in the growth of knowledge about such diseases as plague, malaria, yellow fever, sleeping sickness, and others, that the confidence of the public in the medical profession will be maintained. This little pamphlet, therefore, can be cordially recommended by any of our readers to their patients and friends for general perusal.

Off the Main Track. By STANLEY PORTAL HYATT. London: T. Werner Laurie. 1911. Pp. 293. Price 12*s.* 6*d.* net.—A series of vivid pen pictures of men, manners, and things, principally in connexion with South Africa, are here presented by a writer who shows much sympathy with the native races and is rather impatient with British rule. Some 30 illustrations add to the value of the book. In view of the "fly crusade," the writer's theory that flies may be responsible for the spread of venereal disease is interesting. "Whenever," he says, "a Mashona has an open sore, due to any cause whatsoever, he lies in the sun and allows the flies to get at it ..... whilst the flies are afterwards permitted to settle where they like—on food, in the corners of babies' mouths, anywhere." Whether or not syphilis is conveyed in this way, the danger arising from such a condition of things is sufficiently obvious.

JOURNALS AND MAGAZINES.

Edinburgh Medical Journal.—The October issue of this journal is the annual "Educational Number," containing some 30 pages on the facilities for medical training in Scotland. Dr. D. Berry Hart writes on Enzygotic Twins—that is to say, twins derived from one zygote or fertilised ovum, the condition being due to doubling of some of the "determinants." Dr. J. H. Harvey Pirie and Mr. A. A. Scot Skirving deal with Intranasal Carcinomata, and Dr. D. W. Currie and Dr. Edwin Bramwell describe a local epidemic of Acute Poliomyelitis. Mr. J. W. Struthers records an unusual form of Diverticulum Ilei which had formed an inflammatory mass with only a minute canal persistent in the centre; and Mr. George Robertson discusses two cases of Acute Dilatation of the Stomach following Gastro-Enterostomy, and caused by undue narrowing of the jejunum in the operation.

Dublin Journal of Medical Science.—This (October) number also is "Educational." The original matter consists of the Review of Vital Statistics for Ireland, delivered by Sir W. J. Thompson as his presidential address at the Royal Institute of Public Health Congress, Dublin, and published in abstract in THE LANCET of Sept. 16th.

Birmingham Medical Review.—In the current number of this magazine Dr. W. J. McCardie continues his review of the Present Position of Spinal Analgesia. He concludes that it occupies a middle position between inhalation and local anæsthesia. "Generally speaking ..... it should only be used in certain selected cases." Dr. A. Douglas Heath records an epidemic of Groin Ringworm in a school, and Dr. William H. Wynn contributes an interesting critical review of the curious phenomena known as Anaphylaxis and Serum Disease, of which the true nature is little understood at present, but which are gradually being brought into relationship with a number of diseases and morbid symptoms.

West London Medical Journal.—The October issue opens with a forecast by Mr. McAdam Eccles of the future of surgery, in which he puts in a plea for the supply of more plentiful material for dissection and for the practice of operative surgery classes. Mr. Leonard A. Bidwell writes enthusiastically on the immediate and ultimate results of gastro-enterostomy for gastric and duodenal ulcers, holding that all cases of the latter condition should be operated on at once, and of the former as soon as medical treatment shows any sign of lack of success. In the discussion which followed his paper some doubts were expressed as to the general need of such drastic procedure.

Caledonian Medical Journal.—The opening article in the October number of this journal is the presidential address delivered by Dr. J. L. Waters at the annual meeting of the Caledonian Medical Society held in Hull on Sept. 23rd. He took for his subject Certain Features of Celtic Life and Story, illustrated with ample details relating to anthropology, history, and questions of politico-social organisation. Dr. Lachlan Grant of Ballachulish, Argyleshire, gives much salutary advice in a contribution entitled "Home, Sweet Home," which in its original form was a health lecture delivered to women and girls in Oban.

Annals of Tropical Medicine and Parasitology.—Issued by the Liverpool School of Tropical Medicine. Series T. M. Vol. V. No. 2. August, 1911.—The editor of these Annals is Professor Sir Ronald Ross, K.C.B., F.R.S., and the first item in the present number is an "In Memoriam" notice, with portrait, of the late Sir Rubert Boyce, F.R.S., himself a

former editor of the publication. After this, Professor Umberto Gabbi furnishes a short but interesting "Note on Tropical Diseases in Southern Italy," in which he refers more particularly to Mediterranean fever and kala-azar. Professor R. Newstead then contributes an article on "Papataci Flies (Phlebotomus) in the Maltese Islands"; this has been reprinted from the *Bulletin of Entomological Research* and is profusely illustrated. The article is in reality the report of the twenty-third expedition sent out by the Liverpool School of Tropical Medicine. Professor Newstead, in collaboration with Mr. Henry F. Carter, assistant entomologist, also writes a second paper on "Some New Species of African Mosquitoes (Culicidæ)," with illustrations. Captain R. McCarrison, I.M.S., a high authority on the subject of the etiology of bronchocele, gives a valuable paper on the "Experimental Transmission of Goitre from Man to Animals," with illustrations. Two eminently scientific papers are contributed by Dr. W. W. Yorke and Dr. R. W. Naus of the Runcorn Research Laboratories, the first being on "The Reducing Action of Trypanosomes on Hæmoglobin," and the second on "The Mechanism of the Production of the Suppression of Urine in Blackwater Fever" (illustrated). This last-mentioned paper, we believe, was read in the Tropical Medicine Section at the annual meeting of the British Medical Association in July last at Birmingham. Dr. J. W. W. Stephens gives an account of "The Anti-Malarial Operations at Ismailia" (with 2 maps). The next article is the first report of the expedition sent out in 1911 to Gambia by the Liverpool School of Tropical Medicine; it is furnished by Dr. J. L. Todd and Dr. S. B. Wolbach, and is entitled "The Diagnosis and Distribution of Human Trypanosomes in the Colony and Protectorate of Gambia." The last of these interesting contributions is one upon which we have already made some comments in the columns of THE LANCET of Oct. 14th; it is by Dr. G. C. E. Simpson and Mr. E. S. Edie, B.Sc., and its title is, "The Relation of the Organic Phosphorus Content of Various Diets to Diseases of Nutrition, particularly Beriberi." This number of the Annals contains a large amount of important, as well as varied and valuable, matter; the papers are well worth careful study by all who are concerned with tropical medicine.

British Journal of Inebriety.—The October number of this publication contains an article on Alcoholic Epilepsy, by Dr. Francis Hare, based on his clinical experiences as medical superintendent of the Norwood Sanatorium. Dr. Hare believes that alcohol *per se* may give rise to typical epileptic fits in individuals who have, so far as can be discovered, no tendency to epilepsy, and in his paper he summarises 13 observations in support of this view. All the patients were addicted to continuous excess, drinking chiefly spirits; there were no takers of absinthe. In every instance the epileptic attack, which was ordinarily of the type of *grand-mal*, followed a complete withdrawal or sudden reduction of the drinker's usual allowance of alcohol, the duration of the period from the stoppage of the intoxicant to the onset of the fit varying from 15 to 74 hours. In three of the cases delirium tremens developed after the epileptic seizure. From the facts observed by him, Dr. Hare draws the conclusion that alcoholic epilepsy depends primarily upon the establishment of tolerance to alcohol, and secondarily upon a sudden fall in the amount of the drug circulating in the body—in short, that it is of the nature of an abstinence symptom in chronic intoxication. He holds a similar view with regard to the causation of delirium tremens. It is Dr. Hare's experience that a patient who has once suffered from alcoholic epilepsy is likely to have convulsions on subsequent sudden cutting off of his usual supply of liquor, but he has not found that the occurrence of these fits has any tendency to set up ordinary recurrent epilepsy. This number of the journal also contains a brief *résumé* of the facts regarding the relationship of alcoholism and tuberculosis, by Dr. J. Johnston, and an account by Mrs. Bramwell Booth of the work of the Salvation Army in the care of inebriate women.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on Oct. 26th, Sir THOMAS BARLOW, Bart., K.C.V.O., the President, being in the chair.

The following gentlemen having passed the required examination were admitted Members of the College:—Francis Graham Crookshank, M.D. Lond., L.R.C.P., George Harold Cross, M.B. Oxon., Elkin Percy Cumberbatch, M.B. Oxon., Robert Skeoch Frew, M.D. Edin., Horace Bryden Hill, M.B. Lond, L.R.C.P., Edwin Walter Routley, M.D. Brussels, L.R.C.P., Percy Edward Walton Smith, M.B. Sydney, and John Aldren Wright, M.D. Camb.

Licences to practise physic were granted to 83 gentlemen who had passed the requisite examinations.

The PRESIDENT announced that Mr. Arthur Lloyd Davies had been appointed the nineteenth Jenks scholar. He also stated that as Sir David Bruce was unable to undertake to deliver the Croonian lectures in 1913 Dr. J. Dixon Mann had been appointed in his place.

The following communications were received: 1. From the Royal College of Surgeons of England, dated July 27th and Oct. 13th, reporting proceedings of the Council of that College upon July 27th and Oct. 12th last. 2. From the Dean of the Faculty of Medicine, Edinburgh University, dated July 27th, reporting that the Murchison Memorial Scholarship had been awarded to Mr. Walter Quarry Wood. 3. From the librarian of the University of St. Andrews, dated Sept. 28th, thanking the College for a gift of books.

A report from the Committee of Management dated Oct. 3rd was received and adopted. The report recommended that the County School, Carnarvon, and Repton School should be added to the list of institutions recognised by the Examining Board in England for instruction in chemistry and physics.

The PRESIDENT reported on the celebration of the 500th anniversary of the foundation of the University of St. Andrews, and the REGISTRAR (Dr. J. A. Ormerod) read the admirable Latin address from the College which he had prepared for presentation on that occasion.

A report was received from Dr. StClair Thomson concerning the Third International Congress of Laryngology and Rhinology. The audited accounts of the College for the year ending Sept. 19th, 1911, were received and adopted.

Dr. J. A. Ormerod was re-elected a member of the Committee of Management.

The Harveian Librarian (Dr. Norman Moore) supplied a list of books and other publications presented to the library during the past quarter, and the thanks of the College were returned to the donors.

After some further formal business the PRESIDENT dissolved the Comitia.

UNIVERSITY OF OXFORD.—The following degrees have been conferred:—D.M., E. L. Kennaway; B.M. and B.Ch., J. F. Penson and E. L. Pearce-Gould.

INVALID LADIES' HOME AT CANNES.—This home is open to ladies, being British subjects, also to American ladies, between the ages of 18 and 50, who are suffering from maladies for which the climate of Cannes is recommended, whose means do not permit them to winter at Cannes without this assistance, and of whose recovery there is reasonable hope. The home is open from Nov. 1st to April 30th of the following year. Application should be made to Miss M. Husband, Hôtel des Anglais, Cannes, Alpes Maritimes, who will send the necessary form to be filled up. The charge for board, lodging, and medical attendance is 24 francs 50 centimes per week, to be paid weekly in advance. Dr. W. Gordon Sanders and Dr. Ginner are the honorary physicians to the home. Fifteen ladies can be accommodated.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 4, 1911.

Report of the Chief Medical Officer of the Board of Education.

THE annual report for 1910 of the Chief Medical Officer of the Board of Education was presented to Parliament on Saturday last. It is a document of great interest, both from the facts which it sets out, the comments upon, and deductions from, those facts made by Sir GEORGE NEWMAN, and the evident promise underlying the whole that by an adequate system of inspection of school children slowly but steadily we must improve the race. It is not so unnecessary or platitudinous as might be supposed to make the last statement, for a good many persons, some of whom ought to know better, have been found during the last two years saying that the system of school inspection implies merely the collection of a vast number of statistics, which are gathered in such a way that they can teach but little, even though their lessons be sought out, and which are destined not even to receive the necessary collating and sifting without which their utility and significance must be gone. This report contradicts such gloomy prophets succinctly. Closely written, bristling with facts, and compelled to range over large and undefined territories of medicine, sanitation, hygiene, and eugenics, the report is none the less so clearly put together that the intelligent reader, medical man or layman, can hardly fail to draw his conclusions, or to see that so far as these conclusions are definite they are based upon the results of school inspection. The net outcome of the report is to show that the vast revolution which began to take place in the care of the youth of this country when the Education (Administrative Provisions) Act, 1907, came into force has progressed on the whole in a systematic and satisfactory manner. The facts collected with regard to the administration of medical inspection and medical treatment of school children, as to their physical condition, as to the education of feeble-minded and physically defective children, as to the proceedings of school doctors, parents, teachers, school nurses, and attendance officers in their various interrelations—all the figures and the details therewith connected speak for the work accomplished; and from reading the summarised account we arrive at the view that the ameliorative phase following upon medical inspection in England and Wales has definitely begun. We say this despite the figures given by Sir GEORGE NEWMAN, who points out, speaking generally, that "out of the 6,000,000 children registered on the books of the public elementary schools of England and Wales about 10 per cent. suffer from a serious defect in vision, from 3 to 5 per cent. suffer from defective hearing, from 1 to 3 per cent. have suppurating ears, from 6 to 8 per cent. have adenoids or enlarged tonsils of sufficient degree to obstruct the nose or throat, and thus to require surgical treatment, about 40 per cent. suffer from extensive and injurious decay of the teeth, about 30 to 40 per cent. have unclean heads or bodies, about 1 per cent. suffer from ringworm, 1 per cent. from tuberculosis in readily recognisable form, from 1 to 2 per cent. are afflicted with heart disease, and a considerable percentage of children are suffering from a greater or less degree of malnutrition." This formidable category of disease and defect, with all the suffering and inefficiency therein implied, must greatly limit the capacity of the child to profit by education, while the outlook for the next generation is certainly darkened by the presence among us of so much incapacity. None the less the evils are to a great extent remediable, and now that we have taken stock of them in a systematic way and begun to combat them in many directions the prospect does not appear so very alarming. Parliament is even now engaged in an attempt to grapple with disease in the adult, and it is, as this report points out, an opportune time to remember that no insurance scheme can be effective or enduring unless it begins with the children, and particularly is this the case in relation to the prevention of tuberculosis with which we hope to deal on another occasion. No greater step could be taken by Parliament at the present time towards these desired ends than to secure that ample assistance is rendered in aid of all agencies, voluntary or State, which work for the amelioration of the children.

The machinery of medical inspection during the year has throughout the country become more homogeneous and more effective. The Act, it will be remembered, originally laid down that not only was it the duty of each local educational authority to provide for the medical inspection of children about the time of their admission to a public elementary school, but that the same inspection would have to be made on such other occasions as the Board of Education might direct. And the Board determined almost immediately that the children should also be inspected at the opposite end of their school lives; so the school population was divided into two classes for inspection—what are termed "entrants" and "leavers." In this way the local education authorities would know with what amount of mischief they had to deal, whether the methods adopted had borne fruit, and thirdly, how far the boys and girls starting in life promised well or were handicapped by physical or mental default. In addition to these two inspections 100 local education authorities undertook during 1910 an intermediate investigation, while it should be remembered that when a medical officer was making a routine inspection either of "entrants," "intermediates," or "leavers," he would be asked, as a matter of course, to examine any child who appeared to be suffering from some reason or another. The machinery of inspection has in fact begun to justify itself, and in particular Sir GEORGE NEWMAN is able to give a better report of the position of London than was the case last year. In the report for 1909 we were compelled to point out in these columns, in accordance with Sir GEORGE NEWMAN'S representations, that London lagged behind the rest of the country. The complicated difficulties under which the London County Council found

itself from the first with regard to the medical inspection of school children are well known to most of our readers, and much allowance was throughout made for the fact that the Council school children were placed at certain disadvantages, many, of course, arising out of the mere size of Greater London. There has throughout been a sincere wish on the part of the Council to meet the situation squarely, but the action taken has not been fortunate. This should now all be changed. From Sir GEORGE NEWMAN'S report for 1909 it appeared that the London Education Authority had practically failed to inspect the school children of the metropolis in accordance with the code, for out of 148,000 children comprised in the estimates of "entrants" and "leavers" only about one-quarter had been officially reported as inspected, while there had been no statutory medical inspection during that year in the vast majority of the elementary schools. During the year 1910, however, vigorous efforts were made by the authority to comply with the Act and to cope with the mass of arrears, the result being that the London County Council should in the future be able to fulfil its legal duties. It would seem from Sir GEORGE NEWMAN'S report that more than half the schools still awaited medical inspection at the close of the year, but it must be remembered that throughout the whole period the reorganisation of the medical work of the London Education Authority was going on.[1] Readers of THE LANCET know well the direction which that reorganisation has taken, and how thoroughly it is in accord with our often-expressed views. From the beginning of the movement which led up to the passing of the Act we were of opinion that inasmuch as school hygiene could never be divorced from home hygiene, the more sympathy and even combination that could be secured between the educational authority and the sanitary authority in the matter of medical inspection the better it would be for the children concerned. The view did not find universal favour, and some well-qualified speakers upon education, as all know, considered it to be a narrow one, but we believe that events have since justified the attitude which we took up, and we are glad to see that the London County Council is now of the same opinion. The Council has decided that the arrangement under which the medical charge of the school children was carried out partly by the Public Health Department, but independently by the education officer, is to be terminated immediately, inspection and treatment being coördinated and administered under the direction of the medical officer of health for the County of London. Upon the retirement, imminent and deeply regretted, of Sir SHIRLEY MURPHY from his present position as chief medical officer of the county, a new medical officer of health will supervise the whole work of medical administration in relation to education, combining in one department educational and sanitary questions. This is as it should be, and when time has allowed the reorganisation to take effect we are confident that the results will display the wisdom of the Council.

Upon the physical condition of the school children of the country, as revealed by medical inspection, Sir GEORGE NEWMAN makes remarks that will be endorsed by every thinking person when he warns us that while careful medical inspection of each individual child is the only sure foundation upon which preventive or remedial work of lasting character can be established, the process must be slow. Neither the local education authorities, nor a Government department willing to assist them in every possible way, can transform a mass of six million children, having the categorised defects to which we have already alluded, in any brief space of time into physically and mentally perfect citizens from whom the best of work and the best of descendants can be expected. The population of the country at large must work towards the desirable end. An organised system of medical inspection is the first thing; the remedies for the ills revealed come second, and for these not only is there required a proper interplay of effort between the school doctor, the school nurse, the attendance inspector, the parent, and the child, but a public intelligence of what is going on is also demanded—an intelligence that will realise how far we are from coping with disease amongst school children when we have named pathological conditions to which they are in certain proportions subject, and adopted methods more or less successfully to remedy those conditions. It is sad that so many of our State-educated children should have defects of sight or hearing. It is a serious drawback to the health of the race that so large a proportion of our boys and girls should have carious teeth. It is important, though less gravely so, that there should be a permanent prevalence of skin diseases, of adenoids, and of ringworm. These latter can be effectively treated, and the machinery for treatment is already shaping itself well; and for the other conditions an improved environment will work wonders. Over and above these definite diseases, with their definite remedies, there is the vast question of how far malnutrition, which renders so much of the school work done by the children of little account, can be dealt with. Here is where public sympathy and active coöperation is needed, and to our mind the great point about Sir GEORGE NEWMAN'S report is its cogent simplicity. Any careful reader can learn from it the vast work that has been inaugurated by the Board of Education, the progress that has been made, and in particular the numberless directions in which private individuals, by helping the medical profession to detect, to prevent, to arrest, and to remedy disease among school-children, can surely improve our race.

[1] See THE LANCET, Oct. 28th, 1911, p. 1222.

The Retiring Age.

THE problems that present themselves in considering the important matter of retirement from business vary accordingly to the sphere from which retirement takes place; but so many of them have a physiological or sociological side that it is not only to the question as affecting the medical profession that a medical paper need confine attention. From the medical profession, we suppose, not a great number of its members ever retire, in the sense that they voluntarily abandon their occupation while still in full use of their faculties. In our profession many more men die in harness than lay harness aside while still strong enough to carry it well; and the

comparatively low average age of death in the medical profession appears to show that at any given moment there is a considerably less proportion of retired members than is the case with many other callings. The work of a medical practitioner is more exacting and more exhausting than is that of a lawyer or of a clergyman, while he has not the same facilities that these latter possess of being in their profession only to the extent that they choose. An aged clergyman does not lose his benefice by delegating more and more work to a curate (if he can get one and pay one); rather his act is seen to be in the public interest. A lawyer can do his best duty while himself in unsound health; the physical grind can be left to his juniors. But with the medical man his duties are too personal for delegation and often too hard to be executed by a frail physique. Moreover, compared with his income, the medical man's expenses are proportionally high; consequently he is liable to be obliged to continue to earn an income into the late years of his life. It is in the case of general practice that the difficulty about retirement occurs, already alluded to—namely, the intimate professional relationships, which make retirement an act of desertion. This is a difficulty which, though real, has much decreased in these more hurried days. Time was when around the successful practitioner there gathered in his advancing years a body of friends, also patients, men and women who in many instances entered the world with his aid and explored the vicissitudes of childhood, youth, and maturity under his guidance. From many of these patients the family friend, being also the medical man, had received confidences which they might now be loth to impart to fresh ears. Yet without these confidences they would hesitate to entrust themselves to new hands. To withdraw his professional activity from such a circle is, in the case of a general practitioner, to inflict a very real loss upon his *clientèle*, so that even when pecuniary circumstances do not forbid it affectionate feelings may retard a medical man's retirement, though too much stress must not now be laid on such arguments. Social conditions are now much more fluid, and the number of persons who remain from the cradle till middle life always in the same locality must seldom be large enough to constitute an actual argument against the retirement of a medical practitioner.

Among those who practise along specialised lines of medicine the position more resembles that of men of other businesses and of other professions. The question of the retiring age is an important matter to them, though not perhaps of the same importance to the community. But, indeed, it might well be asked by those adopting a high moral and social standard—Ought a man to retire at all? Ought he to give up work so long as he is perfectly fit for its performance? The question cannot be answered off hand. No man has a right to deny benefits to his fellows, but a man is not always the best judge of how far the benefits that he can supply cannot be supplied equally well by others. Those who know themselves in any real sense may be trusted not to retire with undue haste or to postpone retirement to an unnecessary date. But it is the greatest possible mistake to suppose that the man who retires, whether from the feeling that his course is run or from the desire to benefit by leisure at the close of his life, has necessarily chosen the best path for himself. The accessory circumstances vary so immensely that where the course is right for one man it is certainly wrong for another. We may remember the remark of the American business man, successful and aged, to his son, who suggested that the business could now run on without the senior partner: "Yes, my lad; but the senior partner can't run on without the business." There was much truth in the old man's retort. The tremendous hold of habit has to be reckoned with. Not all men can safely and suddenly change their methods of life when they are approaching old age, and if work is an ingrained habit the enforced idleness of leisure is apt to become disastrous. Herein lies the importance of a second string to the professional bow. A well-cultivated hobby, that has grown in the garden of activity alongside the professional tree, may well shelter the retired professional man's last years, and give him just as much labour as is good for him to accomplish. Who has not seen the lack of such a resource in those perforce retired from active service? The pensioned military man, who has cultivated nothing but his profession, and knows no art but that of command, may make the family martinet, or the club bore, or both.

This question of the retirement of an active worker is not simple whether looked at from an objective or subjective standpoint. Subjectively the individual may act as best suits him and his belongings. If he "can't run without his business" he will see no reason against continuing to run with it. But suppose that business to be an already overcrowded profession. Objectively, and reasonably as it appears to them, his competitors cry, "You have enough to retire on, your family and your wants are supplied to the end. Why do you continue to fill a place that so many are waiting for by whom its advantages are really needed?" The answer must be found in a broad view. It is the greatest good that is to be sought, and that must often mean that a man should continue his distinguished work though he does not need the money it brings, and though there are others anxious to do the work instead of him. Though we may still be far from the day when the practice of medicine will become a State service, it is impossible not to see that the tendency of the times is towards such a revolution. In a State medical service compulsory retirement at an age-limit, as we have it in the navy and army, would possibly be enforced upon our profession. Our feeling is that such regulations would be highly dangerous. Youth must be served, and the wisest seniors among us are those who welcome most readily the coöperation of their juniors. But numbers of the difficulties which the public brings to medicine for solution depend for that solution upon the wisdom that is born of manifold and divers experiences, so that in many cases compulsory retirement of medical men under a system of age-limit would be a misfortune. While there is bound to be injustice and waste of good material wherever a hard-and-fast age limit is laid down for the cessation of active work by all individuals of any large body of men, in dealing with the medical profession this would be particularly the case.

Suicide in Prisons.

IN his annual report for the year ended March 31st, 1911, Dr. HERBERT SMALLEY, the Medical Inspector of Prisons, discusses at some length the question of suicide in the prison population of this country. The question is one of very great interest, not only in its possible bearing on the efficiency and humanity of prison administration and with reference to the psychology of the criminal, but also because, presenting as it does a particular case of a large and important bio-social problem, the examination of its special and distinctive features may be expected to throw light on other aspects of that problem. For this reason the facts and figures brought forward by Dr. SMALLEY have a wider significance than might be suggested by their official presentation, and are likely to appeal to the interest not only of the legal and medical professions, but to many persons who are not specially concerned with penological matters, but who have the cause of social progress at heart.

The most striking and also the most satisfactory point established in Dr. SMALLEY'S report is that in the English prisons suicide is of very infrequent occurrence. During the last ten years the number of deaths from this cause has varied from a minimum of 4 to a maximum of 14, the annual average for the whole period being 9·5, a tolerably low figure when it is borne in mind that the yearly admissions to prison average upwards of 200,000. This low rate of suicide would go to show that imprisonment *per se* has not the detrimental influence in this respect which used to be, and in some quarters is still, imputed to it. And the same conclusion is further confirmed by the extreme rarity of this phenomenon in the class of prisoners who ought more than any other to show the alleged injurious effects of incarceration—namely, the inmates of the convict prisons. It may, indeed, be argued with some plausibility that so far from promoting suicide the fact of imprisonment, which postulates the removal of the worries and disappointments incident to the struggle for existence, has quite the opposite result; and we should, perhaps, be justified in attributing to the beneficent influence of imprisonment the fact that during the last few decades suicide in prison has shown no trace of the upward tendency which until quite recently has been so marked a feature in the statistics of ordinary suicide. Whatever be the explanation, this want of correspondence in the statistical movement of suicide in the general population and in the prison population may be taken to suggest that suicide amongst prisoners does in fact present some distinct characteristics. And this impression is strengthened by a more detailed examination of the data, which shows, as Dr. SMALLEY points out, that prison suicide is marked by certain peculiarities, amongst which the most notable is a tendency to much earlier age-incidence. In ordinary suicide, as is well known, the period of maximum frequency is in the later age-groups; in fact, this predominance is so marked that on the average over 55 per cent. of male suicides occur at ages over 45, though the males above that age form only 28·3 per cent. of the total adult male population. On the other hand, amongst prisoners who commit suicide the proportion aged upwards of 45 years is only 24·4 per cent. It is true that the prison population, as compared with the general population, contains a relative excess of young adults, but the difference, even at the highest probable estimate, would certainly be quite insufficient to account for such a contrast as we have indicated. It appears likely, therefore, that the explanation is to be sought, at all events in part, in other influences dependent either on the special character of persons going to prison or the special conditions that attach to imprisonment. In this connexion Dr. SMALLEY draws attention to the highly significant fact that suicide is relatively far more frequent in the case of prisoners guilty of impulsive crimes, and more particularly of homicidal offences and of crimes against sexual morality. These are forms of delinquency which are relatively infrequent and make but a very small contribution to the prison population; indictable homicidal crime, for instance, only amounts to 2·3 per cent., and indictable sexual offences to 1·7 per cent. of the total volume of indictable crime, but they account respectively for 14·7 per cent. and 7·3 per cent. of the criminality of prisoners committing suicide. It might be suggested that, as these offences expose the delinquent to heavy penalties, the suicidal tendency may be related less to the nature of the crime than to the known or anticipated severity of the punishment which the prisoner has to face; but against this explanation we have the fact that this tendency is equally marked in the minor sexual offence of indecent exposure, which is of like impulsive character with the more serious crimes of lust, but does not usually entail more than a very short sentence of imprisonment. We may take it, then, as established that the criminals who have committed impulsive offences, and especially offences expressing morbid and destructive impulses, are those who are most prone to suicide; and as it is offenders of this same class who are also most frequently found to be, or to become, insane, it is reasonable to suspect that the suicidal tendency may be due to insanity, the impulsive act of suicide, like the impulsive crime which preceded it, being an initial symptom of mental disease. While admitting that this explanation may hold good in many instances, Dr. SMALLEY seems disposed to think that more often than not the emotional instability shown in the crime and in the suicide may be due to conditions within the limits of mental health. In this connexion the facts regarding suicidal attempts ought to be peculiarly instructive, and they certainly go to support Dr. SMALLEY'S view. Indeed, most observers who have had large experience of cases of this sort will probably agree that only a relatively small proportion of persons making such attempts are insane; the majority are suffering from alcoholism, while the residue consists chiefly of adolescents in whom such a condition of emotional instability as we have indicated is to be regarded as a physiological result of their age. And this latter fact may, perhaps, be allowed to have special significance in connexion with the tendency to earlier age incidence in prison suicide; it would go to suggest that an important factor in the causation of such suicides may be that the impressionable temper of youth allows an excess of impulsive reaction to the shock of detection or of punishment. If these inferences are justified we should be led to conclude that, in relation to suicide, imprisonment exercises a different influence, according as the individual

who has to undergo it is in adolescence or early manhood, or has reached maturity; in the former case it acts as a violent emotional shock of which the self-destructive impulse is a natural sequence, while to the grown man it is rather a temporary protection from the stresses of active life, and is, therefore, to that extent a corrective of the economic influences which play so important a part in determining adult suicide.

Whatever view be taken as to these speculative considerations, the facts embodied in Dr. SMALLEY'S report afford at all events additional and very important evidence of the desirability of taking into account their physiological condition in applying penal discipline to adolescent offenders. It may be noted as a significant fact from this point of view that no instance of suicide has been recorded amongst the youths detained in the Borstal institutions. The growth of these institutions within recent years has been a gratifying evidence of the spirit which actuates penal administration in this country. The Borstal system encourages growth of body and mind, and promotes both self-restraint and self-respect, so that it is natural, while very cheering, to know that a large majority of those who undergo it benefit permanently by the strong incentives to reform—tersely, they do well.

Annotations.

"Ne quid nimis."

THE BACTERIOLOGICAL STANDARDISATION OF DISINFECTANTS.

Two years ago THE LANCET undertook an inquiry into the comparative value of the chief proprietary disinfectants on the market.[1] The aim of THE LANCET Commission was to evolve a method which would show working figures which *per se* could be subjected to criticism. By means of special apparatus and technique the method was elaborated so that by using more dilutions a broad curve of results was shown both with the disinfectant and the carbolic acid control. It was pointed out that a comparison of greater mathematical value could be made between the two, and the liability to error, as compared with the Rideal-Walker test, was very considerably reduced; at the same time mistakes due to errors of technique were disclosed and thus could not affect the result. We are of opinion that the claims then made were justified. On p. 1267 of this issue we publish a note by Mr. F. T. Marchant, Lecture Assistant in the Public Health Department of University College, London, in which he describes a further modification of technique making for greater simplicity. He proposes to substitute a modified separating flask to hold each of the mixtures of culture and graded disinfectant solution. At the necessary intervals a drop from each of the mixtures can be allowed to pass into the tubes of subculture medium. The suggested modification appears to be a good one. It would seem, though we have had no opportunity of testing it, to be exact in its working, and should give results as consistent as those obtained with the apparatus used by our Commissioners, over which in some positions it might have advantages. For example, it is clear that with this apparatus any type of organism may be used in the test. In certain circumstances this may be a distinct gain, but it must be remembered that for the purpose of comparing different disinfectants a standard organism must be decided upon, and we still maintain that B. coli communis is the one most suitable. By Mr. Marchant's method the broad curves of results we require can undoubtedly be obtained, and we would urge him, and those who follow this method, when testing a disinfectant, to remember the importance of this point—one on which we were very insistent—and give the full curve of results on which the comparative figures are based.

[1] THE LANCET, Nov. 13th, 20th, and 27th, 1909.

A "RETURN" CASE OF SCARLET FEVER.

AN action of considerable importance to the medical officers of isolation hospitals was tried recently by Judge Ruegg, K.C., at the Hanley county court. The plaintiff was the father of a boy who had been treated for scarlet fever in the Bucknall Infectious Diseases Hospital, and afterwards at the Bagnall Convalescent Hospital. The defendant was Dr. C. H. Phillips, who in the capacity of medical superintendent to the Stoke-on-Trent and Stoke Rural Joint Hospital Board had discharged the lad from the Bagnall hospital after a period of treatment in the two institutions amounting to eight weeks. The case for the plaintiff was that his son had been negligently discharged while still suffering from the disease, and that in consequence it had been communicated to other persons, one of whom was his father, the plaintiff. The case for the defence was a denial that the patient was suffering from scarlet fever or capable of communicating it when he was discharged; that the defendant acted in his official capacity and was not personally liable; and that every reasonable precaution was taken, the treatment being proper and according to the best known and recognised methods. The facts leading up to the litigation were that on his discharge the boy was taken home by his parents in a taxicab, that three days after his return his father developed symptoms of scarlet fever, and it was further stated that the child of a customer of the father who had carried a pair of boots away from his shop (the plaintiff being a bootmaker) had also contracted scarlet fever. The original patient, the son of the plaintiff, also developed scarlet fever again, his mother giving evidence that she found him to be peeling on making an examination after her husband was taken ill. Medical evidence was given on behalf of the plaintiff as to his illness and the condition of the lad when he was medically attended for his second attack, and the medical witnesses on both sides were asked a considerable number of questions as to the sources of infection in scarlet fever and in particular as to the extent to which infection should be ascribed to desquamation. The evidence of the defendant, who stated that as medical officer to the hospital board during a period of 25 years he had had under his care over 10,000 cases, was to the effect that the case was a mild one with no complication except that during the last fortnight there had been a slight sore inside the nose, which had caused him to retain the lad at the hospital when his discharge was first suggested to him after the patient had been for six weeks under treatment. In the eighth week there had been no discharge either from the nose or ears, and slight desquamation of the heel observed at the end of six weeks had ceased. He pointed out the possibility that in the course of the removal of the child in a taxicab the subsequent catarrh of the nostrils of which there had been evidence might have been brought on, and that a return case with fresh infectivity might have been the result. The evidence of Dr. Phillips was corroborated by expert evidence given by Dr. G. Reid, medical officer for the county, and details of the boy's treatment were deposed to by nurses. His honour Judge Ruegg, who tried the case without a jury, in giving judgment, said that in order to find for the plaintiff he must be satisfied that there had been negligence on the part of the defendant,

and expressed his difficulty in understanding how the boy could have been allowed to leave the convalescent hospital if at the time of his discharge he was manifesting the symptoms that he showed almost immediately afterwards, especially as he had been detained for an extra fortnight owing to conditions which admittedly had been observed. In all the circumstances he found that there was no negligence and gave judgment for the defendant with costs. It was intimated, in response to an appeal to that effect, that the question of foregoing costs would be submitted to the London and Counties Medical Protection Society, who must be congratulated in bringing a difficult and anxious case to a just conclusion.

THE NEW CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A NEW edition of the Calendar of the Royal College of Surgeons of England for 1911–12 is now published. The name of the late Sir George Sutherland Mackenzie, K.C.M.G., has been added to the list of donors and benefactors, and the Calendar states that he left by will a sum of £30,000, the income therefrom to be paid to his two brothers for their joint lives and the life of the survivor, and, on the death of the survivor, to be paid to the President and Council of the Royal College of Physicians of London and the President and Council of the Royal College of Surgeons of England for the purpose of providing the means of assisting qualified medical persons to pursue scientific medical investigation. The Calendar contains a statement of the number of candidates who were admitted to examination during the past collegiate year for the Fellowship, to the first, second, and third examinations, and to the examination for the licence in dental surgery respectively, with the results of the several examinations. The Fellows of the College now number 1518, an increase of some 30 names from that of last year, and include 1 elected "*ad eundem*," 6 "by election," 28 elected as Members of 20 years' standing, and 1483 admitted by examination. The oldest name on the Fellows' list is Mr. Peter Redfern of Belfast, who was admitted a Fellow in 1851, and it is of interest to note that Lord Lister's name figures next on the list. He became a Fellow in 1852. The Members' list contains 16,929 names. The oldest Member is Mr. Edgar Jones, of Great Burstead, Essex, who became a Member as far back as 1834, and who is now in his 102nd year. The Licentiates in Dental Surgery and the Diplomates in Public Health are still increasing in numbers. Particulars of the various College prizes are included in the Calendar, and for the first time an extended index has been added, thereby increasing its usefulness for reference purposes.

SUPPURATION IN THE ACCESSORY SINUSES OF THE NOSE.

IN the issue of THE LANCET of last week we published a report of a paper by Mr. Herbert Tilley at a meeting of the Medical Society of London on acute and chronic suppuration in the nasal accessory sinuses. It is curious how little was known a few years ago about the diseases of these sinuses even by those who devoted special attention to the diseases of the nose. With the advances in our knowledge we have learnt in the first place how very frequently these suppurations occur, and how often their existence is entirely unsuspected. A recurring morning headache and a slight nasal discharge may be all the symptoms of which the patient is complaining, and yet for years he may have had an extensive suppuration in one or more of the accessory sinuses. Not rarely indeed the patient's health may have been so good that he may boast that he has never had a day's illness in his life; doubtless in such cases as these protective processes have been going on, with the result that he has become protected against the germs affecting the sinuses and their toxic products. Not only has our knowledge of these sinuses increased, but our power of dealing satisfactorily with them has increased also. The extent and ramifications of these accessory cavities are so widespread and numerous that it is easy to see that special skill and knowledge are required to deal with them. The antrum of Highmore is comparatively easy of access, and it is of interest to note that Mr. Tilley considers that the canine fossa is the best route by which to drain most cases of antral suppuration, and that he condemns unreservedly any attempt to drain a chronic suppuration through the buccal socket of a tooth. The frontal sinus presents difficulties greater than those connected with the antrum, and in this case the importance of a cosmetic result is greater, but it is when we consider the deeper sinuses, those of the ethmoid and of the sphenoid bones, that we are able to appreciate the skill needed in treatment. Structures of the most vital importance are almost immediately in contact with these sinuses, only a few millimetres intervene between the sinus wall and the base of the brain, and a small error in the use of an instrument may cause serious injury. At present the necessity for immediate radical operation is not urged quite so intensely as a few years ago, for it is now known that in a certain proportion of cases less energetic measures may be followed by success, yet there are cases in which rapid and thorough operation is needed for recovery.

"TOUJOURS PERDRIX."

ONE of the most interesting observations made in regard to a strict monotony of diet is that the digestive functions readily adapt themselves to it. But if, after this digestive adaptation has been established and a peaceful appropriation of certain food substances is ensured, there is introduced something new, the system breaks down. If, for example, an exclusive meat or milk diet is suddenly changed to one consisting entirely of farinaceous foods (bread or potatoes) there invariably happens a severe dyspepsia, because the kind of digestive aid which these require for digestion has not been invoked recently, and some time elapses before the particular demand is answered. In short, each kind of food demands an agent (ferment) endowed with a specific digestive force. A consideration of this fact would seem to indicate that a policy of *toujours perdrix* is often right, at all events when for some reason the diet has to be confined to particular food substances. But, of course, when such a restricted diet is called for the health of the individual is not normal. Physiological observation is not opposed to a monotony of diet, but it is reasonable to suppose that digestive adaptation would follow the adoption of a uniformly regular dietary rythmical in its variations. Persons of regular dietetic habits are often heard to say that a change in food upsets them. Dyspeptic troubles are a frequent complaint of travellers abroad where food is different and served in a different manner from what they are accustomed to. These persons are too quick to complain. In course of time a digestive adaptation ensues, and digestive troubles disappear. Successful digestion involves, however, a psychological factor. In addition to the physiological expediency of a mixed diet the relish or zest inspired by the pleasant appearance and attractive taste of food is an important quality. Without appetite the digestive process is prone to become dilatory, and when food begins to pall upon the palate it is a sign that the digestive functions are satiated also: the limit has been reached and excess has been begun. Hence the mixed diet, mixed to a reasonable extent, is a necessity,

place being found for several classes of foods, each having a distinct and separate food value, and each prompting the gastric functions to maintain an all-round digestive capacity. But the source of protein need not always be mutton, nor the source of carbohydrate potatoes, for then the pyschological factor ceases to serve, and monotony produces a true physiological revolt. Some people complain that the cycle of meat foods is a very small one, and so it is, especially with the working classes, whose choice is restricted to beef and mutton and pork. The art of cookery can, however, do much to relieve the boredom of diet, and on every ground more attention should be given to it.

ADENOIDS AND TONSILS.

IT would be difficult to mention a surgical operation more productive of benefit when efficiently performed in suitable cases than that for the removal of adenoids and tonsils. It would be equally difficult to mention one more often performed with little ceremony and with results by no means coming up to what is expected of it. This opinion has been held for some years by many men of experience and authority in the profession. The treatment of enlarged tonsils and adenoids, and of the conditions to which they give rise, has been frequently under discussion during recent years. At the Sheffield meeting of the British Medical Association in 1908 the Section of Laryngology, Otology, and Rhinology discussed this matter, and the sense of the meeting was to the effect that the benefits which it was predicted would result from the removal of adenoids in individual cases were far from being generally obtained. Some speakers attributed this failure to the operations being insufficient. Last year, when the Association met in London, the removal of the tonsils was again discussed, and one speaker stated that in a certain throat department a black list was kept of hospitals where tonsils had been removed and the patients had come for treatment owing to recurrent symptoms; the list, it was stated, was impartial and nearly every throat department in London was represented. In reply it was objected that such statistics of unsatisfactory results were of little value, because they were drawn from hospital out-patient practice, and everyone knew that in most clinics the out-patient department was so overworked and the skilled assistance so insufficient that few senior members of the staffs viewed the results with complacency. At the recent meeting of the British Medical Association at Birmingham a discussion on the treatment of chronic adhesive processes in the middle ear occasioned some appropriate remarks bearing on this matter. One speaker said that in reading the reports upon school children he had been struck by the proportion of cases in which the diagnosis of enlarged tonsils had been made without any mention of adenoids. The natural inference was that the tonsils had been removed by the practitioner, and that the more important factor, the adenoids, had been left, which was greatly to be regretted from the point of view of prophylaxis.[1] From the proceedings of the Section of Laryngology of the Royal Society of Medicine it is evident that, far from the operation being at times insufficiently extensive, too much zeal, on the contrary, has been displayed. Cases have been brought under observation presenting bands of adhesion between the Eustachian tube and the pharynx. The question arises whether they are due to disease or to traumatism. It was pointed out that a little less operative zeal in those corners might prevent a few of those cases.[2] At times cases of malformation of the soft palate and uvula resulting from the removal of tonsils and the attempted removal of the adenoids come under notice.[3] However simple the operation may appear to be, accidents may arise even in the hands of the experienced, but it would be as well for all of us to realise that the operation is by no means so simple as it looks. The lack of ceremony previously referred to has apparently attracted the attention of the laity. A lay contributor to the *British Journal of Nursing* for Sept. 23rd last, in an article on the after-care of operations on out-patients, criticises warmly the way in which children recently operated upon for adenoids and tonsils find their way, still bleeding, into public conveyances, with nothing better to mop the blood trickling from the nose than a very grimy kerchief. Many doubtless have witnessed this sight and its occurrence cannot be ignored. The author concludes her article with a practical suggestion which is doubtless already practised in some of the special hospitals. This suggestion is that "before out-patients leave the hospital after operations for the removal of tonsils or adenoids a sterilised gauze dressing shall be applied over the nose and mouth, and a regulation packet of sterilised dressings shall be provided for each patient's use." It is added that these dressings might take the form of squares of gauze for keeping clean the mouth and nose until convalescence, and that these precautions should be extended to operations on the ear. However skilfully the operation may be performed good results are jeopardised by the lack of attention to the after-care, though everyone knows how difficult it is to have the instructions for after-care carried out even when they are handed to the patient in print. Failure in realising at times the results predicted must be attributed partly to practitioners promising too much, and partly to its not being generally recognised that in cases of long standing the evils that adenoids and tonsils do live after them. It would be well if it were more commonly recognised that the satisfactory removal of adenoids and tonsils calls for genuine skill, and that a nicety of judgment must decide as to whether they should be interfered with or left alone.

MEASLES AND VENTILATION ON BOARD SHIP.

A PAPER on "The Ventilation of Emigrant Ships," by Dr. P. H. Bryce, chief medical officer of the Department of the Interior in Canada, appears in the *Journal of the American Public Health Association* for September. He there tells a story which shows how generalised an infection may become when once it is introduced into a community very closely packed together and without adequate ventilation. An emigrant ship left Rotterdam on June 13th for Canada. At that busy time of year she probably carried passengers nearly to the limit of her statutory capacity. On June 14th, the day after sailing, a child developed measles, and was immediately isolated with the whole of its family, but in the short interval it had done all the mischief it could. In the same compartment with it were 51 families, 279 persons in all, and amongst them the second case appeared on the thirteenth day, June 26th, which was the day of arrival in Canada. Twenty-one more cases were recognised the same day before the ship arrived at quarantine, and another dozen were seen before 9 P.M. that night. In all 71 cases developed, and from that single case Dr. Bryce tells us "every non-immune person [in that compartment] was infected within the short space of twenty-four hours." Fifteen families wholly escaped, but their members were either grown up or protected by previous attacks. The cubic space available for each person was probably the same as in English emigrant ships, 105 cubic feet on a deck 7 feet high, and if we may suppose, as is not unlikely, that this ship was no better

[1] THE LANCET, August 12th, 1911, p. 448.

[2] Section of Laryngology, Royal Society of Medicine, Jan. 7th, 1910, p. 69.

[3] See Section of Laryngology, Royal Society of Medicine, April 1st, 1910, p. 131.

ventilated than that on which Dr. Bryce crossed when he found 10 to 12 parts of carbonic acid per 10,000 volumes of air, the hourly ventilation supply for each person cannot have been more than 700 cubic feet. Propinquity—that is, small cubic space and close neighbourhood—accounted for the spread of the disease to the nearer children, but the dissemination of the infection to the remote corners of the compartment occurred because the infective particles were not quickly enough carried away in a good flow of air as they should have been, but were left to diffuse themselves everywhere throughout the air of that passenger deck. And we would put it to shipowners—whether it is more expensive to pay for dealing with 71 infectious cases and the isolation for the necessary time of 36 families, or to put satisfactory ventilation on board and so minimise these risks. And by satisfactory ventilation we mean for each adult 1300 cubic feet of properly warmed air per hour suitably introduced into, and removed from, the compartment. The more numerous are the inlets and the outlets the more directly and quickly will the used and, in these cases, infected air be removed, and the smaller chance will there be of the spread of infection.

THE MEDICAL RECORD OF MANCHESTER GRAMMAR SCHOOL.

OUR Manchester correspondent some weeks ago described the work done by Dr. Alfred A. Mumford in reporting a year's record of the health of the boys in considerable detail. Every boy has a medical record card which not only notes the result of medical examination, but also the boy's games, out-of-school occupation, way of travelling to and from school, and a number of other points. We cannot but be struck, as our correspondent was, with the thorough nature of the medical supervision exercised as compared with what is possible in elementary schools, and return to the subject from this point of view. Since 1905 boys from the ordinary elementary schools have been admitted to the Grammar School in considerable numbers. Very interesting, therefore, is Dr. Mumford's careful and accurate comparison both of physical conditions of the boys and social conditions of the parents. The alleged change in social condition is shown by a comparison of two groups of parents of 1285 boys in the period 1881–86 and in 1905–10—that is, since the admission of elementary scholarship boys. The cases chosen are taken consecutively from the school register and are classified according to the parents' occupations :—

Occupation of parents.	1881–86.	1905–10.
Professional	22·2 per cent.	23·5 per cent.
Retail trade	11·0 ,,	11·0 ,,
Higher mercantile	33·0 ,,	25·0 ,,
Lower mercantile	11·0 ,,	21·9 ,,

Higher and lower mercantile indicate positions in business of greater and less responsibility. The rest of the parents belong to smaller groups. A comparison of the physical and health conditions of the boys shows a decided advantage for the period since the beginning of the scholarship system. At age 16 the boys are 1½ in. taller and 8 lb. heavier than a generation ago. Chief among the causes which have led to this result Dr. Mumford puts "the steady diminution ... postponement of early infectious disease in childhood, due to the progressive operation of the Public Health Act of 1875." A second cause is indicated in the changed attitude towards athletics, and other factors are better housing, "increased knowledge and use of foods," and "a greater insight into the meaning of parental responsibility as regards health." With regard to infectious disease, Dr. Mumford traces its ill-effects particularly on vision, and gives a table showing that there is a direct relation between infectious illness in childhood and defective vision later. The value of this excellent report would have been increased had the results of a more detailed comparison between present "free" scholars and the other boys been given. The weight comparison given can only be doubtfully accepted as a test of good physique and well-being.

KALA-AZAR AND THE MOSQUITO.

IN another part of the present issue (p. 1268) will be found an interesting communication by Professor Franchini of Bologna as to the mosquito being the intermediary host and transmitting agent of kala-azar to man. He sets out the details of some experiments carried out by him with the view of demonstrating that in the alimentary tract of anopheles the parasitic organism of the disease can live and multiply; and surmises that as kala-azar is largely found in malarious districts the mosquito is, in all probability, the usual carrier of the infection. Professor Franchini infected his mosquitoes by feeding them on cultures of leishmania, but in his preliminary paper he does not, of course, suggest that this mode of infection could occur in nature. It is fair to point out that Professor Franchini states that further research upon the subject is required, to ascertain, for example, in what part of the mosquito's alimentary tract the leishmaniæ live and undergo multiplication, and to find out if the insect can transfer the infection from one animal to another after being fed on infected blood. These and other problems connected with this most interesting and important subject will no doubt be reported upon by him when he has carried out the further series of experiments referred to by him in his paper. As most readers of THE LANCET are doubtless aware, there are three varieties of the leishmania infection now classed under the general term of leishmaniosis (named after the distinguished discoverer of the protozoal parasitic organism). The first is the kala-azar met with in India, China, and other parts of Asia, in which the infecting parasite is known as leishmania donovani. This is a very fatal form of the disease. The second is known as infantile kala-azar, and is met with along the shores of the Mediterranean Sea and elsewhere, the infecting organism being the leishmania infantum; it is of a more benign nature. Lastly, there is the variety of the malady met with in North Africa, the Near East, India, and in other parts of Asia under the name of oriental sore, Delhi boil, or Bagdad sore, the parasitic cause being leishmania tropica. Professor Franchini does not state which one of the three forms of leishmaniosis is, in his opinion, transmitted by the anopheles, or if all the forms are equally transmissible in this way. Probably it is leishmania infantum, the variety found in Southern Italy, to which he refers. In the introductory part of his paper he adverts to negative results obtained from experiments on the bed bug (cimex lectularius), the dog flea (pulex serraticeps), the human flea (pulex irritans), and the head louse (pediculus capitis), but this position is hardly consistent with the reports of Nicolle, Basile, Pianese, and others who have shown that the dog in Tunis and other parts of the Mediterranean littoral suffers naturally from the same disease which attacks children and which is caused by leishmania infantum, and further that this parasite can be transferred from dog to dog or from dog to man by the dog flea and sometimes by the human flea. Basile, for example, took laboratory bred puppies and allowed infected fleas to feed upon them, with the result that they became infected and died from the disease, the leishmaniæ being found in the bodies of the puppies. Dogs, therefore, may serve as reservoirs of the parasite, and any blood-sucking insect like the mosquito, as suggested by

Professor Franchini, may upon occasion transmit the disease from the dog to man. Nicolle believes that the dog- and the human-fleas are the common transmitting agents of leishmania infantum. In India it has so far been found impossible to infect dogs or any other animal with leishmania donovani. Rogers, Patton, and others regard the Indian bed bug, cimex rotundatus, as, in all probability, the usual carrier of kala-azar to man, though occasionally the conorrhinus subfasciatus, a plant-feeding bug generally, but which at times becomes a blood-sucker, may act as the transmitting agent. As regards the leishmania tropica, Dr. R. Row has recently in India brought forward evidence in support of the view that the domestic fly is the actual carrier of this parasite to man. There is nothing improbable in the idea that leishmania in any of its three forms may be spread by one or another kind of biting insects—ticks, lice, bugs, fleas, mosquitoes, or even by flies—but, except as regards the bug in India and the flea in North Africa and the Mediterranean littoral, there has been no direct evidence brought forward to inculpate other biting insects. Professor Franchini's paper opens up a new field of investigation, and we hope to have from him before long further information as to his incrimination of the anopheles. For those who are interested in the subject we refer them to a critical review of Kala-Azar and Tropical Sore by Colonel Sir W. B. Leishman, F.R.S., R.A.M.C., published in the *Quarterly Journal of Medicine*, Vol. V., No. 17, October, 1911.

GONORRHŒAL PERIOSTITIS OF THE LONG BONES.

GONORRHŒAL affections of bone are much less common than gonorrhœal affections of joints. The epiphyses and small bones of the hands and feet are the most frequently affected. Periostitis of the diaphyses is so uncommon that it is unmentioned in most text-books, and its existence has been disputed. In the *Journal of the American Medical Association* of August 19th Professor Stephen H. Watts has reported the following case. A man, aged 24 years, was admitted to the Johns Hopkins Hospital on Jan. 2nd, 1907, complaining of an abscess in the left thigh. His illness began with gonorrhœa four weeks before. Two weeks later a swelling appeared in the left thigh and became painful, hot, and hard. As he could not use the leg he remained in bed for a week before admission and the discharge ceased. He lost appetite, was constipated, and had night sweats. A bubo appeared on the left side, but disappeared without discharging. On examination he was healthy-looking; the temperature was 103·6° F., and the pulse 90 and of good volume. The leucocytes numbered 12,400. There was purulent balanitis, and the pus contained gonococci. On the anterior and outer aspects of the middle third of the left femur was a tender indurated area 10 by 14 centimetres, apparently an abscess beneath the quadriceps. The skin was hot but not reddened. The hip and knee-joints were normal. An incision 14 centimetres long was made over the swelling. The muscles were separated, and the swelling was found to be due to a small collection of turbid but not purulent fluid beneath the periosteum. It contained the gonococcus in pure culture. The periosteum was very thick, œdematous, and lined by velvety granulation tissue. The exposed bone was slightly roughened by deposits of new osseous tissue. The wound was irrigated with mercury bichloride and packed with iodoform gauze. Sections of the thickened periosteum were examined by Dr. W. G. MacCallum who reported: "The section shows some new-formed bone embedded in a great deal of very vascular granulation tissue. Outside of this there is muscle, the individual fibres of which are separated by the same granulation tissue. No definite organisms can be seen." After the operation the temperature ranged up to 102° and there was a small amount of purulent discharge. The whole of the thigh was swollen and the femur seemed to be thickened and tender. A skiagram showed deposits of new bone about it. The patient improved and the thigh became less swollen, but the bone seemed thicker than ever. In the middle of February the wound healed and he could walk, but the femur remained greatly thickened. He was discharged. He was seen again in August, when his general condition was good, but there were great thickening of the femur and a small sinus in the middle of the scar. He was then lost sight of. Gonorrhœal affections of the periosteum were first described in 1869 by Fournier. He distinguished periostitis and periostosis, the former being simple inflammatory deposits in the periosteum, the latter being tumours resulting from infiltration between the bone and periosteum. He insisted on the much greater frequency of periostitis, which produces slight circumscribed ephemeral swellings most frequently on the tibia just above the insertion of the sartorius, on the lower end of the humerus, on the upper end of the fibula, on the great trochanter, on the posterior surface of the os magnum, and on the extremities of the metacarpal and metatarsal bones. The only symptoms are pain in a circumscribed area, with perhaps a little œdema and tenderness of the overlying skin. Gonorrhœal periostitis is frequently associated with gonorrhœal arthritis.

THE RISKS OF INTRAVENOUS INJECTION OF SALVARSAN.

AT a meeting of the Académie de Médecine of Paris on Oct. 10th M. Hallopeau reported a case in which death followed the intravenous injection of salvarsan by a practitioner who rigidly followed the rules laid down for its administration. The patient was a robust, well-developed man, aged 35 years, who contracted syphilis in 1902. He had been addicted to alcohol, but had abandoned the habit for two years. He had in succession a chancre, roseola, mucous patches, and a relapsing palmar and plantar psoriasiform eruption. He was treated at first with mercury and then with 10-centigramme injections of hectine without effect on the eruption—a result probably due to the fact that the dose was too small. In July, 1911, three months after the last injection, he demanded treatment by salvarsan. An intravenous injection of 30 centigrammes was given and was well borne. On the sixth day an injection of 40 centigrammes was given. After a few minutes he was seized with a sensation of dryness in the throat, accompanied by congestion of the face and anguish. These symptoms lasted some minutes. He was able to take a walk in the afternoon without any feeling of malaise. In the night he suffered from nausea, which was followed by vomiting. On the following night the same symptoms recurred, and on the next day he was seized with anguish and convulsions. The temperature rose to 101·3° F. The pulse was normal and strong. Several attacks of convulsions with chewing movements followed; the eyes were turned upwards and to the left. There were congestion of the face, tremor of the upper limbs, and clonic and tonic spasms, and the temperature rose to 104°. In the night he gradually became comatose and died in an attack of convulsions. The short interval between the second injection and the appearance of the symptoms suggested that they must have been due to the salvarsan, but the reason for their occurrence was not evident. The patient showed no signs of visceral disease. It might be suspected that his previous alcoholic habits had caused some change in his liver, but of this there was no indication. Similar cases have been recorded by other observers, and others have

occurred which have not been published. In a case recorded by B. Fischer, slight changes were found in the liver at the necropsy, indicating former alcoholism. M. Hallopeau concludes that salvarsan should not be given to persons who have been addicted to alcohol, even though they have abandoned the habit for some time. He went, as a matter of fact, much further and suggested that a drug which in ordinary doses might prove fatal to persons in no danger should have no place in routine therapeutics. In the discussion which followed he was supported by Professor Gaucher, who declared that he knew similar cases. He insisted that salvarsan does not cure syphilis but only certain manifestations of it, particularly ulcerative lesions, and does not prevent relapses which are almost constant. He passed his time, in hospital and private practice, in seeing patients on whom salvarsan produced no, or only a temporary, effect, and believed that patients thought themselves cured by it, and after one or several injections were lulled into a false sense of security. If they then followed no other treatment they were exposed to worse consequences.

THE ROYAL INSTITUTE OF PUBLIC HEALTH: BERLIN CONGRESS, 1912.

THE Council of the Royal Institute of Public Health has accepted an invitation from the Lord Mayor of Berlin to hold its Congress in 1912 in that city, from Thursday, July 25th, to Sunday, July 28th, inclusive, and a local general arrangements committee has been formed, consisting of representatives of the Royal Ministry of the Interior, the Imperial Board of Health, the City of Berlin, the medical officers of the Headquarter Staffs of the Army and Navy, the University of Berlin, the medical and hygienic societies of Berlin, &c., to promote the success of the meeting. The Congress will be under the Presidency of Earl Beauchamp, His Majesty's First Commissioner of Works, and will be conducted in the following sections:—A, State Medicine (President, Sir T. Clifford Allbutt); B, Bacteriology and Comparative Pathology (President, Professor G. Sims Woodhead); C, Child Study and School Hygiene (President, Sir James Crichton-Browne); D, Military, Colonial, and Naval (President, Sir Ronald Ross); and E, Municipal Engineering, Architecture, and Town Planning (President, Mr. P. C. Cowan, Chief Engineer of the Local Government Board, Ireland). The various Congress and sectional officers will also include distinguished scientific and municipal persons of German nationality. Facilities will be afforded for visiting the various public health and educational institutions in Berlin, and the opportunities thus given to representatives of municipalities, county councils, and other sanitary authorities of the United Kingdom for becoming practically acquainted with institutions in the work of which they are concerned should be of the greatest value. Mr. James Cantlie, honorary secretary of the Institute, informs us that arrangements are being made for travelling and hotel accommodation at reduced charges, the subscription for each delegate being one guinea.

THE King has given to the undermentioned gentlemen His Majesty's authority to accept and wear the decoration of the First Class, Third Division, Imperial Chinese Order of the Double Dragon, which has been conferred upon them by His Majesty the Emperor of China, in recognition of valuable services rendered by them during the recent epidemic of pneumonic plague—namely, Mr. William Harold Graham Aspland, M.D. Toronto, F.R.C.S. Edin., medical professor at the Union Medical College, Peking; Mr. John Maitland Stenhouse, M.B., B.C. Cantab., of the Union Medical College, Peking; and Mr. Bernard Score Browne, M.B., Ch.B. Edin., of the Church Missionary Society Hospital, Ningpo.

THE annual dinner of the Harveian Society of London will be held at the Café Royal, Regent-street, on Thursday, Nov. 9th, at 7 for 7.30, when the chair will be taken by Mr. Ernest Lane, the President.

THE First International Eugenic Congress will be held at the University of London from July 24th till 30th, 1912, under the presidency of Major Leonard Darwin, who will be supported by a number of vice-presidents of international reputation. These include the Lord Chief Justice of England, the Presidents of the Royal College of Physicians of London and of the Royal College of Surgeons of England, the Principal and Vice-Chancellor of the University of London, and representatives of the United States and of the great European countries. The papers will be grouped into four sections: (1) The bearing upon eugenics of biological research; (2) the bearing upon eugenics of sociological and historical research; (3) the bearing upon eugenics of legislation and social customs; and (4) the consideration of the practical applications of eugenic principles. The Congress will be organised by the Eugenics Education Society, and all communications should be addressed to the honorary secretary, 6, York-buildings, Adelphi, London.

MOTORING NOTES.

By C. T. W. HIRSCH, M.R.C.S. ENG., L.R.C.P. LOND.

The Olympia Motor Show.

THE Tenth Annual Exhibition of Motor-cars organised by the Society of Motor Manufacturers and Traders is now open, and the medical man in search of a motor will find many from which to select. For our well-to-do colleagues there are the cars costing many hundreds of pounds, and alongside others priced at but a tenth part of such a sum. As a result of a careful walk round on "press" day I was convinced that the man must be hard to please who cannot find some car among the many shown which will meet with his approval.

The general arrangement of exhibits follows the plan proved to be satisfactory in the past, but a slight alteration has permitted bringing together in one group the individual displays of the body-builders. Entering the hall from Addison-road, chassis and cars will be found at the eastern and central portions of the ground floor. At the western end the body-building firms maintain the traditional reputation long ago secured by British carriage-builders. The popular torpedo flush-sided bodies, landaulettes, limousines, and cabrio-landaulettes are all shown in a remarkable variety of forms, and among many attractive designs, which are bound to draw attention, are the productions of Messrs. Mulliner, Morgan and Co., Messrs. Vincent of Reading, Messrs. Hora of Peckham, The Connaught Motor and Carriage Co., Limited, Messrs. Brown, Hughes, and Strachan, Messrs. Maythorn, Messrs. W. and F. Thorn, and Messrs. Alford and Alder. Adjoining the Hammersmith-road entrance, and immediately opposite, on the northern side of the hall, are electric lifts which convey visitors to the galleries, where a whole day can be spent amidst a multitudinous array of engines, parts, and accessories. The south gallery is devoted to exhibits of tyres, detachable wheels, and rims.

A good many medical friends have questioned me as to the best car. I feel inclined to reply, like the critic did in *Fanny's First Play*, when requested by the father to give an opinion on his daughter's work: "Tell me who it is by and I will tell the sort of play it is." So in the case of cars, the makers' names help in arriving at a conclusion. The following, among others, should certainly be looked at by the doctor visiting Olympia with a view to the purchase of a new motor: The Adler,

which in addition to its excellent design has body-work by Messrs. Morgan; the Albruna, shown by Messrs. Brown Brothers, of Great Eastern-street, London, E.C., the smaller one of which seemed to me to be an ideal two-seater; the Argyll, an old favourite with the profession, and now fitted with a sleeve-valve engine, with combined reciprocating and partial rotary motions, and regarding which I hope to give a detailed account on another occasion; the Arrol Johnson, the Austin, the Belsize, the two- and four-cylinder Briton; the Charron, sold by the London Motor Garage Co., Limited, of Wardour-street, who issue inclusive maintenance contracts covering every expense connected with the car; the Daimler with the Silent Knight engine, which was described in THE LANCET of April 15th, 1911; the Darracq, of which cheap and trustworthy car five types are shown. the 11-h p. costing complete with a two-seater body but £195. Their other types have a worm drive, and one model has a cylindrical distributer which does away with valves, spring tappets, and cam shaft. The De Dion, as always, are well to the fore with their 6 h.p. single, and 7 and 9 h.p. two-cylinder cars. Messrs. Humber have a 5½ h.p. air cooled two-cylinder two-seater, which costs but £95; and they also show 11, 14, and 12-20 h p. cars. Other excellent cars are the 17 h.p. Maudslay, the American Mitchell, the Napier, the Panhard, the 6 h.p. Pilot, the various Renault models, especially their little two-cylinder 8 h.p. and four-cylinder 12 h.p., the satisfactory Rovers, including the old and popular 6 h.p. poppet valve, and the newer 12 h.p. two-cylinder Silent Knight. the Star, Straker Squire, Swift, Talbot, Vauxhall, and Wolseley. All these cars are the work of old-established makers, and any one of them has a name which is a guarantee of good workmanship. The single- and two-cylinder cars certainly maintain their previous popularity, and this type has many points for the medical man who merely desires a car for professional use, which he can look after and drive himself. In external appearance engines now approach towards an oblong block, with valve stems and springs enclosed. The poppet valve, I am glad to note, is still popular, though there are many devotees to the sleeve and rotary type. The efficiency of an 80 mm. bore has directed the designer's attention to smaller sizes, and many chassis are shown carrying engines to be known as 11·9, smaller editions of the popular 15·9. Undoubtedly the smaller one is fitted for a two-seater, but I do not think it should be expected to carry heavy four-seated bodies. Lubrication devices have certainly improved, and to-day the motorist replenishes his oil tank less frequently than his petrol container, and if too much or too little be given simple tell-tale signals instantly inform him of the fact.

Automatic carburetters are also general, and the fuel consumption is probably now at a minimum. The leather-faced clutch still holds its own against the multiple disc, and this is to be welcomed, especially as the leather is attached in sections and can be easily replaced when worn. Declutching is no longer laborious, thanks to lighter springs and compound leverage. The demand for greater flexibility of control has introduced more four-speed gear-boxes, which enable a better average speed to be maintained in hilly districts. On nearly all the cars the final transmission is by a propeller shaft and bevel or worm drive. In the worm drive many place the driving worm above the driven worm wheel; this may not be as easily lubricated as when the driving worm is below, but it gives greater road clearance and saves wear on the universal joints of the cardan shaft, keeping the propeller shaft more horizontal.

Comfort for passengers on cheap as well as expensive cars, in the matter of a well-sprung chassis, hardly admits of further improvement, but the addition of such devices as shock absorbers makes cars so fitted travel with luxurious smoothness. Moreover, the tyres are always in contact with the road surface, and thus their life is prolonged. Tyres are, of course, of the first interest to the motorist, and the Dunlop, Continental, Michelin, Spencer-Moulton, and Stepney road grip, in addition to being as good as ever, have this advantage—they are much cheaper. Of lamps, many are shown, and for medical men I must confess I like the electric, such as shown by Messrs. Longstreth's, C. A. Vandervell and Co., and Brown Brothers. Messrs. Vandervell's dynamo to be driven off the motor seemed light, neat, and simple.

Thomson Bennett show a useful exhaust car-heater, in which the heat could be regulated, and which would be ideal for work in winter. Harvey Frost show their vulcanisers, which are useful for prolonging the life of inner tubes and covers. For tubes, too, "Quick Patch" patches are of value.

PLAGUE AND FEVER PREVENTION IN INDIA.

MOST people know that during the last 10 or 15 years India has been visited by severe outbreaks of plague and malarial fever that have caused an enormous loss of life. This has probably been far less than had been the case in old-time epidemics before statistics were published or even thought of. Nevertheless, the continued prevalence of plague in many parts of the country, and the recurrence of malarial outbreaks of great severity, had naturally caused some anxiety. Opportunity was taken in September, in reply to a question at the Imperial Legislative Council at Simla, to give a succinct account of what has actually been done, and is now in course of being carried out by the responsible authorities to safeguard the health of the country.

Statistics.

It has often been said that sanitation is based on statistics, it being implied that the statistics are trustworthy. As far as a great part of India is concerned it has to be admitted that the registered causes of death are very misleading. It is therefore not possible to indicate accurately the direct effects of malaria and plague prevalence on the growth of the population. Nevertheless, the provisional figures of the 1911 census, which show an actual reduction in the populations of the United Provinces and of the Punjab since 1901, are evidence of the terrible severity of the visitations of these two diseases. Plague chiefly shows itself in greatly increased mortality; epidemic malaria, besides this, causes a great diminution in the births during the year following the outbreak. The United Provinces, where there had been famine in 1905–08, in this latter year were devastated by the most severe epidemic of malaria that had ever been known; during the decade (1901–10) more than a million and a half people died from fever *in excess* of those who had died from this cause in the preceding decade. In the same period the plague deaths numbered over 1,300,000. The Punjab also suffered severely, the deaths from plague and malaria during the ten years 1901–10 having been more than a million and three-quarters in excess of those due to these two diseases in 1891–1900.

Work and Discoveries in India.

The Sanitary Commissioner calls to mind the fact that almost the whole of the knowledge on which efficient and precise measures against fever and plague are based is the result of action taken and discoveries made in India. With regard to the former disease the extensive development of cinchona plantations has been the chief means of bringing about such a fall in the price of quinine as to make it available for the poorest peasants; the Indian Government also started the plan of selling doses of quinine for the smallest coin current in the country (pice packets). Again, the discovery of the mode of spread of malaria was the work of an Indian medical officer, Sir Ronald Ross; it is entirely owing to this discovery that precise and rational preventive measures have been made possible. As regards plague, the discovery and provision of preventive inoculation, the recognition of the part played by rats in the epidemiology of the disease and of the mode of infection and conveyance by the rat-flea have placed preventive measures on a rational basis.

Preventive Measures.

In 1909 a conference was held at Simla to consider the question of malaria in all its bearings; a permanent organisation to deal with the matter was established, consisting of a central scientific committee, provincial committees, and a general committee, consisting of the central body combined with delegates from the various provincial committees. It was decided that the first requirement was a knowledge of all the circumstances connected with the disease as it presented itself in different localities. As a result, in the early

part of last year, a Malaria Bureau was established at Kasauli, near Simla; and at Amritsar, in the Punjab, a permanent laboratory was established, where classes of instruction for medical officers and subordinates have been held, under Major S. R. Christophers, I.M.S. These specially trained experts have been distributed throughout the different provinces, their work being entirely devoted to the investigation of malaria and its prevention.

In Madras an officer has been specially deputed to inquire into the causes of variation in intensity of malarial prevalence in Jeypore (Vizagapatam); much anti-malarial work on the usual lines has been carried out in different directions; and a Malaria Board and special malaria officer are to be appointed. In Bombay a provincial committee has already been formed for this purpose. Dr. C. A. Bentley has carried out an exhaustive investigation as regards the city of Bombay, his final report having just been published [1]; and many individual investigations have been made in selected districts. In Bengal a specially trained officer has been appointed, with a staff of assistants, for research work; draining has been carried out in several towns, and quinine freely distributed. In the United Provinces two medical officers have been appointed for research; a provincial and eight divisional committees are at work making inquiries, educating the people, and popularising the use of quinine; in four specially selected districts travelling dispensaries have toured from village to village giving medical relief.

In the Punjab, in addition to the establishment of a provincial committee and chief malarial officer, Major Christophers was specially employed in 1909 to investigate the very severe epidemic prevalence. His report has just been published, showing that periodical flooding has been an important factor, and that preventive measures are quite practicable. In Eastern Bengal and Assam Major Christophers and Dr. Bentley inquired into the incidence of blackwater fever; their report of 1908 settled many vexed questions regarding its etiology. Their recommendations have been carried out by a large number of planters in the province, and great improvement in regard both to blackwater fever and malaria has already resulted. Consequent on a second report by the same officers on malaria in the Duars in 1909, a committee has been appointed to inquire into the sanitary and economic conditions of the tea-garden coolies. In the Central Provinces and in Burma committees and special investigation officers have also been appointed.

Similar action, *mutatis mutandis*, has been taken with regard to plague prevention. A yearly grant of 30 lakhs of rupees (about £200,000) has been devoted to the improvement of sanitation, with special reference to plague. In the present financial year an additional special grant of 57 lakhs has been made for expenditure chiefly on drainage schemes likely to improve malarial conditions in towns.

This brief recital of the more important, though not by any means of the whole, of the measures adopted by the Government of India in regard to disease prevention will show that the Imperial authorities are fully alive to the importance of preserving the health of the community, and are grappling with the inevitable difficulties in a scientific and statesmanlike fashion. In such a vast area, with such widely differing local conditions, there can be no sudden cessation of epidemic disease from Cape Comorin to the Himalaya; but improvement has already been very perceptible, and we feel assured that it will be progressive.

[1] THE LANCET, Oct. 28th, 1911, p. 1221.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The annual meeting of Fellows and Members will be held at the College, Lincoln's Inn-fields, on Thursday, Nov. 16th, at 3 o'clock P.M., when the report of the Council will be laid before the meeting. Fellows and Members can obtain copies of the report on application to the secretary, and can, if they so desire, have their names placed on the list of those to whom the report is sent annually. Motions to be brought forward at the meeting must be signed by the mover, or by the mover and other Fellows and Members, and must be received by the secretary not later than Nov. 6th. A printed copy of the agenda will be issued to any Fellow or Member who may apply for one on or after Nov. 13th.

THE LONDON COUNTY COUNCIL AND THE DENTAL TREATMENT OF SCHOOL CHILDREN.

A REPORT was presented to the Education Committee of the London County Council on Nov. 1st with regard to the results obtained in the experimental schemes for the dental treatment of school children begun during the year in four districts of London. Agreements were entered into with the Poplar Hospital for Accidents, the St. George's Dispensary, Blackfriars, the Deptford Health Centre, and the Wandsworth Medical Treatment Centre.

The Progress of the Local Experiments.

The report stated that with regard to the Deptford and Poplar experiments, while the Council realised that the most appropriate age-group from a purely dental point of view was from six to eight years of age, the period of eight to nine was selected because the ordinary medical inspections included the examination of children of this age, and because it was known that a considerable amount of dental caries existed among those children, for which it would be necessary to provide facilities for treatment. In both cases it was found at an early stage to be necessary to supplement the work of the school medical officers by special dental inspections, and the Council sanctioned the reduction of the time allotted to treatment from ten to nine sessions a week, and authorised the employment of the dentist on the remaining session for the dental inspection of children attending schools in the areas served by the respective centres. The Council, on March 7th, 1911, and on July 4th, 1911, approved two further experiments—viz., (1) at St. George's Dispensary, Blackfriars, and (2) at the Wandsworth Medical Treatment Centre. As special dental inspections had become necessary, the reason for the selection of the older age-group was removed, and the Council, in these two experiments, provided for the treatment of children between six and eight years of age, and for the treatment, in special cases, of children of other ages. Arrangements were made for the dentist in each case to be employed on one session a week to conduct dental inspection in the schools and to select cases for treatment. From the outset it was recognised that difficulty would be experienced in obtaining the consent of the parents, owing to the fact that, in the absence of actual suffering, the need for treatment was not generally appreciated. With a view, therefore, of educating parents in dental hygiene the Council sanctioned lectures by Mr. C. E. Wallis in the vicinity of the centres, and leaflets and cards on the care of the teeth had been circulated. The experimental period at Deptford and at St. George's Dispensary would expire on Dec. 31st, 1911, and it was necessary to decide whether the arrangement should be continued. The consent of the Board of Education in both cases was given on the understanding that, in the event of any application for renewal, the Board would be supplied with reports upon the working of the schemes in sufficient time for consideration before the end of the experimental period.

The Results Obtained.

At the Deptford centre the agreement provided for the treatment of 3960 cases per annum. During the 29 working weeks ended Sept. 30th, 1911, 1594 children were treated, or at the rate of 2420 a year. In addition to 2563 extractions and 2690 fillings some 300 minor operations, such as medical dressings in teeth, scaling, and cleansing had been performed. Of fillings performed 2481 were permanent teeth and 209 temporary; and of extractions 364 were permanent teeth and 2199 temporary. With regard to the discrepancy between the number treated and the number provided for, it should be pointed out that the deficiency was much more serious at the beginning of the scheme than at the present time—e.g., out of a possible 180 appointments during the fortnight ended Jan. 21st, 1911, 49 appointments were kept, while during the fortnight ended Oct. 21st, 1911, 138 children attended the centre. The dentist reported that considerable advantage had resulted from the inspections conducted by him in the schools, inasmuch as they had afforded him an opportunity of arousing the interest of the teachers and children in the work. The experiment at St. George's Dispensary was put into operation in May, 1911. The agreement provided for

the treatment of six cases a session (approximately 1300 a year), but whenever possible endeavour had been made to secure the attendance of eight new cases a session (approximately 1760 a year). During the 16 working weeks ended Sept. 30th, 1911, 457 children attended the centre, or at the rate of 1250 a year. There could be no doubt that dental caries was sufficiently prevalent to justify all the provision for treatment made in the districts served by these two centres, which, notwithstanding the difficulties incidental to the inauguration of new schemes of this nature, had done good work.

In view of the impending reorganisation of the Council's medical work, the committee did not propose to deal with the general question of the dental treatment of children, but the two centres were quite suitable for retention as part of a permanent scheme, and the local committees were prepared to continue the work. All the dentists concerned were in agreement that an anæsthetic was essential in difficult cases of extraction, but no provision had been made for dealing with these cases, and it had been necessary at all the centres to withhold treatment. The Council, however, on August 1st, 1911, sanctioned the employment of an anæsthetist in connexion with the treatment at the Poplar Hospital, and it was proposed that this provision should be extended to all the schemes. On the question of age, it was proposed to provide for the treatment of children from six to eight years of age, selected as the result of special dental inspections, and also, for the present, for the treatment of children of eight to nine years of age selected by the school medical officers, and of any specially urgent cases which might arise. The basis of payment by the Council was £50 a year for one half-day's service a week of the dentist or anæsthetist, and 2*s*. per case treated.

The cost involved in the two schemes was therefore as follows:—Deptford Centre: Salary of dentist (seven half-days a week), £350; salary of inspecting dentist (one half-day a week), £50; anæsthetist (one half-day a week), £50; capitation grant on 3080 cases, £308; total, £758. St. George's Dispensary: Salary of dentist (five half-days a week), £250; salary of inspecting dentist (one half-day a fortnight), £25; anæsthetist (one half-day a fortnight), £25; capitation grant on 1760 cases, £176; total, £476. The sub-committee recommended that, subject to the approval of the Board of Education, the agreements with the Deptford Health Centre and the St. George's Dispensary, Blackfriars, be renewed as yearly agreements as from January, 1912.

The proposal was approved and the report was forwarded to the Council.

THE TECHNICS OF PLUMBING.—A meeting to inaugurate a course of special lectures on sanitary plumbing was held on Oct. 18th at the London County Council Schools, Ferndale-road, Brixton. The lectures are instituted by the Council for the National Registration of Plumbers under the auspices of the Worshipful Company of Plumbers and the London County Council. Mr. W. D. Caroë, M.A., F.S.A., architect to the Ecclesiastical Commissioners and Past Master of the Plumbers' Company, took the chair, in the absence of the present Master, the Lord Mayor. The meeting was well attended. Mr. Caroë having read a letter from the Lord Mayor regretting his inability to be present, said that he considered the lectures, being given by practical men well versed in all the technicalities of the trade, should inspire confidence in those attending them, and promised to move the court of the Plumbers' Company to offer some award to the successful students. Mr. Fretwell, teacher of sanitary plumbing, then delivered a lecture on Domestic Water-supply. The lecturer described the various forms of boilers and methods of circulating hot water by cylinder, tank, and auxiliary systems. Diagrams were shown, and the relative cost of heating water by coal and coke fires and electricity was gone into. In conclusion, Mr. Caroë congratulated Mr. Fretwell on the lucidity of his lecture, which he (Mr. Caroë) would like to see in print. The usual vote of thanks followed. After the lecture specimens of the standardisation mark applicable to plumbers' work under the regulations of the Board of Trade were shown on pipes of lead, cast and wrought iron, and copper, and the system of marking was explained by the clerk of the Plumbers' Company, Mr. W. R. E. Coles.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH FOR 1910.

City of Liverpool.—Dr. E. Hope's annual volumes form one of the most instructive records of municipal sanitary progress which we possess, and his last report, like its predecessors, is a model in form, arrangement, and illustration. The population of Liverpool is estimated for 1910 at 743,295. The Registrar-General's estimate, based on the 1901 and previous Census returns, approximated closely to the figures obtained by actual enumeration in 1911, and in this respect Liverpool contrasted markedly with Glasgow, Edinburgh, Birmingham, Leeds, and other large cities where the numbers proved to be considerably below anticipations. The usual thinning of the population of the central parts of a great city is, however, seen in Liverpool as elsewhere; during the last ten years the increase has been towards the city boundaries, especially in Walton, West Derby East, and Wavertree. The high birth-rate of Liverpool was maintained in 1910, being 31 per 1000, against 24·8 for England and Wales; the death-rate has declined to 17·9 per 1000, the lowest so far recorded, representing a reduction of 25 per cent. in 15 years. The report gives particulars of the progress made in dealing with insanitary dwellings and houses unfit for human habitation, and has interesting sections on the result of the continuous efforts made in Liverpool to improve the food- and milk-supply. On the latter question Dr. Hope gives further facts which prove that the cowsheds and cows within the city are in a more satisfactory condition than those in the country whence milk is dispatched to Liverpool. In regard to tuberculosis, four samples out of 289 milks of "town" origin proved infective on guinea-pig inoculation, against 15 out of 323 country samples. Dr. Hope draws attention to the enormous reduction in the mortality of scarlet fever which has been effected during the past 30 years, and inquires whether similar reduction may not be practicable in the case of measles and whooping-cough. There is no doubt that much of the spread of the latter disease, particularly in tenements, could be obviated by hospital isolation, but the fact that so huge a proportion of those attacked are infants who would need to be accompanied by their mothers presents a considerable difficulty. Isolation for a limited number of cases, both of measles and whooping-cough, has, however, been provided in the city hospitals. In dealing with tuberculosis Dr. Hope insists on the association of the disease, all through the history of Liverpool, with the construction of its mean streets and alleys and the thousands of insanitary courts and cellar dwellings, which at one time housed as many as 120,000 people. In connexion with the clearance of certain insanitary areas by the corporation, some 2400 appropriately constructed dwellings have been erected which are let exclusively to former tenants of the areas demolished or to tenants displaced by the corporation from equally insanitary dwellings in the vicinity.[1] In contrast to what frequently obtains elsewhere, in these cases at least 80 per cent. of the occupants were previously the occupants of the former insanitary areas, most of them in extreme conditions of poverty and dependent upon precarious labour for a living. At the time these areas were condemned evidence was available to show that for many years there had been a remarkable incidence of phthisis amongst these people, the average annual death-rate approximating to 4 per 1000. The rate amongst these same people in their new surroundings has fallen during the last two years to 1·9 per 1000, the most material difference being the change of dwelling, together with such alterations in their social habits as have ensued from the change. Hospital accommodation for phthisis cases is at present provided out of funds derived from rates by four independent public authorities in Liverpool. Twenty-five years ago the same observation was applicable to all forms of infectious disease, many of which were dealt with under the Poor-law, and Dr. Hope considers that the time may be approaching for a further advance in dealing with tuberculosis by transfer to the public health authority of such responsibilities connected with the disease, apart from the destitution resulting from it, as are at present

[1] THE LANCET June 18th (p. 1718), and July 2nd (p. 60), 1910.

accepted by the Poor-law authorities. The latter authorities in Liverpool have in recent years spent large sums in erecting hospitals, admirable of their kind, for the accommodation of chronic consumptive patients, and now accommodate some 600 patients either in these special hospitals or in the general Poor-law infirmaries. The public health authority has not at present more than 60 beds available for phthisis. It remains to be seen whether the introduction of an entirely new authority, the Health Committee of the National Insurance Bill, will merely augment the existing administrative confusion to which Dr. Hope refers or can usefully adapt the existing machinery. The voluntary system of notification of phthisis has worked more efficiently in Liverpool than in many other towns. Dr. Hope considers that at present practically all cases are notified in which the public health authority can be of service, and that whether all cases of phthisis should be scheduled for notification is really a matter for the medical profession to determine, and largely on the grounds of its own convenience. The report contains an instructive analysis of the reports on cases of phthisis made by Dr. W. L. Hawksley and the sanitary inspectors specially engaged in home visiting. The school children notified during the year to be suffering from pulmonary tuberculosis numbered 344, and attended as many as 110 elementary public schools. There appears to be no evidence of special incidence on any one school, although generally those in the old city area have a relatively greater number of cases. The future history of these cases, if it can be obtained for a sufficient number of years, should be of much value in determining the significance and prognosis of pulmonary tuberculosis reported at school ages. Out of 23,054 births in the city during the year, 17,257 were attended by midwives. One registered midwife attended over 500 cases, while 90 attended less than 50 cases. The average was 70 cases to each midwife in practice. Medical assistance was required by midwives in 1015 cases during the year. The health committee continues to be responsible for a fee of a guinea for every case of emergency attendance by a medical practitioner at the request of a midwife, provided that the fee cannot be obtained from the patient's friends or the board of guardians. Dr. Hope states that the arrangement has given general satisfaction; the total amount paid by the health committee in 1910 was £464. For ophthalmia neonatorum advantage is taken of the provision of a small ward at St. Paul's Hospital, where infants only a few days old can be received with their mothers, and private generosity has enabled a hospital-trained nurse to be appointed to visit the homes of those patients whose parents are unable to provide adequate attention. It is somewhat surprising that so little favour is shown to cremation in Liverpool. A properly equipped crematorium was provided in 1896 at Anfield cemetery, and its administration was taken over by the corporation in 1908. Only 501 cremations have taken place since 1896, the number in 1907 being 37, if anything a little below the average.

City of Cork.—This city, according to Mr. Denis D. Donovan, possesses the unenviable notoriety of having the highest consumption death-rate of any town in Great Britain and Ireland. There were 233 deaths from phthisis in 1910, a rate of 3·06 per 1000. Mr. Donovan renews his advice that cases of the disease should be made compulsorily notifiable, the voluntary system having resulted in producing no more than 38 notifications in 1910. It is obvious that the prevalence of tuberculosis in Cork is closely dependent on the housing conditions of the population. Out of a total of 12,480 houses some 1300 are without backyards, and some 1800 are tenement houses. The latter contain about 23,000 occupants, approximately a third of the population. Many of them are old and decayed, and some hopelessly dilapidated. Mr. Donovan considers that a very large number of these dwellings are so structurally bad and so dirty that any form of patching or mending them would be useless. On the other hand, he regards their demolition as hopeless until new accommodation is available for those displaced. In this matter he strongly advises the corporation to undertake a large construction of cottages on the outskirts of the town—a practice already begun with satisfactory results—in place of any efforts to house the people on the spot in new tenement dwellings. Mr. Donovan draws attention to the recent construction of 21 private slaughter-houses outside the borough boundary, where considerably more animals are now slaughtered than in the city slaughter-houses, where strict inspection takes place. He advocates also provision of a public abattoir with general closure of the private establishments in the locality.

Ross and Cromarty.—Dr. William Bruce's report on this county embodies some interesting observations on public health matters in the island of Lewis made by Dr. D. Murray, the district medical officer of health. The directions in which improvement is required are now fairly well known, but it is only practicable to press for alterations in the habits of the people with any prospect of success if they first realise the reason of the changes they are asked to make. On this view Dr. Murray has made a special point of supplementing his inspections of schools in the island by evening lectures in Gaelic to parents on the Prevention of Consumption and the Care of School Children, and finds his advice taken in good part and with evident gratitude. The tweed-making industry has grown rapidly in recent years, and in some districts nearly every woman is employed. This necessitates almost constant work inside the house, often until the small hours of the morning. There is reason to fear that the health of the women will by-and-by show deterioration owing to the curtailment of work in the open-air. Infections such as those of measles and whooping-cough are frequently introduced from one village to another by special gatherings, particularly local communions, and Dr. Murray pleads for a recognised rule against any person from an "infected district" attending services outside his area without medical sanction. Typhus fever still occasionally shows itself in the island; nine members of a family in a house in Balallan were affected during the year. A curious prevalence of enteric fever, strongly suggesting the operation of a carrier, has occurred in the remote parish of Uig during the last five years.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7449 births and 4128 deaths were registered during the week ending Oct. 28th. The annual rate of mortality in these towns, which had steadily decreased from 21·2 to 14·4 in the nine preceding weeks, further declined to 13·3 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these towns averaged 14·5 per 1000, and was equal to that recorded in London during the same period. The death-rates in the 77 towns last week ranged from 4·5 in Handsworth (Staffs.) and in King's Norton, 6·8 in Hastings, and 7·5 in Northampton, to 18·7 in Wigan and in Oldham, 18·9 in Hull, and 21·3 in Middlesbrough. The 4128 deaths from all causes in the 77 towns were no fewer than 322 less than the number returned in the previous week, and included 334 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 406 in the nine preceding weeks. Of these 334 deaths, 164 resulted from infantile diarrhœa, 48 from measles, 46 from diphtheria, 30 from whooping-cough, 28 from enteric fever, and 18 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·1 per 1000, against 1·7 and 1·3 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœa, which had steadily decreased from 2714 to 223 in the nine preceding weeks, further declined to 164 last week, and caused the highest annual death-rates of 1·7 in Rhondda, 2·0 in Burnley, 2·7 in St. Helens, and 4·1 in Wigan. The deaths referred to measles, which had increased from 19 to 37 in the four preceding weeks, further rose last week to 48; the highest annual death-rates from this disease were 1·3 in Norwich, 2·4 in Burnley, and 3·3 in Wolverhampton. The fatal cases of diphtheria, which had been 46, 44, and 60 in the three preceding weeks, declined to 46 last week, and included 12 in London and its suburban districts, and 3 each in Birmingham, Manchester, and Leeds. The deaths attributed to whooping-cough, which had declined from 55 to 25 in the three preceding weeks, rose last week to 30; 3 deaths were recorded in London, 3 in Manchester, and 2 each in Stoke-on-Trent, Birmingham, Burnley, Hull, and Rhondda.

The deaths referred to enteric fever, which had risen from 35 to 48 in the four preceding weeks, declined to 28 last week, and included 7 in London, 4 in Hull, 3 in Northampton, 3 in Birmingham, and 2 in Bradford. The fatal cases of scarlet fever numbered 18, against 10 and 13 in the two previous weeks, and of these 4 were registered in London, and 2 each in Walthamstow, Stoke-on-Trent, Birmingham, Leeds, and Rhondda. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 2106 in the eight preceding weeks, had further advanced to 2180 on Saturday last; 297 new cases of this disease were admitted to these hospitals during the week, against 293, 355, and 344 in the three preceding weeks. These hospitals also contained on Saturday last 1148 cases of diphtheria, 177 of whooping-cough, 162 of enteric fever, and 84 of measles, but not one of small-pox. The 1132 deaths from all causes in London last week were 107 fewer than the number in the previous week, and included 210 which were referred to diseases of the respiratory system, against numbers steadily rising from 73 to 228 in the eight preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 170 and 150 in the two preceding weeks, rose to 158 last week, and 327 inquest cases were registered. The causes of 30, or 0·7 per cent., of the deaths registered in the 77 towns during the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, Nottingham, Salford, and in 54 other smaller towns. The 30 uncertified causes of death last week included 7 in Birmingham, 6 in Liverpool, 3 in Sheffield, 2 in Stoke-on-Trent, and 2 in Gateshead,

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 771 births and 548 deaths were registered during the week ending Oct. 28th. The annual rate of mortality in these towns, which had been 16·4 and 15·7 per 1000 in the two preceding weeks, rose to 16·7 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 15·9 per 1000, and was 1·4 per 1000 above the mean death-rate during the same period in the large English towns. The annual death-rates in the Scotch towns last week ranged from 8·3 and 13·1 in Greenock and in Perth to 18·6 in Glasgow and 19·4 in Leith. The 548 deaths from all causes in the eight towns were 35 in excess of the number in the previous week, and included 52 which were referred to the principal epidemic diseases, against 74 and 47 in the two preceding weeks; of these 52 deaths, 19 resulted from diarrhœa, 12 from measles, 8 from diphtheria, 7 from scarlet fever, 4 from whooping-cough, and 2 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·6 per 1000, and was 0·5 per 1000 above the mean death-rate from the same diseases in the 77 large English towns. The deaths attributed to diarrhœal diseases, which had been 33, 41, and 20 in the three preceding weeks, were 19 last week, and included 17 of infants under two years of age; 14 deaths were recorded in Glasgow and 4 in Dundee. The deaths attributed to measles, which had steadily risen from 1 to 9 in the four preceding weeks, further rose last week to 12, and comprised 8 in Aberdeen and 4 in Glasgow. The fatal cases of diphtheria, which had decreased from 13 to 5 in the four preceding weeks, rose to 8 last week, of which 5 were registered in Glasgow. The 7 deaths referred to scarlet fever were equal to the number in the previous week, and included 3 in Glasgow, and 2 Aberdeen. The 4 deaths attributed to whooping-cough were 1 fewer than the average in the three previous weeks, and included 2 in Glasgow. The fatal cases of enteric fever numbered 2, against 1 in each of the three preceding weeks, and were recorded in Glasgow and Perth respectively. The deaths referred to diseases of the respiratory system, which had averaged 79 in the three preceding weeks, rose last week to 111, and were 39 in excess of the number in the corresponding week of last year. Of the 548 deaths from all causes in the eight towns last week, 166, or 30 per cent., were recorded in public institutions, and 25 deaths were attributed to different forms of violence. The causes of 19, or 3·5 per cent., of the deaths in the eight towns last week were not specified or not certified; in the 77 large English towns the proportion of uncertified causes did not exceed 0·7 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 524 births and 377 deaths were registered during the week ending Oct. 28th. The annual rate of mortality in these towns, which had declined from 19·6 to 18·6 in the three preceding weeks, further decreased to 17·1 per 1000 in the week under notice. During the first four weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·7 per 1000; in the 77 English towns the mean annual death-rate during the same period did not exceed 14·5 per 1000, while in the eight Scotch towns it was equal to 15·9. The annual death-rate last week was equal to 18·0 in Dublin (against 13·1 in London), 16·7 in Belfast, 22·5 in Cork, 8·9 in Londonderry, 12·2 in Limerick, and 9·5 in Waterford; in the 16 smallest of these Irish towns the annual death-rate averaged 17·8 per 1000. The 377 deaths from all causes were 32 less than the number in the preceding week, and included 47 which were referred to the principal epidemic diseases, against numbers decreasing from 134 to 47 in the six preceding weeks; of these 47 deaths, 27 resulted from diarrhœal diseases, 9 from whooping-cough, 6 from measles, 2 from scarlet fever, 1 from enteric fever, 1 from typhus, and 1 from diphtheria, but not one from small-pox. These 47 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·1 per 1000. The mean rate from the same diseases in the 77 English towns did not exceed 1·1 per 1000, while in the eight Scotch towns it was equal to 1·6. The deaths attributed to diarrhœal diseases, which had steadily decreased from 121 to 31 in the six preceding weeks, further declined to 27 last week, and included 25 of infants under two years of age; 13 deaths were recorded in Dublin, 6 in Belfast, 2 in Londonderry, and 2 in Clonmel. The deaths referred to whooping-cough, which had averaged 2 in the four preceding weeks, rose to 9 last week, and comprised 5 in Dublin, 3 in Belfast, and 1 in Lurgan. The fatal cases of measles, which had been 2, 1, and 3 in the three preceding weeks, rose to 6 last week, of which 5 were recorded in Dublin and 1 in Cork. The deaths from enteric fever, typhus, and diphtheria occurred in Dublin, while those from scarlet fever were registered in Dublin and Belfast respectively. The deaths referred to diseases of the respiratory system, which had been 64, 50, and 66 in the three preceding weeks, declined to 57 last week. Of the 377 deaths from all causes in the Irish towns last week, 105, or 28 per cent., were recorded in public institutions, and 12 deaths were attributed to different forms of violence. The causes of 17, or 4·5 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 0·7 per cent. in the 77 large English towns, and was equal to 3·5 per cent. in the eight Scotch towns.

UNIVERSITY OF LONDON: FACULTY OF MEDICINE.—A meeting of the Faculty of Medicine was held at London University on Oct. 27th, Dr. Sidney H. C. Martin, Dean of the Faculty, being in the chair. The constitution of the boards of studies for 1912 with which the Faculty is concerned was duly arranged. A consideration of a report of the Board of the Faculty on the financial needs of the Faculty was adjourned. Dr. Leonard E. Hill having resigned his position as representative of the Faculty in the Senate of the University, a ballot took place to elect his successor. Two nominations had been received, and the result was as follows: Dr. Herbert Lightfoot Eason, 42 votes, and Mr. Henry Betham Robinson, 18 votes. Dr. Eason was declared to have been elected. The proceedings then terminated.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeon H. Clift to the *Venerable*, on recommissioning. Surgeons: P. B Egan to the *Halcyon*, additional for the *Skipjack*, and J. D. Keir to the *Venerable*, on recommissioning.

ARMY MEDICAL SERVICE.

Colonel Herbert J. R. Moberly is placed on retired pay (dated Oct. 26th, 1911).

Lieutenant-Colonel Henry O. Trevor, from the Royal Army Medical Corps, to be Colonel, vice H. J. R. Moberly (dated Oct. 26th, 1911).

ROYAL ARMY MEDICAL CORPS.

Major Charles R. Elliott to be Lieutenant-Colonel, vice H. O. Trevor (dated Oct. 26th, 1911).

The undermentioned Captains to be Majors (dated Oct. 25th, 1911): Thomas E Fielding, Charles H. Straton, James M. Cuthbert, and Robert T. Brown.

Captain Herbert O. M. Beadnell is placed temporarily on the Half-pay List on account of ill-health (dated Oct. 17th, 1911).

Captain Alexander D. Fraser, from the Seconded List, is restored to the establishment (dated Oct. 24th, 1911).

Colonel R. H. Forman, principal medical officer of the Bombay Brigade, at present on leave of absence, has been struck off the strength of the Indian establishment, with effect from Nov. 2nd, on reaching the age limit. Lieutenant-Colonel T. B. Winter, senior medical officer in charge of recruiting duties in London, has been selected to officiate as Administrative Medical Officer of the London District, in succession to Colonel A. Peterkin, who has been retired on reaching the age limit. Lieutenant-Colonel H. M. Sloggett has taken up duty at the Military Hospital in Malta. Lieutenant-Colonel J. B. Wilson, in charge of the Surgical Division of the Royal Herbert Hospital, Woolwich, has been detailed by the War Office to proceed to Jamaica during the ensuing trooping season for a tour of foreign service. Lieutenant-Colonel T. McCulloch, in medical charge of the military hospital at Calcutta, has been appointed for duty on board the transport s.s. *Rewa*, which left Bombay for Southampton on Oct. 12th. Major G. S. McLoughlin, D.S.O., on the expiration of his appointment as medical inspector of recruits in the Western Command, has been transferred from Chester to the Southern Command. Major D. J. Collins has taken up duty as Specialist Sanitary Officer to the Dublin District. Major T. B. Beach, company officer of the 33rd Company of the Royal Army Medical Corps stationed at Cairo, has arrived home on leave of absence. Major B. F. Zimmerman has taken up duty at Lancaster as Medical Officer in charge of troops and their families. Major A. L. A. Webb has embarked for a tour of foreign service on the West Coast of Africa. An exchange of positions on the roster for service abroad has been sanctioned by the Director-General between Major L. P. More, serving at Portsmouth, and Major L N. Lloyd, D S.O., adjutant of the School of Instruction, London; the former will accordingly proceed to India for a tour of duty with the Northern Army. Major F. J. C Heffernan has left the London District for duty in India. Major A. H. Waring, from Portland, has taken up duty at the Military Hospital at Gosport as Officer in Medical Charge. Captain J. E. H Gatt has been transferred from Benares to the Station Hospital at Allahabad. Captain L. Bousfield, on the closing of Honiton Camp, has been posted to Devonport. Captain A. H. T. Davis, on completion of a course of instruction at the X ray institute at Dehra Dun, has joined for duty at Secunderabad. Captain J. M. H. Conway, from the Royal Infirmary, Phœnix Park, Dublin, has been selected for appointment as Adjutant to the West Riding Division, Royal Army Medical Corps, School of Instruction, at Leeds. Captain T. J. Potter, on return from special duty under the Colonial Office in Jamaica, has been posted as a Recruiting Medical Officer in London. Captain P. Sampson has been transferred from Sialkot to Upper Topa. Captain P. S. Lelean, specialist sanitary officer to the Seventh (Meerut) Division, has been granted one year's extension of his Indian tour of service. The following Captains have been detailed for the nine months' course of instruction for promotion to the rank of Major at the Royal Army Medical College, London, which commenced on Nov. 1st:—G. E. Cathcart, J. A. Turnbull, D. P. Johnstone, E. H. M. Moore, F. J. Garland, R. J. Cahill, S. C. Bowle, A. S. Arthur, P. Dwyer, H. T. Wilson, R. C. Hallows, G. A. D. Harvey, M. Sinclair, A. N. Frazer, H. St. M. Carter, K. A. C. Doig, P. A. Lloyd-Jones, J. St. A. Maughan, L. V. Thurston, A. W. Gater, J. P. Lynch, R. K. White, E. B. Booth, E. G. R. Lithgow, J. S. Pascoe, G. H. Richard, W. McConaghy, A. A. Sutcliffe, H. E Gotelee, E. J. Elliot, and J. H. Gurley. Lieutenant F. B. Dalgliesh, who is attached to the Station Hospital at Mhow, has been granted six months' leave of absence home from India.

INDIAN MEDICAL SERVICE.

Colonel H. Hendley, principal medical officer of the Sirhind and Jullundur Brigades, Lahore Division, has been selected by His Excellency the Commander-in-Chief in India for appointment as Deputy Principal Medical Officer of His Majesty's Forces in India in succession to Colonel D. ffrench-Mullen, whose tenure of the appointment has expired. Lieutenant-Colonel H. R. Woolbert, first-class agency surgeon, Bengal Presidency, has been granted six weeks' leave of absence. Major W. Selby, civil surgeon of Lucknow, has been placed on special duty in connexion with the Lucknow Medical College. Major H. J. Walton, civil surgeon at Bulandshahr, has been transferred in the same capacity to Saharanpur. Major C. Milne, on return from leave, has taken up the appointment of Civil Surgeon at Jhansi. The services of Captain N. S. Wells have been placed permanently at the disposal of the Government of the United Provinces of Oudh and Rohilkhand. Captain J. C G. Kunhardt, on special duty under the Sanitary Commissioner with the Government of India, has been granted three months' privilege leave of absence. Captain K. W. Mackenzie has been appointed Specialist in Midwifery and Diseases of Women and Children to the Fifth (Mhow) Division by His Excellency the Commander-in-Chief in India. Captain H. M. H. Melhuish has been transferred to Delhi as District Plague Medical officer. The services of Captain M. F. Reaney have been placed permanently at the disposal of the Honourable the Chief Commissioner of the Central Provinces by the Government of India. Captain A. S. M. Peebles has been selected for appointment as superintendent of the Central Asylum at Berhampore, Bengal Presidency, in succession to Major C. Robertson-Milne, deceased. Captain J. D. Sandes, officiating resident physician at the Medical College Hospital, Calcutta, has been granted privilege leave of absence for one month. His Excellency the Governor of Bombay in Council has been pleased to appoint Captain B. B. Paymaster to be a Civil Surgeon of the Second Class and to continue to do duty as Acting Civil Surgeon at Karwar. Captain E. J. C. McDonald has taken up duty in Eastern Bengal for civil employment and has been appointed to the Medical Charge of Sibsagar District, Assam. Captain C. A. Sprawson has been placed on Special Duty in connexion with the Lucknow Medical College. Captain R. Steen, civil surgeon, Bengal Presidency, has rejoined from study leave of absence. Captain A. G. Coullie has been appointed a Specialist in Advanced Operative Surgery. The services of Captain J. Buckley have been temporarily placed at the disposal of the Government of the Punjab for Employment on Plague Duty.

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd South Midland Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains (dated Oct. 1st, 1911): Lieutenant James S. Mather and Lieutenant Thomas A. Green.

1st Northumbrian Field Ambulance, Royal Army Medical Corps: Lieutenant John M. Gover to be Captain (dated Oct. 1st, 1911).

2nd Southern General Hospital, Royal Army Medical Corps: Cadet Frederick Cecil Nichols, from the Birmingham University Contingent, Senior Division, Officers Training Corps, to be Quartermaster, with the honorary rank of Lieutenant (dated Oct. 25th, 1911).

Attached to Units other than Medical Units.—Captain Thomas A. Sellar to be Major (dated August 29th, 1911). Captain David Westwood resigns his commission (dated Oct. 25th, 1911).

THE JAPANESE NAVAL MEDICAL DEPARTMENT IN THE RUSSO-JAPANESE WAR.

The third instalment of the translation of the Japanese Naval Medical report on the late war by Dr. Chemin, staff surgeon in the French Navy, appears in the October number of the *Archives de Médecine et Pharmacie Navales* (O Doin, Paris, 2 francs), and should be read by every naval surgeon.[1] In the battle of the Yellow Sea (August 10th, 1904) the flagship, *Mikasa*, had an ambulance party of 26—12 men on the upper deck (of whom 9 were either killed or wounded), 11 down below, and 3 superintending petty officers. Of the 75 wounded who were treated at the dressing stations 42 walked down by themselves, 29 were carried down "man-handled," and only 4 came on stretchers. The wounded got a first dressing during the action at the dressing stations, which are in places protected indeed, because behind the armour, but very hot and stuffy. So after the battle the wounded were first removed to more convenient places, then taken one by one to the operating room and dressed again that night. After a first visit had been made next morning necropsies of those killed in battle were undertaken. For the battle of Tsushima (May 27th and 28th, 1905) most careful medical preparations were made by Admiral Togo and Surgeon-General Suzuki Shigemichi, who was also on board the *Mikasa*. As we have said before,[2] the principal medical officer of a Japanese fleet lives in the commander-in-chief's mess; that will in time be the case in our navy too. It was ordered that an abundance of dressings were to be prepared, and first-aid dressings to be put on deck in places conspicuously marked; they were also to be carried by stretchermen. Ice was to be available for treating contused wounds of important organs, and fans were to be provided to alleviate the discomfort of the wounded in the dressing stations, which of necessity in parts of the ship at any time hot are particularly uncomfortable in action with the hatches over them shut. It was considered well that men should bathe themselves before an action and put on clean clothes in case they are wounded. Spare operating blouses were to be ready for the surgeons. Stokers, especially in torpedo boats and destroyers, were to wear clothing covering them all over so that as little skin as possible might be exposed to the risk of scalding by escaping steam. It was not enough to give the men wadding to protect their ears from gunfire; medical officers were to go round before the battle and see the plugs were properly adjusted, not too loose nor too tight. Stretchermen were only to be on the upper deck when required; at other times they were to remain down below behind protection—i.e., armour. There was to be plenty of water for the wounded and they were to get as much to drink as they wanted. If in second-class cruisers and small craft ward-rooms were used as dressing stations, curtains and canvas were to be hung all round them to reduce damage by splinters. A nominal list of killed and wounded was to be forwarded immediately after, and men blown to pieces should be so noted in the column for remarks. In this battle the Japanese lost only 3¼ per cent. both killed and wounded, of whom ½ per cent. were killed. This section of Dr. Chemin's translation is full of information of the greatest value to every surgeon of a ship.

QUEEN ALEXANDRA'S NURSING SERVICE.

The regulations for this service for 1911 have just been issued. The limit of age for candidates is 35 and the pay as follows: Nursing sisters on entry, £40 per annum, rising by increments of £2 10*s.* yearly to £45; nursing sisters after three years, £50, rising by increments of £5 a year to £65; superintending sisters £70, rising by increments of £5 a year to £100; and head sisters £130, rising by increments of £10 to £160. The appointments are pensionable, and the head, superintending, and nursing sisters will be regarded as officers of the hospital, taking a position immediately after the surgeons.

ROYAL ARMY MEDICAL CORPS (TERRITORIAL FORCE): FIRST LONDON DIVISION.

The challenge cup for divisional field work, presented by Major E. B. Waggett, was competed for on Saturday last at Hendon. Three units competed, the 1st City of London Field Ambulance (Lieutenant-Colonel R. R. Sleman), 2nd City of London Field Ambulance (Lieutenant-Colonel J. Norwood Brown), and 3rd City of London Field Ambulance (Lieutenant-Colonel J. Harper). The competition consisted of a tactical scheme drawn up by Colonel B. P. Giles, C.B. (A.M.O. of the Division), on lines suggested by the donor, and included the entire operation of a complete section of a field ambulance under service conditions. The judges were Brevet Lieutenant-Colonel A. P. Blenkinsop and Major G. B. Stannistreet, R.A.M.C. The order was that each section should be formed up ready for work with transport at 4.30 P.M. However, the difficulties of getting men together, owing to their civil employment and the condition of London street traffic, prevented two of the units being on parade to time. At 4.30 to the minute the judges ordered the 1st Field Ambulance to commence. Later on the 2nd and 3rd Field Ambulance arrived, and, no objection being raised, also competed. As soon as it was dark the acetylene lamps and search-lanterns were used, and gave a very realistic representation of what happens in clearing the field of wounded at night. When the "Cease fire" sounded the judges gave their decision that the 1st Field Ambulance were the winners of the cup, the 3rd Field Ambulance being second, and the 2nd Field Ambulance third. The "Officers' call" was then sounded, and Colonel Giles gave the judges' decision and criticism. He complimented Captain A. Elliot, who was in command of the winning section, upon so successfully surmounting the difficulties of getting his transport through London at the appointed time. Captain Elliot had as his subalterns Lieutenant D. C. L. Fitzwilliams and Lieutenant Arthur D. Williams. It is understood that in future the competition will take place during the second week of annual training.

[1] See THE LANCET, Sept. 23rd and Oct. 7th, 1911.
[2] THE LANCET, June 3rd, 1911.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—As one opposed to any system of payment by fee may I be allowed as briefly as I can to state the grounds on which I base my objection and at the same time give reasons for my preference for the *per capita* system?

I hold one appointment (coastguards) in which payment is made by fee. The amounts received annually have varied over a period of 12 years from nothing to £4. Under the Post Office rate *per capita* I think I should have received more, but at least I should have been paid a fixed sum quarterly and been spared much anguish in making out returns, claims, and what not.

I hold the Post Office appointment under which payment is *per capita*. The pay order comes punctually at the quarter, and there is no fuss about it at all. The only return required is an annual report of the work done.

I hold several society appointments in which of course payment is also *per capita*, and here again it is like a salary should be—paid punctually; one knows the exact amount due, and the day it will be paid. There are no reports to make at any time—the clerical work is practically *nil*. Payment for union work is by salary and the amount of clerical work involved is considerable at times.

I have also a private surgery club for men, women, and children. Premiums I fix myself, and they vary according to age and my estimate of "health value."

An interesting calculation discovers the fact that half my income is derived from these appointments and that the members number *less than one third* of the total of my *clientèle!* The amount derived by "private practice" (including all confinement fees) from two-thirds of the total number of "my patients" is not more now than it was ten years ago, although the number has actually increased by at least 200 in that time. In the harvesting of one-half my income there is involved no making and sending out of bills, with all the worry attaching thereto, and it is only for the union portion of this half that there is any clerical work worth mentioning. For the other half, which comes from my "private practice," day-books, cash-books, and ledgers have to be posted, bills and receipts sent out, and heaven knows what besides. Of the total laboriously entered in my ledger every year I calculate that one-third will never be paid. There is ten times, perhaps 20 times, more clerical work required to get in this "private" half of my income than there is for the other. I have not got actual figures to show the number of visits made for each half of my income, but I

am convinced that there is less for the contract half than for the private, and I am certain there is far less worry. My relations with club patients, club officials, and guardians have always been perfectly agreeable, and everything runs smoothly from year to year. In regard to contract work, one's first and last wish is to get the patient off one's hands by getting him well in as short a time as possible, and there is no dread of being accused of making too many visits—there cannot be a glimmer of a suspicion in anybody's mind that you are going to the case too often. It seems to me this dread would with many of us operate strongly under any system of "payment by fee." There would always be people ready to accuse the doctor of this form of dishonesty—that is, making unnecessary visits (*vide Nineteenth Century*, July, 1911). This fee system is not only contrary to public weal, but I firmly believe is likely to be less remunerative, advantageous, and convenient to doctors than a system under which we shall be paid *per capita*, provided, of course, the premium is not less than the Post Office rate. One must remember that the sickness-rate is declining every year, that hospitals take operation cases off the private practitioner's hands, that in towns isolation hospitals rid him of his infectious cases, and that sanatoriums (if the Act is passed) will relieve him of his tuberculous cases. Various other agencies are at work in the community, which all tend to diminish our private practice—hospitals, patent medicines, medical advice in newspapers, popular medical books, ambulance and nursing classes, improved education, increased facilities of travel, diminishing birth-rate, &c. Every year the income derivable from a given number of the public is a diminishing quantity, and I am convinced that the only hope for the general practitioner is in extending his contract work.

Why the *per capita* system should be denounced as "immoral, dishonest, and demoralising" I fail to see. Should not the boot be on the other leg? (see *Nineteenth Century*). If these adjectives had been applied to the fee system—as they have been—I should have been less surprised. Speaking for myself, I have ofttimes felt "immoral" in charging 2*s*. 6*d*. for a visit to the sick child or wife of an agricultural labourer earning the munificent wage of 15*s*. per week, and I feel demoralised absolutely when I receive it, an event which happens occasionally. Are army and navy surgeons, medical officers of asylums, house surgeons and house physicians, school medical officers, medical officers of health, ships surgeons, doctors at such places as Hong-Kong, Canton, &c., all to be branded as immoral and dishonest because they work on a contract system and not by fee per visit? An asylum medical officer with 600 lunatics under his charge gets £150 a year whether there is much or little sickness amongst them. If he was paid 8*s*. *per capita* his income would be £240, and this is more than it probably would be if he was paid 2*s*. 6*d*. a visit. Some writers seem to think that *per capita* means per "sick person" instead of "per unit of working class."

If the fee system is adopted records of each case will have to be kept, accounts would have to be sent in and carefully scrutinised by officials, various returns would have to be periodically sent up, correspondence would arise over mistakes, or questions, or explanations, and the whole rigmarole would be a hideous nightmare. Under the contract or *per capita* system the necessary writing and the consequent worry would be reduced to a minimum. In my opinion if the capitation fee granted is adequate—and the Post Office rate should be the minimum—medical practitioners will gain largely under the Act. Its first effect will be to greatly diminish the annual total of bad debts we are all piling up in our ledgers. It will at 8*s*. *per capita* provide remuneration equivalent to 2*s*. 6*d*. per visit—without deduction for bad debts. We shall be rid of the ugly feeling which we must have all of us now and again experienced, that we are, by demanding our dues, depriving a poor sick person of what he needs to keep him in health. The effect of a *per capita* system of payment will not be to make us slack, indifferent, and inattentive to our patients, but just the contrary—keen and alert to prevent and active in curing—simply because it will be to our interest to prevent illness. For the first time in history (European) the interests of doctors and public will be at one.

I am, Sir, yours faithfully,

B. HALL, M.B. Lond.

West Mersea, Colchester, Oct. 30th, 1911.

To the Editor of THE LANCET.

SIR,—In a footnote to Dr. H. B. Luard's letter in THE LANCET of Oct. 28th, p. 1229, you say, "It is understood that a majority of the medical profession has given adherence to the principle" (of capitation payment); this understanding is surely a misunderstanding. The facts of the case are these: In spite of the special pleading in favour of the contract system set out in the March report of the British Medical Association, *the Divisions furnished a majority in favour of "payment for work done"*; notwithstanding this, the Representatives, disregarding the instructions of their constituents, adopted a policy of amending the contract system instead of ending it. This policy avowedly adopted on the ground of tactics ("not what we want, but what we are likely to get") has failed in this very particular, for whereas the demand for the abolition of contract, a system condemned by all investigators, including a Royal Commission, would have been found by public and Parliament perfectly reasonable and understandable, the demands of the six-point policy of the Association have gradually alienated the sympathy of the press and Parliament.

Finding that the executive of the British Medical Association was willing to lead them only half way to victory, the profession gave not their "adherence" but their encouragement and support, hoping that the Association would be stimulated to summon up pluck enough to do its duty. The six-point policy fails in duty on two sides. First, if the Association regards contract practice as an evil thing to doctors, patients, and to the practice of medicine (and the Association has declared it so), then it is its *duty* to demand its abolition when the intervention of the State renders it no longer necessary. Second, since the abolition of contract practice and the universalisation of the ordinary method of payment for work done do no injustice to the contract party, who all hold some private practice and are content with it, whereas the continuance of contract is a great hardship to the anti-contract party, who loathe the whole system, the Association fails in its *duty* of protecting the "rights of minorities" and fails most woefully in this case, since the "minority" is actually a majority.

Urged to be loyal and to avoid appearance of dissension in our ranks, we abolitionists have for some months kept quiet, trusting to bitter experience teaching our leaders that their demands were not only materially but tactically weak, and looking forward to the time (now at hand) when we should have an opportunity of pressing our views again on the profession. This opportunity arises from the failure of the Association's negotiations with the Government which must be followed by a long guerilla warfare; if the profession must fight we ask that a plebiscite should be taken as to what we shall fight for; and we are in no doubt as to the reply of the profession if the question is put clearly to it whether it will fight for semi-tolerable slavery (club practice amended) or freedom and justice (abolition of all contract and *insurance by medical men*).

Let this issue be put clearly, that contract practice is inherently and ineradicably bad, and can only be made tolerable by constant watchfulness in preventing abuses, a watchfulness which is extremely harassing and derogatory to medical men; and that payment for work done is the ordinary principle on which the affairs of society are run; and it will be found that there are few medical men willing that their business should be selected for the experiment of a reversal of this principle. Contract medical work is a combination of two separate businesses: one, medical practice; the other, underwriting or insurance. Are we as professional men desirous of combining with our profession the trade of financial speculation?

I trust, Sir, that you will not hesitate to accede to Dr. Luard's request, and register the names of those who declare themselves to be doctors, and only doctors.

I am, Sir, yours faithfully,

Bristol, Oct. 28th, 1911. HARRY GREY, M.D. Edin.

To the Editor of THE LANCET.

SIR,—In answer to the letter of Mr. Richard Williams in your issue of Oct. 28th. I beg to refer him also to the rules of the National Deposit Friendly Society, from which he will see that there is no analogy between the National Deposit Friendly Society and the scheme of the National Insurance

Bill, which latter caters for an entirely different class of the public.

The National Deposit Friendly Society combines the advantages of a Friendly Society with those of a savings-bank, and it provides sick pay, medical attendance, weekly old-age pay, permanent pensions, and assurances. The contributions of the members are from 1*s.* to 10*s.* per month, which entitle them to from 1*s.* to 10*s.* per day sick pay; in addition to the contributions they must, however, make deposits in the savings-bank department. When they draw sick pay a portion of it is deducted from their deposit account, thus preventing any kind of malingering, and the duration of the sick pay is automatically limited by the amount standing to the credit of a member in his deposit account. There appears to be no wage limit, but the sick pay must not exceed the usual earnings.

The society provides benefits for a much higher class of wage-earner than the ordinary club member, and every member has to pass a stringent medical examination before being allowed to join, extra rates being charged for impaired lives or those working in dangerous or unhealthy trades The society pays on the following scale of fees for attendances on the members: 2*s.* 6*d.* per visit, including medicine for two days; in dangerous cases requiring more frequent attendance, 1*s.* 6*d.* per visit for intermediate visits. The fee for attendance at a surgery is 1*s* 6*d.*, to include two days' medicine. In the case of the better-class members who are in receipt of sick pay between 5*s.* and 10*s.* per day, the medical attendance fees of 2*s.* 6*d.* and 1*s.* 6*d.* have an addition of 6*d.* for each 1*s.* received by a member over 5*s.* per day as sick pay. Mileage over two miles is allowed and very moderate extra fees for surgical cases and operations; these fees include the supply of apparatus, splints, medicines, and attendance for a month, and are, I think, wholly inadequate.

Such fees are perfectly possible to a society with the above rules, but I venture to ask any business man in the profession whether it would be possible to pay them out of an insurance fund dependent on a maximum subscription per assured member of 9*d.* per week, when unlimited continuing sick pay of 5*s.* per week is payable in cases of permanent and chronic disability, and members are admitted without medical examination.

Another of your correspondents, Dr. Edwin Smith, thinks that "there must be a capitation fee of 20*s.*, not a penny less." I would point out to your readers that this would mean an annual payment to the medical profession of over £15,000,000, and I should much like to know how it is proposed that such a sum could be raised. I think that the profession should remember that in the past it has given without stint an immense amount of gratuitous medical service; from this heavy burden it will be entirely relieved, for in future there will be no excuse for anyone asking for free medical attendance, since everyone unable to pay will be provided for. In view of this surely it will be possible to arrange a method of remuneration for medical men attending assured persons on a scale adequate but within the means of the Insurance Fund.

I am, Sir, yours faithfully,

South Hampstead, N.W., Oct. 28th, 1911. ALBERT BENTHALL.

To the Editor of THE LANCET.

SIR,—As I had in my early medical days a pretty large experience of club contract practice (one club 900 men, two lodges of Oddfellows, and four small societies) it seems to me impossible to speak too strongly against taking any contract pay for medical attendance. One of the Oddfellows for several consecutive years had more attendance than the whole payment from his lodge covered. The National Provident Society's record conclusively proves that it is possible to pay club doctors according to work done without financial breakdown.

I signed the British Medical Association's resolutions, as many others have done, without feeling in any way pledged to take contract work. Having for 20 years practised amongst a class of patients to whom the Bill applies, and finding that I should need four times the number of patients I now have to make the same income at Mr. Lloyd George's rate of pay, I have decided that I will not work under the Bill. I propose that those of the profession who feel the same, and consider that a decided stand against contract work should be made forthwith, form a "no contract society" without any further delay.

I am, Sir, yours faithfully,

New Kent-road, S.E., Oct. 31st, 1911. VERE G. WEBB.

To the Editor of THE LANCET.

SIR,—Mr. Lloyd George has said that the compulsory part of his scheme must provide that every person employed and whose income is up to £160 per annum must join the insurance scheme. Of course, there are also to be "voluntary" members, these to include all being paid an income by an employer. To illustrate the latter he says that a paid employee, such as a manager of the Bank of England, may become a member, and so obtain medical and other grants for 4*s.* or 6*s.* a year, which will, I trow, be bad for the bank managers, being something very akin to an insurance for death. Now I and others cannot pay for a good reliable assistant to treat these voluntary members. At least they can expect to get only 4*s.* worth of treatment for 4*s.*, just as they would give me only 20*s.* for a sovereign, and no more.

Mr. Lloyd George takes exceptional care not to state how we are to find out the real income from all sources of the "compulsory" member. Here lies the quackishness of his proposal. It may be suggested that as the freedom from paying income tax applies to those whose income from all sources does not exceed £160 per annum less insurance, and less the £10 opposite each child under 16 years, we could obtain a list of all those not taxed for income tax purposes. But such is nowhere provided in his Bill. It is said that about 15,000,000 compulsory contributors must become members. But as the official returns show that only 885,397 persons—excluding firms and companies—paid income tax, how are we to get to know what is the income of the 14,000,000 odd. This is a most serious point, and it is to be hoped that each doctor will call the attention of his M.P. at once to it. I would also point out that in so far not one of the points the British Medical Association has "demanded" has been granted by Mr. Lloyd George. Grave objection must be taken to the manner in which all our rightful requests have been ignored.

If we fail to obtain recognition of our requests then I trust each doctor will at once put himself and his local society into active touch with members of the House of Lords. I shall be glad to hear that some definite, honest, and practical solution has been given as to how the income of "compulsory" members is to be arrived at. If the National Insurance Bill passes in its present form it will mean a loss of at least £1,750,000 every 12 months to doctors.

I am, Sir, yours faithfully,

Liverpool, Oct. 31st, 1911. ROBERT R. RENTOUL.

To the Editor of THE LANCET.

SIR,—Perhaps you might explain the benefits to patients and medical men in the following cases.

On Sundays, when the shops of chemists and druggists are closed, how is medicine to be obtained by the public? In cases of patients coming to the surgery suffering from pneumonia or diphtheria, they will have to go on to the chemist, and perhaps, on busy nights, stand about for half an hour till their prescriptions are made up. In some cases the patient may have a mile or more to walk. Again, in cases of night visits, how is the patient to proceed?

Perhaps you may be able to show the way out of this *impasse;* but I can see only one—viz.: The medical man, unless he is allowed to make up his own medicines and is paid for same, will be forced for common humanity's sake, to give some 30 per cent. of his time and drugs free.

I am, Sir, yours faithfully,

Endymion-road, N., Oct. 31st, 1911. S. CONSTABLE.

*** Our correspondent details one of the difficulties in removing dispensing from medical hands, but we must presume that with the altered circumstances new facilities will arise.—ED. L.

To the Editor of THE LANCET.

SIR,—I read with much astonishment your note at the end of Dr. H. B. Luard's letter in last week's LANCET and should like to learn on what evidence you conclude that the medical profession has accepted the "incalculably wide extension of the contract system proposed under the National Insurance

Bill." I feel convinced that the bulk of the profession, at any rate in the North of England and Scotland, have no intention of accepting such a thing under the Bill, and if you were to peruse the various resolutions which have been passed at the meetings of the local divisions of the British Medical Association you would find that many divisions have passed resolutions that service under the Bill should only be accepted on the basis of payment for work done. When the history of the profession for the past year comes to be reviewed it will seem almost incredible that a learned profession should have shown such a lack of common sense in the attitude it took towards the medical benefits of the Bill.

The British Medical Association sent out a list of questions to be answered in respect to a proposed Insurance Bill before the text of the present Bill was published. Alternative questions were given as to the methods of control and payment under a proposed insurance scheme for medical benefits, and naturally these were answered under the impression that such a scheme would only be applied to the submerged tenth above the pauper line, and many divisions thought that all the questions must be answered. This, in my opinion, is the first mistake the profession (or the Association on behalf of the profession) made, and I feel sure that if the opinion of the profession were now to be taken as to whether they will accept such an extension of contract practice, the replies would be in the negative.

In the six minimum requirements formulated by the Association there is no mention of contract practice or *per capita* payment; the remuneration is to be adequate, and the method of remuneration in accordance with the wishes of the majority of the profession in each locality. Even if these minimum requirements are insisted on the profession can theoretically choose the method of payment; practically I am afraid the "Battle of the Clubs" will have to be fought over again with a Government scheme in place of the Friendly Societies as the enemy. The general opinion of the profession, so far as my opportunities have allowed me to judge, is that up to the present the Association have managed things very badly, and if in face of the reports of the Poor-law Commission, of THE LANCET, and of the *British Medical Journal* condemning contract practice the Association should now countenance contract practice in the present Bill it will receive the heaviest blow it has ever received, and the profession will cease to regard it as a body able to protect professional interests, and the recent increase of membership will be followed by a still more remarkable decrease. I would ask you to take steps to gauge the opinion of the profession as suggested by Dr. Luard, and the results will convince you that the profession are not willing to accept such an extension of contract practice.

I am, Sir, yours faithfully,

Oct. 30th, 1911. F.R.C.S. ENG.

To the Editor of THE LANCET.

SIR,—I have read with interest the numerous letters on the National Insurance Bill and have noticed how many of them advocate payment for work done, say, on the lines of the National Deposit Society, but have never seen one showing why this is impracticable, although many make such statements. I think there is little doubt that the large majority of us, and probably all, would be in favour of payment for work done, if it could be managed, and I cannot see why such a scheme should be at once condemned as being out of the question. I believe I am correct in stating that the actual cost for medical attendance on the National Deposit system works out at a fraction less than 4*s.* per head per annum; and although admitting that the fees are too low, I think every one of us would rather work on some such lines than under the much condemned *per capita* system. Among the points for and against that have arisen on talking the matter over with other men are the following:

Con.: 1. That in a long illness a patient runs through his deposit. This is so, but with the addition of the employer's and State's shares it would be much less likely, and even so he could still receive the 5*s.* a week the Insurance Bill offers. 2. That too many visits might be paid by the doctor, but since these are paid for out of the patient's deposit, there would be the same deterrent effect as at present under the National Deposit system. I think that anyone who has tried both will agree that he sees far fewer trivial cases and pays far fewer unnecessary visits under the National Deposit than under the ordinary club system. 3. The filling up of the necessary forms, but this is really very little trouble and would soon become a routine.

Pro.: 1. That we should all prefer payment for work done. 2. That such a system carries with it free choice of doctor. 3. That we should not have the many trivial and unnecessary calls we now have under the ordinary club system. 4. That it would probably be possible to vary the fees according to the patient's income.

I am, Sir, yours faithfully,

Parkstone, Oct. 31st, 1911. K. M. GIBBINS.

THE STRIKE AND THE DEATH-RATE IN LIVERPOOL.

To the Editor of THE LANCET.

SIR,—The lengthy report of your Special Sanitary Commissioner on the supposed connexion between the recent strike in Liverpool and the severe epidemic of infantile diarrhœa which raised the death-rate in that city during the months of July, August, and September has interested me greatly because I have been defending the position in the lay press of Liverpool that the strike and epidemic were wholly unconnected.

As medical men we have no concern with the causes of the strike, or even with the methods of the strike, but the question whether, as alleged, the strike did accentuate the epidemic has a great scientific interest, especially if the comparative figures in Liverpool and elsewhere show, as I believe they do, that the presence of garbage in the streets had no effect on the epidemic of the disease, thus indicating that it is carried in some other way than by means of garbage.

Your Commissioner starts with the assumption that the strike is responsible for the enhanced death-rate and states that "the death-roll is not yet closed." Such a method of procedure is a mere begging of the question until it has first been proven that the strike actually did produce an effect. I submit that all proof of this is lacking either in your Commissioner's statements or in the statistics given in the report of the medical officer of health for Liverpool. In discussing the question I should like throughout to compare the figures for Liverpool with the figures for Dublin, choosing the latter city because it was free from any general strike at the period in question. The population in the Dublin area is just about half that of Liverpool, so that for comparison the Dublin figures should be doubled.

Your Commissioner makes a great point of the fact that the figures were very low in July and states that there was only a small increase up till August 7th, which he places quite arbitrarily as the date of the strike. By that date, he claims, "the great strike had thrown all the sanitary services out of gear." Now this I emphatically deny, for the scavenging service was not materially disturbed until August 16th till August 19th, the period of the general railway strike, and for a few days thereafter. As to the small figures, in July and early August, giving promise of a mild epidemic in Liverpool, in the first place, I contend, they are not small, and in the second place that they were proportionately much higher than those obtaining in Dublin, where nevertheless there was a heavy epidemic in August and September without the intervention of any strike. Thus, the figures for the four weeks in July for Liverpool were 20, 23, 38, 46, while for Dublin they were 4, 5, 11, 34. For the first four weeks in August Liverpool ran 81, 132, 159, 140, while the Dublin figures were: (week ending) August 5th, 29; August 12th, 41; August 19th, 49; August 26th, 38; Sept. 2nd, 51. For the first four weeks in September the Liverpool figures ran 148, 130, 109, 112; while the Dublin figures for as close dates as available were: (week ending) Sept. 9th, 45; Sept. 16th, 46; Sept. 23rd, 43.

With the single exception that the epidemic throughout, both before, during, and after the strike, is somewhat more severe in Liverpool than in Dublin, there is no difference in the two cities. The curves of incidence are identical in form, and there is no perturbation in the Liverpool one to indicate a strike or other contributory cause. It is also to be remembered that Liverpool is usually one of the most severely stricken centres in any severe year of epidemic diarrhœa. It is entirely without meaning to compare the four or five cold wet summers preceding this last summer

with it, as your Commissioner, copying the medical officer's report, proceeds to do.

Since the increase in the general death-rate was nearly all due to the epidemic of diarrhœa, it would be a waste of space to follow through this, but it appears to me peculiarly absurd for your correspondent to draw attention specially to the small fluctuations in the general death-rate to the end of the fourth week in September and then remark that "these figures clearly indicate that the exceptionally hot weather did aggravate the situation, and that the strike intensified the evil to an alarming and disastrous extent." The modest estimate is then made that for a period of two weeks a third of the deaths from diarrhœa were due to the strike. One cannot help wondering which two weeks these were, and how the "one-third" was arrived at; there is an uncanny precision about it that alarms one. The part of the strike which really interfered with scavenging for a few days occurred in the third week in August. Let it be granted that this aggravated the amount of infection and made more children ill with the disease, then these children have to sicken, pass through the course of the disease, and die before any effect is visible on the weekly death-rate. The very earliest week, therefore, in which the death-rate could show any effect due to the strike would be the fourth week in August, or more probably the first week in September. But in these weeks the epidemic had already commenced to show abatement: how then does your Commissioner arrive at his mathematical one-third of the deaths due to the strike? The only point in favour of an influence of the strike on the epidemic is the slow decline of the disease in September, but this is equally slow in Dublin where there was no complicating strike, and in both cases the most obvious reason is the mild character of the September weather.

To sum up, the epidemic was well on its way and already past its maximum before it could possibly have been influenced by the strike, and there is not one respectable shred of evidence that the strike had any influence upon it. Yet, as a consequence of this report, one finds the workmen accused in the lay press and in a vast mass of municipal election literature of massacring their own children. There are indications about that one of these days the medical profession itself may not be far from something closely resembling a strike, and much as many of us may rightly deprecate certain of the methods of the recent strike, we ought surely to have some meed of sympathy for men striking for a reasonable living wage for themselves and their wives and families. In any case, from the purely professional point of view such scares raised upon entirely inadequate evidence are, in my opinion, much to be deprecated.

I am, Sir, yours faithfully,

Liverpool, Oct. 30th, 1911. BENJAMIN MOORE.

DR. CUTHBERT MORTON'S "PRINCIPLES OF ANATOMY."

To the Editor of THE LANCET.

SIR,—With reference to the review of my work, "Principles of Anatomy: The Abdomen Proper Described and Illustrated by Text and Plates," which appeared in THE LANCET of Oct. 21st, I should like to say that when a scientific work, bearing the visible imprint of years of hard and conscientious labour, is submitted to a scientific journal for review the reviewer is under an obligation to furnish the author and the publisher of the work, as well as the editor and the readers of the journal, with a scientific expert criticism, that is to say, an accurate and clear statement of what the work aims at, how far it attains its aim, and what scientific worth or practical value it possesses or is likely to possess either in its present or in any probable future form. Casual criticism is entirely out of place.

Your reviewer has noted some resemblance in appearance between the "Principles of Anatomy" and Snellen's test-types. I should like to draw attention to a certain resemblance in function also, for just as the keenness of a man's physical vision may be tested by learning from himself how much he is able to see in Snellen's test-types, so the keenness of a man's mental vision may often be gauged by learning from himself how much he has been able to see in a work which he has reviewed. Your reviewer has seen in the "Principles of Anatomy" only "14 drawings"; your readers will find 14 front-and-back plates with at least two drawings for each. He has seen only "outlines"; they will be struck by the details. He has seen that "the outlines all coincide, and when held up to the light in the special frame provided may be superimposed and viewed as transparencies"; they will perceive that outlines which all coincide may be superimposed but cannot be viewed as transparencies with profit. He has seen only "various organs in their relation to each other and to the surface of the body"; they will perceive that, *inter alia*, every organ of the abdomen proper can be studied in its surface anatomy, its parietal, visceral, and peritoneal relations, and its blood- and lymph-vascular and nervous supply. He has seen in some pages of the text an appearance "irresistibly suggestive of Snellen's test-types"; they will perceive that these pages are to be found only in the Table of Contents, where their "strange variety of type" serves a definite and useful purpose. He has seen, quoted, and criticised what "the author says of the purpose of the work"; they will perceive that in their original context on p. 6 of the Principles the words quoted are strictly relevant, referring as they do in the clearest and most unmistakeable manner solely to the presentation of the body by plates. The introductory lines of apology (which, as he truly remarks, have been culled from John Bunyan's Apology for the "Pilgrim's Progress") he has seen to be of sufficient importance to require in the review as much space as either the plates or the text, and he is even "tempted to wish that the author had quoted more fully from the Apology of the 'wonderful tinker,' and added the lines—

> 'If that thou wilt not read, let it alone;
> Some love the meat, some love to pick the bone.'"

Your readers will perceive that the "wonderful tinker" (and the author, too) has long anticipated both the verdict of your reviewer—

> "Well, yet I am not fully satisfied,
> That this your work will stand, when soundly tried,"—

and the author's reply—

> "Be not too forward, therefore, to conclude,
> That I want solidness,—that I am rude;
> Nay, since your brethren pleased with it be,
> Forbear to judge till you do *further see*.
> If that thou *wilt not* read, LET IT ALONE;
> Some love the meat, some love to pick the bone."

I am, Sir, yours faithfully,

WM. CUTHBERT MORTON, M.A. (Classical First), M.D. Edin.,
Honorary Demonstrator of Anatomy in the University of Leeds.

Leeds, Oct. 28th, 1911.

THE NOMENCLATURE OF SPINAL DEFORMITIES.

To the Editor of THE LANCET.

SIR,—Mr. Paul B. Roth and myself disagree upon one very distinct point. He, following Lovett's deductions and the suggestion of W. Adams, believes that the spine is incapable of any simple lateral movement whatever, and that even in the normal subject rotation is coincident with the very beginning of side-bending. To him, therefore, the terms "lateral curvature" and "skoliosis" are synonymous. I hold a very firm opinion that lateral movement in the dorsal region is free until all play in the costo-vertebral articulations has been taken up and that rotation commences only when the tubercles of the ribs become firmly applied to the tips of the transverse processes. To me, therefore, the terms "lateral curvature" and "skoliosis" are *not* synonymous, for the first stage of the former may be quite free from any rotation whatever. The extent of this free stage varies with the type of patient, being very brief in the "rigid" type and much greater in the "loose-jointed" type. Its existence in the latter type has been noted again and again by old writers, who verified their observations by the use of some such instrument as Barwell's skoliosis gauge, and who adopted the term "lateral deviation" to fit this pre-skoliotic phase of lateral curvature.

However, Mr. Roth and myself can meet on common ground by putting aside the terms "skoliosis" and "lateral deviation" altogether, and by using the term "lateral curvature" to cover all phases of all cases. The classification he supports then works out as follows:—1. Postural lateral curvature. 2. Osseous lateral curvature in four stages—trace, moderate, severe, and extreme. The diagnosis between

the "postural" and "osseous" cases presents no difficulty, and is too well known to call for any description, but the subdivisions of "trace," "moderate," "severe," and "extreme" leave too much to individual judgment. They are excellent terms to use to the patient's friends, but are too vague to find acceptance if any more precise classification is available. I maintain that we have this in the method of Professor Rudolf Klapp and Dr. Fränkel of dividing all cases into three grades, each easily recognisable, and each resting upon a definite anatomical basis.

There is no need to repeat the analysis of these three grades given in my letter published in your issue of Oct. 14th, but Mr. Roth misapplies to them my description of the three distinct stages in the underlying anatomical changes in the thoracic skeleton. My correct statement regarding the three clinical grades of cases was as follows: "These grades pass imperceptibly one into the other. ..... But, with experience in examination, there is little difficulty in relegating any one case to its proper grade: the distinction is about as definite as that between degrees of burn." The truth of this comparison is a strong argument in favour of this method of classification.

Mr. Roth has some difficulty in understanding the second grade of case in which the bones have not yet undergone any fixed alteration in shape and in which the deformity, rendered possible by the elasticity of the ribs and their cartilages, is maintained in great measure by muscular and ligamentous shortening holding the contorted thorax in malposition. There is no mystery about lateral curvature of the spine and the soft parts behave as they do in other deformities—viz., the muscles and ligaments will become shortened or lengthened according to diminished or increased strain. Thus they will be shortened on the concavities of the curves and lengthened on the convexities. It was in recognition of this phase and of the importance of restoring the mobility of the thoracic framework that the "creeping" exercises were devised, and therein lies the explanation of the excellent results derived from them.

I am, Sir, yours faithfully,

Cavendish-place, W., Oct. 28th, 1911. J. S. KELLETT SMITH.

THE ETIOLOGY OF SCARLET FEVER.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Oct. 28th you publish a communication from Dr. R. W. C. Pierce, medical officer of health for Guildford, on the subject of the Etiology of Scarlet Fever. In the communication he mentions that I called the attention of Dr. J. C. Thresh, medical officer of health for this district, to the fact that I had a sequence of four sporadic cases of scarlet fever, in each of which there was a septic wound or a septic condition of some sort. The cases were as follows: 1. A boy, aged 9, sleeping and living amongst five other young children, developed a typical scarlet fever rash, throat and tongue. It was not possible to move him until two days after I had diagnosed his condition, so that he had to remain amongst the other children. None of them caught it. He had an abscess and a septic condition of the sole of the foot. 2. A young lady had had her ears pierced and the wounds became infected. About 14 days afterwards she developed a rash very like scarlet fever and undoubtedly connected with the septic condition of the lobes. This certainly was not a *typical* case of scarlet fever. 3. A child of 8 showed a typical scarlet fever rash. She lived in an isolated cottage and had not been near other children or people for several weeks. She had a septic sore from an abrasion on the front of the tibia. 4. A young woman had a lot of teeth removed under gas for pyorrhœa alveolaris. She developed scarlet fever a few days afterwards.

These four cases, occurring one after the other, long distances apart, arising from no previous cases as far as I knew, and giving rise to no fresh cases in their own homes as they were either isolated at home or sent to the fever hospital before the peeling stage, made me think whether there was a condition common to them all to account for the onset. The common condition to all I found was a septic one on some part of the body.

Until such a condition is found to be present in a large percentage of sporadic cases in sparsely populated districts the observation is not worth much. It would be interesting to hear other medical officers of health on the subject.

I am, Sir, yours faithfully,

Stock, Ingatestone, Oct. 30th, 1911. HERBERT CARDIN.

OLD AND NEW VIEWS ON THE TREATMENT OF CONSUMPTION.

To the Editor of THE LANCET.

SIR,—Dr. C. Theodore Williams in his excellent Harveian oration on the new views on the treatment of consumption, published in your last issue but one, mentions that 54 different theories have prevailed in bygone ages—that is, from the time of Hippocrates to the time of Dr. Hughes Bennett. And these theories are as diverse as they are numerous, and testify to the lively imagination of their authors, and, as a rule, mistake predisposing causes for the *causa vera*, which, "though long suspected, was never actually discovered till Robert Koch appeared on the scene." May I be permitted to mention an addition to the list, and which, I believe, surpasses all others in value, and is a piece of work of equal magnitude with Koch's own, which it preceded by almost 14 years. I mean, "Études sur la Tuberculose: Preuves rationelles et expérimentales de sa spécificité et de son inoculabilité. Par J. A. Villemin, professeur agrégé à l'École Impériale du Val-de-Grâce, 1868; à Paris, chez J. B. Baillière et Fils, éditeurs." The 17me Étude is a most remarkable production; any one having read the work will believe that Villemin listened to the exhortation of "l'immortel Harvey," as we say on this side of the Channel, "to search and study out the secrets of Nature by way of experiment," and that he did it successfully.

I am, Sir, yours faithfully,

Paris, Oct. 30th, 1911. EUGENE DUPUY.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Physical Defectives.

A SPECIAL subcommittee of the Birmingham Education Committee has issued an exhaustive report concerning all cripples in the city, both adults and children. It has taken the committee two years to tabulate and collect the facts. The object was to find out why people became cripples, what could be done to prevent it, how cripples earn a living, and in what trade they are most successful. The answers to these questions are given at some length. There are 1001 cripples (546 males and 455 females) over 16 years of age. Of these 334 (212 males and 122 females) are being maintained by the three local boards of guardians, 180 being in infirmaries and 154 in workhouses. In the Birmingham workhouse and infirmary out of a total of 2636 inmates 272, or 10·3 per cent., are cripples. Of the 1001 cripples in the city about one-fifth, or 214, were able to work under ordinary conditions, and 145 could do some useful and remunerative work if workshops could be provided in the centre of the city. They were not so handicapped that they could not go to and from their work, but they could not compete with ordinary workmen. Employers were loth to engage them. The third class, 111, were unable to go to and from a central workshop. The Cripples' Union was doing a great work, but had not sufficient funds to cover the ground. The last class, comprising 531 cases, could do no remunerative work, and 334 of these were maintained by the guardians. There were 728 cripples under 16 years of age, some of whom will recover, but the committee did not think this number would be large. Mrs. Hume Pinsent, in presenting the report to the Education Committee, said she believed it was the first report of the kind ever made in England. She appealed to the medical profession to read the report and see if they could give satisfactory answers and information on the questions asked. Dr. H. W. Pooler pointed out that the great majority of cases of tuberculosis of the bones and joints were due to infection from food, chiefly milk, which children took in their earlier years.

Greater Birmingham and Special Schools.

None of the outside districts about to be taken into the city have made special provision for defective children with the exception of Aston, which has a small school for the deaf. The other districts send most of their deaf children to institutions, and in all the districts blind children are sent to institutions. The percentage of defective children in the school population will probably not differ materially in the new districts from the percentage known to exist in the old

Birmingham area. In the present city, with a school population of 96,260, there are 1093 mentally defective, of whom 832 are in day-schools, 51 in residential schools, and 210 for whom further accommodation is required. Further accommodation is also required for 63 cripples, 33 epileptics, and 20 partially blind children. In the outside districts it is estimated that there were 826 defectives for whom accommodation must be gradually found.

Oct. 30th.

NEWCASTLE-ON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

Stannington Sanatorium: Opening of a New Wing by Earl Grey.

ON Oct. 29th there was formally opened a new wing of the Children's Sanatorium at Stannington. More than ordinary interest was attached to the ceremony of opening. In the first place, the expenditure for the erection and equipment of the extension was entirely defrayed by the Lord Mayor of Newcastle-on-Tyne, Sir William Stephenson, and the new wing has been named the Lady Stephenson Wing in consequence. The institution itself is an off-shoot of the work of the Poor Children's Holiday Association, which also manages a convalescent home on the same land for children recovering from debilitating diseases; here one must also mention the presence of a neighbouring farm, also under the auspices of the Poor Children's Holiday Association, worked by youths who have been rescued from a street life. Rather more than a year ago Sir William Stephenson wrote: "It has constantly been in my mind that the building ought to be completed by the erection of an additional wing, and thus provide accommodation for 50 more patients"; and following on this he made his gifts as mentioned above. In the second place it is interesting to note that these additional beds will be devoted to patients suffering from local tuberculosis, of joints, bones, and glands, for whose relief up to the present there has been no provision in the sanatorium. And, thirdly, interest attaches itself to the fact that the opening by Earl Grey was his first public service since his return from Canada after his seven years' governor-generalship. At the ceremony Earl Grey was supported by Sir William Stephenson, Miss Stephenson (the Lady Mayoress), Lord Armstrong, Sir Walter Plummer, Lady Ridley, Sir Riley Lord, the Right Hon. Thomas Burt, M.P., and Mrs. Burt, Dr. T. M. Allison, Mr. J. H. Watson (honorary secretary), and many others. Earl Grey received a gold key from the Lady Mayoress and opened the door of the new wing, after which a dedication meeting was held in the large dining-hall. In the course of his remarks the noble chairman said that he had had no hesitation in replying from Ottawa, where he had received the invitation for the ceremony, and accepting the invitation; the character of the association made him regard its operations as doing some of the best work for the public in the north of England. They were often told by scientists that that country which had a large amount of consumption among its population was an uncivilised country, and that if only the lives of the people could be regulated on scientific lines they should make consumption as obsolete a disease as leprosy was to-day. It was possible for them to banish it from the land if they only tried. The Lord Mayor, in thanking Earl Grey for his kindness and presence, asked to be allowed to present to his lordship a small gift of silver plate. This took the form of a tray with a suitable inscription thereon, and also an engraving of the new wing. Earl Grey suitably replied. Votes of thanks to Earl Grey and to the Lord Mayor concluded the proceedings.

Care of the Teeth: Step by the Northumberland Education Committee.

The Northumberland education committee meeting at the Moot Hall, Newcastle-on-Tyne, last week considered a report dealing with the results of a circular letter, which had been addressed to the managers of the elementary schools, inviting attention to the remarks of the school medical officer in his report of last year relative to the injury likely to arise from carious teeth. The managers were asked to state their views after consulting the head teachers on the likelihood of scholars purchasing at the school toothbrushes if supplied by the committee at cost price, and, further, as to the practicability of the scholars using the brushes at the schools. Replies had been received from 39 schools, and whilst in three cases the managers stated that in their opinion no action was necessary, and in one case it was stated that all the children used toothbrushes in their homes, the majority were in favour of inviting the children to purchase brushes, but, as a rule, considered it was impracticable for them to be used at the school premises. It was agreed by the committee (1) that a supply of toothbrushes should be purchased out of the voluntary fund which had been raised for the provision of spectacles and sold at cost price to the scholars asking for them; (2) that it be left to the managers and teachers to arrange for the brushes to be used by the children; and (3) that a circular drawing attention to the importance of cleaning the teeth be prepared by the school medical officer and issued with the brushes.

Oct. 31st.

WALES.

(FROM OUR OWN CORRESPONDENT.)

Pauperism in Lampeter.

THE Lampeter union has a decreasing population of about 9000 persons, and at a recent meeting of the board of guardians Mr. Hugh R. Williams, one of the Poor-law Inspectors of the Local Government Board, drew attention to the much higher cost of pauperism in the union than in the adjoining districts. The cost per head of paupers in Lampeter had increased from 5*s.* to 5*s.* 6*d.*, whereas in the Tregaron union the cost per head was 4*s.* 5*d.* He suggested that the guardians of the unions in Cardiganshire should consider the practicability of carrying out a more extended classification of those paupers who were in institutions by utilising one workhouse for adults, another for children, and another for the weak-minded. In the early days of Poor-law administration there was a workhouse in each parish; these soon gave place to a combination or union of parishes with a joint workhouse, and now it would appear to be desirable to have a combination of unions.

Welsh Tuberculosis Campaign.

There has now been promised to the funds of the Welsh National Memorial nearly £200,000. This is to be utilised in every reasonable manner that can be devised for preventing tuberculosis, and an influential deputation is waiting upon the Chancellor of the Exchequer asking that Wales and Monmouthshire should be constituted a unit for providing sanatoriums and administering sanatorium benefits under the National Insurance Scheme. So far the efforts of the promoters have been concentrated on methods of education by means of popular lectures, a travelling exhibition, and the spread of popular literature. A further step has now been taken in the direction of treatment. A small sanatorium has been presented to the Memorial Fund by Miss A. M. Davies, who erected it a few years ago and has since maintained it in the county of Anglesey. In Newtown, in the county of Montgomery, there is in course of erection the first tuberculosis dispensary to be established in North Wales. The entire cost is being borne by Mr. David Davies, M.P., who was the originator of, and a most munificent contributor to, the Memorial Fund. He intends to place it at the disposal of the fund when completed, and it will presumably be administered in conjunction with the Montgomeryshire Infirmary at Newtown, the new buildings for which have only recently been opened. The dispensary, which has been carried on in a basement room in the Cardiff city hall for more than a year, under the assistant medical officer of health, Dr. E. Fairfield Thomas, as medical officer, has established for itself a definite place in the public health equipment of the town. There are over 1000 names of patients on the books of the dispensary, and the results of the enterprise are said to be very encouraging.

Housing Schemes.

The Merthyr corporation was one of the earliest to embark on a municipal housing scheme, and it has now decided to purchase an estate 92 acres in extent at a cost of £12,000. It is intended to erect on it about 300 workmen's dwellings, many of which will be required to replace houses which ought no longer to be occupied, but of which the occupants cannot find better dwellings. At Bedwellty, an urban district

of Monmouthshire, the population of which has increased from 10,000 in 1901 to over 22,000 in 1911, there has for some years been a serious dearth of houses, but there seems at last to be some prospect of an amelioration of the existing unsatisfactory conditions. The district council has decided to build 60 houses, and nearly 500 more are to be erected by the Welsh Garden Cities Syndicate on a site of 40 acres. The scheme of the syndicate enables the tenant of a house to purchase it on payment of an initial sum equal to 20 per cent. of the cost of construction, the remaining 80 per cent. being paid in weekly sums amounting to less than the rental that would ordinarily be charged for such a house.

Diphtheria in Cardiff.

In a recent report to the Cardiff school management committee Dr. E. Walford, the medical officer of health and school medical officer, stated that during the first nine months of the present year there had been 334 cases of diphtheria in the city and 24 deaths. In the corresponding period of 1910 there were 236 cases and 12 deaths. As in former years, the chief incidence of the disease has fallen on children at school ages, and it is probable that the assembling of children in the public elementary schools at ages when they are particularly susceptible to infection has been a factor in spreading the disease. Facilities are afforded at the public health laboratory for the examination of specimens from the throats of suspected children and from convalescents, but Dr. Walford expresses regret that greater use is not made of these facilities by the medical practitioners of the town.

Oct. 30th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Edinburgh: Meeting of the General Council.

THE statutory meeting of this body was held on Oct. 27th in the University. Sir William Turner, K.C.B., Vice-Chancellor, presided. The first business was to appoint two assessors to the University Court: Dr. R. McKenzie Johnston, whose term of office had expired, was reappointed; and Mr. George A. Berry, President of the Royal College of Surgeons, was appointed in room of the late Dr. Joseph Bell. Mr. J. B. Clark, convener of the business committee, submitted a minute regarding Dr. Bell's death, in which, in addition to the qualities for which he was so widely known, his devotion to duty, and particularly to his duty as one of the General Council's representatives on the Court of the University, his conspicuous business ability, sound judgment, and natural quickness were eulogised. It was intimated that the University had recently decided to grant a Diploma in Psychiatry, which will be open to any registered medical practitioner who completes the necessary course of study. The diploma is intended for those who propose to devote themselves to this branch of medicine. The course of study will extend over one academic year. Candidates who have held responsible asylum posts for not less than two years may be exempted from one or more subjects of the curriculum. The opening of this diploma to all medical practitioners is one of the first-fruits of the recent medical ordinance giving the University greater freedom of action than it had formerly. The only other matter of medical interest brought before the Council had reference to the inclusive fee proposals. The convener of the business committee intimated that the University Court had agreed to its representation that if an inclusive fee were established the cost of study to the student should not be increased; he at the same time proposed that the Council should take no further action in the matter at present, as it was undesirable to hamper the dealings of the University with the Treasury. It was decided, however, to send to the University Court the findings of the conference of representatives of the general councils of Scottish Universities which had met in July. The findings were briefly as follows: The conference did not approve of the principle of inclusive fees; that if it was forced students should have the option of paying individual class fees as at present. Apart from Arts, the conference had not sufficient data to enable it to suggest the amount of the inclusive fee; that whatever system be adopted in the Faculties of Medicine and Science care should be taken to safeguard the interests of the extramural schools; that in the case of a student presenting a qualifying certificate from an extramural class his inclusive fee should be reduced by that amount. It was then proposed and agreed that the meeting be postponed, as there were certain important matters to be shortly sent down from the University Court for the consideration of the Council. The date of meeting was left in the hands of the business committee.

The British Medical Association and the Insurance Bill.

On Oct. 28th a meeting was held in Edinburgh to consider the prospects of the profession with regard to the National Insurance Bill. The meeting was called by authority of the Scottish Committee of the British Medical Association. The meeting was held in the hall of the Students' Union. Sir William Turner, K.C.B., occupied the chair, and there was a large and representative gathering of members. The chairman, in his opening remarks, spoke of the very critical position in which the profession was placed. He warned them to be careful of the acceptance of principles that were not backed up by clear alterations in the text of the Bill. He hoped the profession would hold together and determine that their profession was not to be lowered in its position and robbed of its rights. The meeting was then addressed by Mr. J. Smith Whitaker, who dealt at length and in detail with the steps the British Medical Association had taken with regard to the Bill. He said that the Government had agreed to the insertion of a clause providing for the establishment of local medical committees who would have power in the determination of the wage-limit in different districts and in the determination of the question of remuneration. As soon as the Bill had passed through the Committee stage the whole question would again be referred to the divisions for their consideration and decision. He very strongly impressed upon his audience that their fate lay in their own hands; if they remained firm and united they could get any terms they liked. All that was required was that they should unitedly decline to take contracts under the Bill whatever its provisions might be. A motion was then submitted by Dr. Gordon of Aberdeen and seconded by Dr. Hamilton of Hawick affirming absolute adherence to the six points of the policy propounded and placed before the profession by the British Medical Association, and appealing to all practitioners in Scotland to support liberally by their subscriptions the insurance defence funds. The motion was carried with acclamation, and the chairman declined to have any discussion. It ought, however, to be stated in this connexion that Mr. Whitaker had spoken for one and three-quarter hours, and that country members and men from a distance had to leave. A motion by Dr. D. J. Mackintosh of Glasgow, seconded by Dr. G. R. Livingston of Dumfries, thanking the Council of the British Medical Association for its labours and declaring confidence therein was also passed.

The Edinburgh and Leith Practitioners' Association.

The annual dinner of this society was held on Oct. 25th, Dr. Alexander James being in the chair. Colonel Sir Joseph Fayrer, the superintendent of the Edinburgh Royal Infirmary, was the guest of the evening. The meeting was well attended.

The Rectorial Election at the University of Edinburgh.

The horseplay which characterises the contest for the Lord Rectorship was not lacking this year, but it seems to have been more circumscribed than usual, owing apparently to the police arrangements.

The Association of School Medical Officers for Scotland.

A general meeting of this association was held in the Royal Infirmary, Edinburgh, on Oct. 21st, Dr. E. T. Roberts, the President, being in the chair. After the election of a number of new members, a demonstration of diseases of the skin was given by Dr. Norman Walker. Many cases of special interest to the school medical inspector were shown, and the demonstration concluded with a practical *résumé* of the present treatment and prevention of ringworm, and a consideration of the question of the admission of cases of ringworm to schools. A hearty vote of thanks was awarded to Dr. Walker. The next general meeting of the association will be held in Glasgow on Nov. 18th.

Complimentary Dinner to Professor MacEwan.

On the occasion of his retirement from the acting staff of

Dundee Royal Infirmary Professor David MacEwan was entertained at dinner by his past house surgeons and his friends of the Forfarshire Medical Association. Dr. Charles Templeman, medical officer of health of Dundee, presided over a company of 60, and in the course of the evening, in felicitous terms, proposed the chief toast. On behalf of the former house surgeons he then conveyed to Professor MacEwan a series of gifts for himself and Mrs. MacEwan in token of the affectionate regard of his late assistants. The professor acknowledged the toast and the gifts in well chosen words.

Oct. 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Lord Iveagh's Gift to the Dublin Hospitals.

THE members of the managing committees and medical staffs of the Dublin hospitals met on Oct. 24th in the Royal College of Surgeons to express their gratitude to Viscount Iveagh, K.P., for his recent gift to His Majesty King George V. of £50,000 for distribution to the Dublin hospitals. The large hall of the College was well filled, and Viscount Monck presided. In a resolution adopted with a view to showing, in a special manner, their appreciation of his lordship's generosity, the governing bodies and medical staffs recalled a similar generous gift for Dublin hospitals made by Lord Iveagh to King Edward VII. They assured his lordship that it will be their endeavour so to employ the funds which have been placed by him, through His Majesty, in their hands, that the poor, who seek aid at these hospitals, may derive the greatest possible benefit from the charity.

Dublin Hospitals Tuberculosis Committee.

At a meeting of the Dublin Hospitals Tuberculosis Committee, held in the P. F. Collier Memorial Dispensary on Oct. 27th, a report of the work performed by the committee's three nurses during the past eight months was read. In all 308 cases were attended, 3880 visits being paid. Twenty-eight patients improved so as to be able to return to work; 136 were admitted to various institutions; 52 deaths occurred. Much work was done in the way of disinfection of rooms, distributing sputum flasks, supplying food and paying rent while the head of the family was ill, sending children of tuberculous parents into the country or boarding them out, and sending children to schools or institutions after the parents' death. In 46 families visited more than one person was affected. The average number in each family was six. The average weekly income was 13*s.* 8*d.*, but only 5*s.* when the breadwinner was ill. The report was considered most satisfactory. The Collier Tuberculosis Dispensary will be opened on Nov. 1st, and there will be evening attendances twice a week, the attendance on other days being in the morning.

Cerebro-Spinal Fever in County Roscommon.

A serious outbreak of cerebro-spinal fever has occurred in the Strokestown district of the County Roscommon. Some 30 cases have occurred, and six patients have died. Only children are affected. There was at first some difference of opinion as to the nature of the disease among the medical men in attendance, but Sir J. Acheson MacCullagh, Local Government Board inspector, reports that the disease is undoubtedly cerebro-spinal fever.

Royal Victoria Hospital, Belfast.

At a meeting of the Saturday Street Collecting Committee on Oct. 30th it was announced that the total amount of the street collections this year for the hospital, after deducting working expenses, was £1029, a record amount. From Belfast £820 was received (as against £750 in 1910), and from the country districts £277 (as against £221 in 1910). It is hoped to raise £2000 next year.

The Belfast Natural History and Philosophical Society.

Professor J. A. Lindsay has been elected president of the Natural History and Philosophical Society, in succession to Sir John Byers, who has been president of the society for the past three sessions, and who, at the annual meeting on Oct. 25th, was specially thanked for the work he had done in strengthening the prestige and position of the society. It was during his term of office that the arrangement was completed with the corporation of the city of Belfast by which a new city museum and art gallery is to be erected in that city.

The Water Famine in Ireland.

In Belfast it has been found necessary to restrict the water-supply to seven hours daily. Instructions have been issued to the inhabitants to use as little water as possible for personal ablutions and to use none at all for pavements and shop windows. It is urgently necessary that the Stonyford scheme, referred to in THE LANCET of Oct. 28th, should be carried out, and it is hoped that no opposition on the part of the authorities or the public, and no unreasonable self-seeking on the part of the owners of the required land, will obstruct this course. In Derry, on Oct. 28th, only 5 feet of water remained above the draw-off point in the last available reservoir, and unless a complete change in the weather occurs, with torrents of rain, the entire city will have to depend upon a carted supply or upon wells. No water for manufacturing purposes has been allowed to be used for a week, and but for the discovery of wells all the large shirt factories for which Derry is famous would have been shut down. If the water totally fails from the reservoirs, corporation carts will carry water round at a cost of £100 per diem. So far there has been no disease attributable to the scarcity of water or to inferior water being used. During the past ten days "water diviners" have been reaping a harvest by locating springs for manufactories. At a special meeting of the Rathfriland town commissioners, held on Oct. 26th, a resolution was passed approving of a scheme by which that town, situated at a high level in South Down, is to be supplied with water from a catchment area in Altaggart Mountain (a short distance from Hilltown, six miles from Rathfriland) where there is a stream. The catchment area, shut in by hills and covering 500 acres, is 200 feet above the level of the highest street in Rathfriland. A special report indicated that the water was good and that it was free from risk of pollution, and it comes from a very wet district with an average rainfall of 36 inches. By making an impounding dam or reservoir across the stream constant supply could be ensured.

Scarlet Fever in Belfast.

A serious epidemic of scarlet fever is prevailing in Belfast, the cases coming largely from working-class districts.

Prevalence of Infectious Diseases in Newry District.

At the monthly meeting of the Newry rural council, on Oct. 28th, attention was drawn to the large number of cases of infectious disease notified in the district since the last meeting. Six cases of scarlet fever had been reported at Carrickravady, two of diphtheria in Rathfriland, of which one had died; two cases of scarlet fever in Warrenpoint, one in Edentromley, one at Tamnaharry, and one at Bavan. In Newry there had been an outbreak of typhoid fever, with 15 cases altogether.

Cavan Auxiliary Asylum.

At a meeting of Clones rural council, held on Oct. 26th, a resolution was unanimously passed protesting against the proposal to establish an auxiliary asylum in County Cavan, on the ground that it would impose an increased burden on the ratepayers of both counties. The council called upon the ratepayers of Monaghan and Cavan to do all in their power to insist that the additional accommodation required should be provided at the present Monaghan Asylum, and they also authorised their solicitor to employ counsel to appear at the inquiry to oppose the establishment of an auxiliary asylum in Cavan. At a meeting of the Monaghan urban council, held on Oct. 27th, a very strong resolution was passed unanimously also protesting against the establishment of an auxiliary asylum in Cavan.

Oct. 31st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Is Tuberculosis Heritable?

THE direct transmission of the bacillus from mother to child during pregnancy has been denied by many scientists, inasmuch as ordinarily bacilli are not found in the blood of the fœtus from a tuberculous mother, either among man or among animals. M. Landouzy, dean of the Faculty of Medicine of Paris, some 30 years ago affirmed this transmission from

mother to child. He has patiently continued his researches since that time, and on Oct. 17th made to the Academy of Medicine a communication of the utmost importance which seems to establish this fact beyond dispute. After rendering female guinea-pigs, rabbits, and dogs tuberculous, both before and during gestation, he found neither bacilli nor characteristic lesions in their fœtuses, either during gestation or after birth. But by killing the fœtuses on their attaining an age of some weeks or months he succeeded, by inoculating healthy guinea-pigs with their organs, in giving rise to indisputable tuberculosis, with the presence of bacilli and characteristic lesions. The failure of the former experiments is understood if we admit that the fœtus already tuberculous at birth presents bacilli in only a very small proportion. But according to Landouzy the bacillus is clearly transmissible from mother to fœtus, and even when it escapes detection various signs of degeneration, such as malformations and dystrophies, are to be found in the offspring.

The Water-Supply of Paris.

M. Colmet-Daage, chief engineer of water-supply and sanitation, gave account of the measures in view to increase the water-supply of Paris at the sitting of the Municipal Council on Oct. 25th. According to his calculations, the city can count next year on 80,000 cubic metres of filtered and sterilised water conveyed through the mains of Saint Maur. It will also be possible to complete the aqueduct of Loing with 20,000 cubic metres from a source in the environs of Nemours; this supply would cost 1,200,000 francs. It would provide for immediate relief, after which the doubling of the capacity of the filter basins at Ivry would give in 1915 an additional 60,000 cubic metres. The sources of the Voulzie, the Durtein, and the Dragon would afford yet another 70,000 metres. But as a sensible increase in the needs of the population, and of the population itself must be anticipated, the Prefect of the Seine and M. Colmet-Daage are taking in hand projects of even greater importance.

The Medical Internes of Toulon.

The six internes of the hospital of Toulon have sent in their resignations. They complain of the rigorous *régime* to which they are submitted by the members of the hospital commission and the physician in chief. They will continue their service, however, for four days, so that the patients shall not be left uncared for.

The Cayor Fly.

On Oct. 25th M. Bouvier presented to the Academy of Sciences a communication by M. Roubaud on the evolution of an African fly, the Cordylobia anthropophaga. It was known that this dangerous larva lives in the skin of man and the domestic animals, in which it gives rise to multiple furuncular tumours having a central orifice; but its mode of penetration thither and its life-history were hitherto unknown. By experiments and observations made in the laboratory of Bammako, the author has demonstrated the following facts: The fly deposits its eggs, about 150, not on the body of the host, but in the earth. After 48 hours the primary larvæ emerge and set about finding a host, being able to exist for ten days without nourishment. They climb along the hairs, and once on the skin they form a tumour wherein they dwell during their transformation into secondary and then tertiary larvæ. In ordinary circumstances the total duration of their evolution does not exceed a week. The European may become infected by the young larvæ, which stick to linen that falls to the ground in the cabins, but he is an unusual host. For the native, who sleeps on the ground, infection is of course much easier.

The French Congress of Medicine.

The twelfth session of the French Congress of Medicine was held at Lyons from Oct. 23rd to the 25th. By a happy inspiration the organisers of the Congress arranged its opening for the jubilee of Professor Lépine, who has just retired at Lyons. His friends, pupils, and admirers met in the amphitheatre in which he has always taught. Professor Roque, his successor, spoke in the name of the old pupils. Then Professor Collet presented to M. Lépine a Jubilee Book, the memoirs in which emanated not only from French but also from foreign scientists. M. Cazeneuve, as a Senator, paid a tribute to the great services rendered to French science by M. Lépine; then M. Landouzy, Dean of the Faculty of Medicine of Paris, Professor Henrijean of Liége, and Professor Joubin, Rector of the University of Lyons, who presided at the ceremony, spoke in succession. Finally, M. Lépine, after expressing his thanks, transferred to his colleagues of the Faculty all the eulogiums that had been pronounced on him for the increasing success of the Lyons school. The first session of the Congress took place in the great amphitheatre of the Faculty of Medicine and was attended by 800 members, presided over by M. Hériot, the Mayor of Lyons. After delivering the opening address the Mayor surrendered the presidential chair to Dr. Chauveau. Diabetes, with its grave complication of coma, first engaged attention. In a discussion on the best diuretics Professor Pic gave a *résumé* of his work on this subject. Professor Widal, Professor Abrami, Professor Chauffard, and M. Nolf discussed icterus due to fragility of the blood cells, which broke up losing their colouring matter and staining the tissues. Dr. Rouget presented a report upon cerebro-spinal meningitis. Finally, arsenobenzol gave rise to numerous discussions. After an acknowledgment of its merits the conclusion was arrived at that it was necessary to distrust solutions made with too stale sterilised water, and it was emphasised that arsenobenzol is a dangerous drug, which must be administered with prudence and reserve if the arteries, the kidneys, and the liver are not in sound condition.

Oct. 30th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Therapeutic Action of Salvarsan.

THE annual congress of the German Association of Naturalists and Medical Men was this year held in Karlsruhe, when Professor Ehrlich read a paper on salvarsan. In dealing with the question of the alleged dangers connected with its administration, he said that recently every death of a syphilitic patient treated by salvarsan had been indiscriminately attributed to the remedy itself. He mentioned a remarkable instance in which a death at first assigned to this cause was afterwards ascertained to have been a case of murder. Painful induration and subsequent thrombosis of the veins were due to the injected solution having been made too alkaline, so that the walls of the veins were eroded. The troubles of the bladder observed in Prague were caused by a decomposition of the preparation which had been exposed to the air. Undesirable symptoms, such as headache, vomiting, and diarrhœa, had been found to be due to the use of impure water containing bacteria; and in this connexion Professor Ehrlich mentioned experiments carried out by Dr. Jakimoff showing that certain bacteria increased the toxicity of salvarsan. Some patients after an injection showed certain nervous troubles, especially affecting the auditory nerve, the explanation being that when a nerve was enclosed in a narrow channel and a reaction in the form of a swelling of the neurilemma was caused by the salvarsan, a compression of the nerve must necessarily occur, and deafness might result. The symptoms in question might commence either some hours or some days after the injection, according to the accessibility of the nerve. The so-called relapsing disorders of the optic and auditory nerves occurring after intervals varying from three to five months were also caused by their inaccessibility, and not by arsenical poisoning. According to statistics collected by Dr. Benario 194 cases of such relapses after treatment by salvarsan and 122 after treatment by mercury were described in medical literature during the same space of time; these symptoms were therefore not due to arsenical poisoning. A very few deaths have, however, happened during treatment by salvarsan, and in these cases the necropsies showed hæmorrhagic encephalitis, which was observed only after infections and the action of toxic substances. Such mishaps might in future be avoided if patients presenting nervous symptoms were from the beginning treated by small but repeated doses of salvarsan. Absolute rest after the injection was very important. In view of the fact that more than 100,000 injections must have been given the proportion of accidents was comparatively small. The "sterilisatio magna"—the radical cure of a patient by a single injection which destroyed all the disease germs—has been successful in relapsing fever and in frambœsia, the latter being a tropical disease which many have regarded as incurable. Professor Ehrlich mentioned that in a hospital in the Dutch colony of

Surinam injections were given to 328 patients suffering from framboesia, the result being that the last patients could be discharged recovered at the end of a fortnight, and the hospital was accordingly closed. Among 900 cases of framboesia there were only three in which the treatment was unsuccessful. Bilharziosis, Aleppo boil, and glanders have also been completely cured by one injection. In trypanosomiasis and in sleeping sickness salvarsan was unfortunately less efficacious. In the early stage of syphilis—namely, in that of chancre and roseola—there was complete recovery in 90 per cent. of the cases.

Fæcal Accumulation as a Cause of Bronchial Asthma.

Professor Ebstein of Göttingen, writing to the *Deutsche Medizinische Wochenschrift*, has stated that a connexion exists between bronchial asthma and coprostasis. He mentioned the case of a boy of 8 years of age who had been suffering for a long time from bronchial asthma and in whom it was observed that the asthmatic seizures decreased after a stay on the seaside, but subsequently became as frequent as before. Professor Ebstein found the patient's rectum and colon filled with great masses of hardened fæces, which were only removed after repeated enemata of sesame oil, the effect of this treatment being that the asthmatic attacks disappeared for good. Another case was that of a woman, aged 42 years, who had been suffering for several years from dyspepsia and chronic constipation and in whom severe attacks of bronchial asthma developed, which completely disappeared as soon as the coprostasis was relieved. After nine years there was a return of the asthma, and it was then found that constipation was again present. By therapeutic measures the constipation was overcome and the asthma once more disappeared. This was not likely to have been a mere coincidence, because the asthmatic attacks became less frequent as soon as the intestines were evacuated. Professor Ebstein is of opinion that bronchial asthma was in these cases caused by the absorption of toxins from the contents of the intestines. The nature of these toxins has not yet been ascertained, but it was advisable that in every case of bronchial asthma the state of the intestines should receive attention, and if there was fæcal accumulation, appropriate treatment should be resorted to.

Acromegaly Caused by Fright.

Professor Pel of Amsterdam has published in the *Medizinische Klinik* two cases in which acromegaly developed after a fright. Both the patients were females, one of them, aged 25 years, having been terrified by an explosion of gas, and the other, aged 26 years, by an outbreak of fire. In both cases the first symptom was amenorrhœa, which was in course of time followed by acromegaly. Radiography showed that the sella turcica was enlarged, but symptoms of cerebral pressure were present in only one patient. Together with an instance described previously by the same author, there are now on record three cases in which the disease has been the sequel of a violent psychical impression, so that a mere coincidence is rather unlikely. Professor Pel, after remarking that Graves's disease was well known to be caused by impairment of the function of the thyroid gland, and that diabetes might depend on disordered action of the pancreas, said that the hypophysis belonged, like the pancreas and the thyroid gland, to the class of ductless glands or glands with internal secretion.

Oct. 30th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

The Medico-Military Service.

THE silent celerity with which the Italian War Office organised the expedition for the annexation of the Tripolitania has evoked the admiration of foreign Powers, to whom, indeed, the fact has come with something of a surprise. When to this is added the completeness and the efficacy of the equipment, down to the minutest detail, the admiration and the surprise are equally enhanced, remembering, as the said Powers must do, the celerity without silence and the equipment, far from efficacious, with which Italy's campaign in Abyssinia closed in the disaster of Adowa. But the lesson of 1896 has borne salutary fruit in 1911, and the Italian War Office of the latter year is as superior to that of the former as the generalship of Caneva is to that of Barattieri. In no department of the present enterprise is the superiority in question more conspicuous than in the army medical service, up-to-date as it is in every particular, and inspired with a forethought and a thoroughness of good augury. Hospital service, whether stationary or mobile, "sections" of surgical or medical relief (*sezioni di sanità*), down to tents improvised for treatment in either sense—all are in evidence within and without the area of fire, with a completeness and an efficiency quite novel in Italy's medico-military record, and excelled by few, if any, of her sister Powers. Every unit of the service is provided with acetylene searchlights supplementary to those of the combatant force for seeking out the wounded. Nor is the commissariat one whit below the standard of medical requirements. No campaign has yet failed to inculcate the lesson that while its dead and wounded are infinitely fewer than its ailing and invalided, the chief cause of these latter is the defective or positively deleterious nutriment served out to the soldier, condemned, as he often is, to wait for long hours spent under fire or on the march, in expectation of food, bad in itself and worse cooked. This source of suffering has been minimised, not to say annulled, by the provision now made for the refection of the expeditionary force, portable cooking apparatus of the best type and yielding the best results being now in operation, most of it, moreover, of Italian invention and construction. Keeping in immediate touch with the troops, this apparatus supplies the force after a march of 16 miles with a warm meal, as palatable as it is sustaining and restorative, to the great comfort and exhilaration of the soldier. Special care has been bestowed on the bread, which, thanks to the acetylene illumination, can be prepared at night, so as to be fresh, crisp, and appetising at the morning meal. If, as now seems possible, we must not count on a speedy issue of the campaign, the responsibilities of the medico-military service may become very heavy, and it is well to know that the service appears to be ready to meet all calls.

The International Monument to Cesare Lombroso.

While cordially approving of the tribute about to be paid by international coöperation to the founder of "Criminal Anthropology," Professor Hans Evensen, director of the Criminal Asylum at Drontheim, in a lecture delivered there and just published at Christiania, does not see eye to eye with Italians in their estimate of the man and his work. Crediting Lombroso's theory of the genesis of pellagra with little more than a stimulating value for the better inspired researches of Terni, Sambon, and Alessandrini, Professor Evensen enlarges on the merit of his work in connecting crime with atavism and epilepsy, and holds that, if Lombroso's type of delinquent has never been fully accepted, the great majority of experts are in accord with him as to the existence of the "delinquente nato" or "criminel né"—the individual, to wit, who from infancy is devoid of the capacity of harmonising his conduct with moral criteria, owing to his brain being insufficiently developed or deteriorated through lesions operative before birth. Even in very favourable circumstances, such an individual (says the Norwegian criminologist) will be found to transgress the laws imposed by society for its own protection. Professor Evensen, in his estimate of Lombroso's best-known publication—that on genius and madness—traces its defects to the fact that the author too often accepted his data on trust without personally examining and testing them. Lombroso, moreover, in resolving into epilepsy whatever is pathologically abnormal in the mental growth of the human subject exceeds the bounds of legitimate induction, the fact being (according to Evensen) that epilepsy has no preponderating part in delinquency, still less in the development of "genius." The great and indisputable merit of the Italian criminologist lies in his having been the pioneer of research in the "frontier regions" of his science—virgin soil which he was the first to cultivate, overrun as it was, and still is, by weeds of every kind. "Few works of our century," says Professor Evensen, "have wrought so many reforms as that on the 'Uomo Delinquente.'" Lombroso's powerful imagination sometimes ran away with him, giving form to theories often unsubstantiated by fact. But even such imagination as his has its indefeasible value, speculation and intuition being factors with which science can never dispense.

Oct. 22nd.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Hygiene of Tobacco-smoking.

IN a paper on tobacco-smoking published in a recent number of the *Orvosok Lapja* Dr. Pekanovics described some of the injurious effects of this practice. He said that besides nicotine, tobacco-smoke contained nicotianine, collidine, and other pyridine derivatives, acids, resins, carbon dioxide, hydrocyanic acid, and ammoniacal salts. Two drops of nicotine placed on a dog's tongue produced in succession efforts to swallow, great weakness, convulsions, and death in less than a minute; eight drops of it were sufficient to kill a horse. Tobacco contained from 2 to 8 per cent. of nicotine, and M. Le Bon, a French observer, has determined that though most of this was changed in smoking it was converted into other pyridine bodies which were just as poisonous. Dr. Pekanovics found that these bodies did not condense to any great extent in the warm mouth, and were mostly exhaled, so that the physiological effect of ordinary smoking was not very marked. Susceptible persons might, however, be much affected by breathing the air of a room in which there was much tobacco-smoke. The action of nicotine had been shown by the investigations of Petit to be intermediate between that of the bromides and of digitalis. It soothed the nervous system, but caused a powerful and rapid contraction of the vessels and a rise in blood-pressure. Among its dangers, therefore, one of the best known was angina pectoris, perhaps due to spasm of the coronary arteries. Through prolonged use it promoted the development of arterio-sclerosis. Tobacco was a "habit-drug," like opium, cocaine, and alcohol, and its devotee lost the force of will necessary to stop the habit, though he knew it was harming him. Tobacco-smoke had apparently no bactericidal action on any micro-organisms present in the lungs. One of the first effects of an overdose was nausea, and prolonged smoking was a distinct factor in the production of digestive troubles.

Short-sightedness in School Children.

Dr. Bogdan has given in the *Orovsok Lapja* an account of his examination of 200 school text-books from a sanitary point of view. He has here drawn particular attention to the fact, already established by many prominent investigators, that short-sightedness in children either originated or developed in connexion with school education. The chief causative agency was, in fact, to be found in too prolonged reading, writing, and drawing, whereby visual accommodation as well as convergence were greatly fatigued. Undue strain of the muscles of accommodation caused an active hyperæmia; the return flow of the venous circulation was greatly hindered, there was an increase of the intra-ocular pressure, and the sclerotic was gradually stretched. Too strong convergence worked even greater harm for the eye in various ways. It must also be observed that in some of the children short-sightedness was hereditary, and they became affected much sooner than their healthy comrades. In addition to the above causes producing short-sightedness, mention must be made of insufficient admission of light in many schools; a similar remark applied to unsuitable desks and other school furniture. As regards the influence of books on the eyesight, Dr. Bogdan insisted that paper should not have a glossy surface, for under artificial light a surface of this kind prevented the eye from seeing well and necessitated moving the book to and fro, as well as frequent changes in the position of the head. Again, the paper should be thick enough to prevent the printing of the next page from obtruding itself upon the reader's eye. A few authorities have recommended yellow paper, but the majority were in favour of white paper, which gave a better contrast between the printed matter and the background.

A Case of Rhinophyma.

An interesting case of this rather rare condition, in which operation was followed by remarkably good results, was reported by Dr. Imre Fischer at a meeting of the Nagyvárad Medical Society on Oct. 1st. The patient was a man aged 65 years. There was no history of injury. Some years ago he had what was probably an attack of acne rosacea in which the nose and the adjacent borders of the cheeks were most prominently affected. This was followed by a nodular growth of the nose which involved all of that organ except the upper fourth. The growth gave rise to no pain. Breathing was not interfered with, but the projecting mass caused much difficulty in eating. The operation consisted in the making of an elliptical incision with removal of the enclosed part followed by shaving of the growth on each side. Contrary to expectation there was very little hæmorrhage. The cosmetic result was very good, an interesting point being that over the area where the growth was simply shaved off skin of normal appearance has been reproduced instead of scar tissue; this was chiefly due to the fact that after the removal of the growth the whole surface was touched with a pencil of carbonic acid snow. Histological examination of the removed tissue showed it to be a soft fibroma of the skin with conspicuous distension and possibly hyperplasia of the sebaceous glands.

Treatment of Epilepsy.

Dr. Rene Berkovics recommends the double bromide of rubidium and ammonium in the treatment of epilepsy; he has seen decidedly better results with this salt than with other bromides. The action is in the main the same, since the rubidium does not exercise any specific effect. The daily dose is 4 to 7 grammes; 4 or 5 grammes given at night are an excellent hypnotic.

Oct. 28th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

Libel Action against General Hertzog.

Dr. A. B. Ward, President of the Medical and Pharmacy Council of the Orange Free State, has instituted legal proceedings for alleged slander against General Hertzog, Minister of Justice. He is claiming £1000 as damages. The case arises out of speeches made by General Hertzog at Smithfield and Fauresmith last year during his electioneering campaign, when he attacked the Medical and Pharmacy Council in connexion with its action in refusing to issue licences to practise to two young medical men holding the certificates of the German Staats Examen, in accordance with a ruling furnished by the Council's legal adviser. The plaintiff in the action avers that the words used by defendant mean that plaintiff, in conjunction with certain other members of the Council, acting in their official capacity, had adopted a biassed, unjust, and discreditable attitude, and had generally abused the position and powers conferred upon them by the law. It is expected that the case will be heard during the November term in the Provincial Division of the Supreme Court at Bloemfontein. This is the second libel action which has been taken against General Hertzog in connexion with his electioneering campaign, the first having already been taken by an inspector of schools who had been dismissed by General Hertzog when Minister of Education in the Orange River Colony. Dr. Ward and his colleagues on the council, after the alleged slander was published, endeavoured to elicit from General Smuts, the Minister of the Interior, a statement that he, as the responsible Minister, was satisfied that the council had acted rightly, and on failing to get a satisfactory answer from the Minister and subsequently from the Cabinet resigned their positions on the council. All the elected members who resigned were, however, re-elected to the council by large majorities, and Dr. Ward was again elected president by the council. He has thus been vindicated by the profession, and it remains to be seen how he fares in the law courts.

Monthly Meeting of Chamber of Mines.

At the last monthly meeting of the Chamber of Mines Mr. H. Webber, the President, made a most interesting speech which indicates that the chamber intends taking active measures in endeavouring to reduce the appalling mortality occurring amongst native mine labourers. The President, *inter alia*, alluded to a research now being undertaken by Dr. Macaulay on behalf of the chamber into the quality of the mealie meal and rice supplied to natives on the gold-fields, and stated that the results so far obtained showed that in a number of samples analysed some of the most important food constituents of the grain appear to be eliminated as waste in the course of grinding and preparation, and that it has been ascertained that these are sold separately as food for cattle. This may possibly prove of some importance in connexion with the prevention of scurvy. Mr. Webber also expressed the hope that the engagement of Sir Almroth Wright for the purpose of carrying out an investigation into the question of

immunisation against epidemic pneumonia might result in the disease being eradicated from the native compounds, where for so many years it has been so terribly prevalent. He also announced that the medical officer for the Witwatersrand Native Labour Association had been sent during the year to investigate sleeping sickness, more particularly in order to ascertain what probability there was of the disease being introduced into South Africa by means of labourers recruited for the mines from the north. He stated that Dr. G. A. Turner, the medical officer referred to, had just returned and had reported quite definitely that there was no danger whatever of the disease ever breaking out in the rand compounds even if introduced from outside.

Farewell Dinner to a Practitioner.

Dr. W. Watkins-Pitchford, who has been transferred to Johannesburg, was entertained before he left at a farewell dinner.

The Need for Public Slaughter-houses in South Africa.

The conditions under which animals are slaughtered for food in most South African towns are very unsatisfactory. The majority of local authorities appear to be of the opinion that as long as the animals are killed out of the public view, and the meat exposed for sale in reasonably clean premises, nothing else matters. Accordingly the slaughter-houses in use are generally insanitary and filthy, and without a water-supply and proper drainage, whilst those engaged in slaughtering are generally dirty in their persons and clothing. In connexion with most slaughter-houses there are a number of natives employed, and it is not uncommon to find amongst these some afflicted with syphilis, tuberculosis, or some other prevalent disease. The meat is conveyed to the shops in wheelbarrows or wagons, exposed to sun and dust, or else merely covered with a dirty tarpaulin. In a few but happily in an increasing number of urban areas the public meat-supply is under proper supervision. Thus the enterprise of the Johannesburg Town Council has resulted in the erection of a large public slaughter-house which supplies meat slaughtered under supervision not only to the inhabitants of the town, but also to a considerable extent those of the other mining towns along the Reef. Bloemfontein also has its public slaughter-house. Durban is understood to be contemplating the same, although this area is equipped with fairly good private slaughter-houses which are worked under close municipal supervision. In the Cape Peninsula municipalities it is stated that a most revolting state of affairs exists, owing to the fact that the owners of private slaughter-houses have been for some years under notice to cease slaughtering in the same. The operation of the closing orders has apparently from time to time been suspended, while the various municipalities have been negotiating amongst each other for the erection of one or more joint public slaughter-houses. These negotiations have been going on for a period of six or seven years, the difficulty being that the municipalities could not come to an agreement as to a site. It is understood that this difficulty has at last been solved, and that the ratepayers of the respective municipalities have sanctioned an expenditure of £35,000 for the purpose of erecting a slaughter-house under joint control. In view of the population to be served, it is understood that the municipal experts are very doubtful if adequate premises can be erected for such a small sum. However, the buildings can always be extended if this proves to be needed, and the closure of the existing slaughter-houses should now be possible within the course of the next few months.

Oct. 2nd.

Obituary.

STANLEY SMITH, M.D. DURH., M.R.C.P. LOND.

WE regret to announce the death of Dr. Stanley Smith, which took place at his residence, Wimpole-street, Cavendish-square, on Oct. 25th, in the sixtieth year of his age. Dr. Stanley Smith received his medical education at London Hospital, and after taking the Membership of the Royal College of Surgeons in 1877 was for a short time house physician to the hospital from which he had qualified. In 1882 he took the L.R.C.P. and L.M. diplomas of Edinburgh, and in 1895 became a Member of the Royal College of Physicians of London and a Doctor of Medicine of the University of Durham. He was physician to the Railway Clearing System Superannuation Fund Corporation. His contributions to medical literature included Empyema: Simple Drainage with Antiseptic Precautions, which was published in THE LANCET in 1882, and Notes on the Treatment of Diphtheria, published in the *British Medical Journal* in 1887.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Oskar Wilhelm Aschenborn, medical adviser to the Prussian Ministry of the Interior. He formerly held various honorary appointments in connexion with the medical associations. His age was 60.—Dr. Julius Caspary, emeritus professor of dermatology in the University of Königsberg. He edited formerly the *Archiv für Dermatologie und Syphilis*, and contributed to Eulenburg and Samuel's great text-book. He was 75 years of age.—Dr. Piettre, member of the French Senate.—Dr. Henry Gibbons, professor of midwifery and gynæcology in Cooper Medical College, San Francisco.—Dr. J. A. Wilder, professor of pathology in the Denver and Gross College of Medicine.

THE REAPPEARANCE OF PLAGUE IN SUFFOLK.

PLAGUE bacilli have been found in the sputum of a seaman who was admitted on Oct. 10th into the sick quarters of the Naval Barracks at Shotley, in Suffolk, apparently suffering from pneumonia. The patient was isolated as soon as suspicions were aroused of the true nature of his complaint. No other cases have been reported, and it appears from an official communication from the Local Government Board that the origin of the infection is not known.

Thus it would seem that a case of pneumonic plague has arisen this autumn in the same corner of East Suffolk in which various cases of supposed human plague were reported about a year ago, and in which plague-infected rats were undoubtedly then present in considerable numbers. The subject of plague in rats and man, with special reference to the Suffolk epizootic of rat plague and the risks of human plague in England, has been dealt with in detail in various recent issues of THE LANCET.[1] In these articles we have traced the history of the East Anglian cases and of previous outbreaks in this country, and have discussed the special circumstances which are likely to affect the appearance and spread of plague at home, and have outlined the measures which should be taken to avert an epidemic of this disease in the event of further cases arising.

The present case of pneumonic plague on the bank of the river Orwell should of course give rise to searching inquiry and the most vigorous precautions, for the pneumonic type of the disease, which is by far the less common, is also by far the more infectious in human beings. Because there have been but few cases of plague in this country for so many years it does not follow that we can afford to relax our guard; and, indeed, the lesson of history shows that such a course invites disaster. But there is no justification for a scare. The present high state of efficiency in sanitary administration and the improved standard of domestic cleanliness in this country must prove strong factors in the limitation and control of plague, as was shown by the experience of Glasgow in 1901. The personal conditions which favour the spread of such a disease among the ignorant natives of India are almost non-existent in this country. Moreover, the Norwegian rat, which has exterminated the black rat in this country, is not primarily a house rat, but a dweller in sewers, docks, and barns, while the British rat-flea, unlike the Indian variety, has little or no taste for human blood. It seems probable that the prompt notification and isolation of all doubtful cases, together with accommodation for keeping contacts apart and under observation, and facilities for preventive inoculation, provided they are associated with wholesale systematic rat destruction in infected areas, would amply safeguard the inhabitants of these islands against anything like a serious epidemic of plague. If rats can be kept outside houses the risk of human plague infection becomes very small.

[1] THE LANCET, Nov. 5th, 1910, p. 1353; Nov. 19th, 1910, p. 1497; Dec. 31st, 1910, p. 1903; and Sept. 2nd, 1911, p. 697.

THE RESEARCH DEFENCE SOCIETY AND ANTI-VIVISECTION SHOPS.

WE have received the following important letter from the officials of the Research Defence Society, whose action in distributing widely their vigorous appeal will receive general commendation :—

SIR,—We desire to make a special appeal, for the purpose of undoing the harm which is done by anti-vivisection shops and processions. The exhibits in these shops are of a most misleading nature; and the truth as to anæsthetics is carefully concealed. No operation, more than the lancing of a vein just under the skin, is allowed to be done on any animal in this country, unless the animal is under an anæsthetic throughout the whole of the operation.

It will be remembered that one of these shops, on the death of H.M. King Edward VII., distributed a leaflet suggesting that His Majesty's death was due to medical treatment.

We have, of course, received many complaints against these shops. We find that the police have no power to close them: and we can only place men outside them, to give our leaflets to passers-by.

But this constant giving of literature is a heavy expense to our society. We therefore appeal for special contributions toward this purpose. We make this appeal with confidence, for we are sure that the public recognises the grave harm which is done by these shops, especially to children. All contributions should be sent to the hon. treasurer, Research Defence Society, 21, Ladbroke-square, London, W.

We may, perhaps, take this opportunity of mentioning that a letter has just been received from Sir Apolo Kagwa, K.C.M.G., the Prime Minister of Uganda. It is dated from Mengo, Uganda, Sept. 26th. "I really think," he says, "that in a few years' time sleeping sickness will be extinct in Uganda, and people will become immune from the disease." If this happy result is obtained, it will, without doubt, be due to the work done by the Royal Society Commission, who gained their knowledge on the subject by experimentation on animals.

We remain, yours faithfully,

CROMER, President.
SYDNEY HOLLAND, Chairman of Committee.
F. M. SANDWITH, Hon. Treasurer.
STEPHEN PAGET, Hon. Secretary.

21, Ladbroke-square, London, W., Nov. 1st, 1911.

THE ROYAL SANITARY INSTITUTE.—A sessional meeting of the Royal Sanitary Institute will be held at 90, Buckingham Palace-road, on Nov. 14th, when a paper will be read on "Sewage Farms," by Mr. H. A. Roechling, M.Inst.C.E. Among those who have promised to take part in the discussion are: Professor A. Bostock Hill, Professor Henry R. Kenwood, Dr. George Reid, and Dr. S. Rideal, D.Sc. The chair will be taken at 8 P.M. by Mr. H. Percy Boulnois, M.Inst.C.E., and a general discussion will be invited. Tickets for admission of visitors may be had on application to the secretary at the institute.

LITERARY INTELLIGENCE.—Messrs. J. and A. Churchill announce for early publication the second edition of "A Short Practice of Medicine," by Dr. R. A. Fleming, in which considerable additions and alterations have been made; the second edition of "Essentials of Surface Anatomy," by Charles R. Whittaker, of which a new feature is the introduction of 12 coloured plates; "The Tobacco Habit, its History and Pathology: a Study in Birth-rates: Smokers compared with Non-smokers," by Dr. H. H. Tidswell; and "Cocoa and Chocolate: its Chemistry and Manufacture," by R. Whymper.—Messrs. Baillière, Tindall, and Cox announce that they have been authorised by the Department of Education of the Sudan Government to publish the Fourth Report of the Wellcome Tropical Research Laboratories, Khartoum. The third report was issued in 1908. The fourth report is in three volumes. Volume A, Medical, represents the research and routine work of the bacteriological section, together with papers on the work of Sleeping Sickness and Kala-azar Commissions; Volume B deals with General Science; and Volume C consists of a second review of Some Recent Advances in Tropical Medicine.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Wilhelm Ceelen has been appointed Prosector of the Pathological Institute of the University in succession to Dr. Beitzke, who is migrating to Switzerland. Dr. Oskar Rumpel, *privat-docent* of Surgery, has been granted the title of Professor. Dr. Adolf Magnus-Levy, whose researches on the pathology of metabolism have attracted much attention, has been appointed Director of the medical side of the Friedrichshain Hospital in succession to the late Dr. Krönig. —*Breslau:* Dr. Julius Strasburger, of the Bonn Policlinic, has been offered the Directorship of the Policlinic with an Extraordinary Professorship, in succession to the late Dr. Richard Stern.—*Cagliari:* Dr. A. Gentili has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Catania:* Dr. F. Pulvirenti of Rome has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Florence:* Dr. P. Rondoni has been recognised as *privat-docent* of General Pathology; Dr. Ugolotti as *privat-docent* of Neurology and Psychology; Dr. F. Leoncini as *privat-docent* of Forensic Medicine; Dr. A. Rossi as *privat-docent* of Surgery and Operative Medicine; and Dr. I. Cappelli and Dr. M. Nencioni as *privat-docenten* of Dermatology and Syphiligraphy.—*Genoa:* Dr. A. Maggione has been recognised as *privat-docent* of Odontology.—*Göttingen:* Dr. Stich of Bonn has been appointed to the chair of Surgery in succession to the late Dr. Braun.—*Königsberg:* Dr. P. L. Friedrich of Marburg has been appointed Professor of Clinical Surgery in succession to Dr. Payr. Dr. Martin Hahn of Munich has been offered the chair of Hygiene.—*Lausanne:* Dr. Beitzke of Berlin has been appointed to the chair of Pathological Anatomy in succession to the late Dr. Stilling.—*Naples:* Dr. F. Galdi has been recognised as *privat-docent* of Medicine.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the executive committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on Oct. 20th. There were present: Dr. F. de Havilland Hall (in the chair), Dr. J. Pickett, Dr. A. C. Hartley (Bedford), Dr. M. G. Biggs, Dr. F. C. Martley, Mr. F. S. Edwards, Dr. St. Clair B. Shadwell, Mr. J. Brindley-James, Dr. F. J. Allan, Dr. Frederick S. Palmer, Mr. H. P. Symonds (Oxford), Dr. M. Greenwood, Dr. R. Hutchison, and Dr. J. B. Ball. The accounts presented showed that the business for 1911 has so far been very good. A considerable margin has been secured in the sickness claims and also in the interest earned by the funds, while the management charges have been well under the amount allowed by the rules. The financial result therefore is very satisfactory, and the funds, now amounting to about a quarter of a million sterling, are still rapidly growing and are ample to provide for all claims that may arise. Prospectuses and all further particulars may be obtained on application to Mr. F. Addiscott, secretary, Medical Sickness and Accident Society, 33, Chancery-lane, London, W.C.

DONATIONS AND BEQUESTS.—The late Countess Dowager of Seafield has left the following legacies: £1000 to the Infirmary, Inverness; £1000 to the Chalmers' Hospital, Banff; £18,000 to the trustees on behalf of the Ian Charles Cottage Hospital, Grantown, the income of which is to be applied towards the maintenance and upkeep of the hospital, and the necessary expenses connected therewith, any surplus to be accumulated and to be available for the expenses thereof in subsequent years. The testatrix empowers the trustees (should they think it necessary) to enlarge and extend the building, and for that purpose to use the savings of income from the endowment of £18,000 under her last will and testament. Should the trustees find it necessary to acquire more land on behalf of the hospital, she desires the proprietors of the Strathspey estates for the time to give such land free from all charge, or for a nominal feu duty.—The honorary secretaries of King Edward's Hospital Fund for London have received £500, the current year's instalment of the £2500 voted by the Corporation of the City of London. —The late Mr. David Fenby has bequeathed £500 each, free from duty, to the Sheffield Royal Infirmary, the Sheffield Royal Hospital, the Jessop Hospital for Women, and the Crookes Orphan Homes.

TURIN EXHIBITION AWARDS.—Messrs. Burroughs, Wellcome, and Co. have secured 13 awards—eight grand prizes, two diplomas of honour, and three gold medals—for their exhibits at the Turin International Exhibition. This probably constitutes a world's record in awards received by a single firm at an exhibition open to all nations.

A PROPOSED IMPERIAL HOSPITAL AND NURSING HOME.—The demand for private nursing homes by a large number of the better class and well-to-do patients coming from the provinces and from the overseas Dominions is very great, while the accommodation provided does not adequately meet that demand. In many cases patients have no choice between a charity and a home which is not subject to medical supervision and where charges are often prohibitive. Patients may have thus a difficulty in selecting an institution suitable to their needs. In these circumstances the proposal to build a large hospital or nursing home can be justified if it is found that the scheme can be carried out in a manner likely to benefit the public at large, while leaving that public at liberty to be attended by medical men of their own choice. It is proposed that a building, for which the necessary capital of £18,000 has already been subscribed, shall be erected in Vincent-square, Westminster, and that in the first instance accommodation shall be provided for 40 beds. The management of the hospital is to be chiefly in the hands of medical men elected by a board of directors, and the charges, which will range from three guineas upwards, will be quite apart from those for professional attendance.

NATIONAL ASSOCIATION FOR THE AFTER-CARE OF THE FEEBLE-MINDED.—A meeting of this association was held at Brighton on Oct. 27th and was attended by a large number of delegates from various parts of the country. The conference agreed to place on record the fact that it had passed the following resolution:—

That this conference emphatically expresses its belief that the time has arrived when the Government should pass a Bill making permanent segregation of the feeble-minded compulsory, and urges the immediate preparation and passage of such a measure.

The conference was not quite unanimous in this resolution, but those delegates holding the view that no further powers should be given to local authorities to detain feeble-minded persons until suitable colonies have been provided were considerably in the minority. Sir William Chance, as chairman of the association, presented the after-care report and statistics for 1911, showing that the total number of cases dealt with was 3283, an increase of 527 over the previous year, and three times as many as the total number of cases under observation five years ago. The proportion of cases reported upon as doing remunerative work was 19 5 per cent. There were only 202 cases reported upon as useful at home, 28·6 were reported upon as absolutely useless to society, and 14·1 per cent. as in asylums, workhouses, or other institutions, while the number of cases lost sight of had increased from 19 to 23 per cent. for the total number of cases. 612 were those of children under the age of 14. Sir William Chance strongly urged compulsory registration and supervision of all cases of mental defect, and said the returns showed how necessary it was for the Government to take the matter boldly in hand as soon as possible and deal with it in a thoroughly scientific manner, not ousting voluntary efforts altogether but enabling them to produce better results, and rescuing, by the institution of permanent care, the many unfortunate persons who, without such care, continued to be a danger not only to themselves but to the whole community. Delegates enlarged upon the pressing need of colonies in which to segregate patients; and the case of a Brighton institution was mentioned where 50 boys and girls were being excellently brought up, but at the age of 16 had to leave and go into the streets and byways and find their own living, which they found to be an impossible task. A note of warning was sounded by a clerical delegate who held that as regards the provision of segregation colonies economy might be preached to architects. Papers were read by Dr. Helen Boyle on Methods of Dealing with Feeble-minded Cases Bordering on Lunacy; Dr. R. J. Ryle on the Origin of Feeble-mindedness; Dr. R. D. Clarkson on Scotch Methods (read by Sir William Chance in the absence of Dr. Clarkson); Dr. Isabelle Thompson Smart of New York, on American Methods (read by Dr. Potts in the absence of Dr. Smart); Dr. G. E. Shuttleworth on the Egyptian Institution; and by Dr. Alice Vowe Johnson describing Visits to the Ursberg Colony in Bavaria and the Working of the Gheel System in Belgium. All the papers were most instructive, and the conclusion arrived at in each of them was that the great object to be attained by the after-care of the feeble-minded was to render the subject a self-supporting citizen.

SHIPS' SURGEONS: A NEW DEPARTURE IN THE PENINSULAR AND ORIENTAL COMPANY.—The Peninsular and Oriental Company has instituted a new departure with reference to its surgeons. Beginning on Jan. 1st, 1912, surgeons in the service of the company will be allowed to charge a fixed fee for each consultation with first- and second-class passengers. The pay, £10 per month, remains as before.

Dr. Joseph Francis Dixon has been appointed medical superintendent of the Borough Asylum, Leicester.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill.

UNDER the "guillotine" resolution the National Insurance Bill is passing rapidly through Committee in the House of Commons, but it is not expected to reach the House of Lords until the beginning of December. Last week the discussions on the Bill referred to the conditions which societies must fulfil in order to become approved societies. The chief alteration made was the excision of the condition that approved societies must have at least 10,000 members being insured persons. This change was made at the instance of the CHANCELLOR of the EXCHEQUER, who has drafted a new clause to provide for the grouping of small societies with less than 5000 insured members. An interesting discussion arose on an amendment brought forward by Mr. GILL on behalf of the Labour Party. It was to the effect that the rules of an approved society "must not provide for medical tests as a condition of membership under this Act." The honourable Member contended that if Friendly Societies had the right to select lives they would select only the best and those which did not reach that standard would have to go into the Post Office as deposit contributors. Mr. GILL urged that by admitting good and indifferent lives, an average would be obtained, and as all had to pay alike, the risk should be taken by all the societies on an average basis. Mr. MASTERMAN, on behalf of the Government, declined to accept the amendment, on the ground that it was impracticable in application and distasteful to the Friendly Societies to compel them to take people without a medical test. Mr. BARNES pointed out that trade unions did not impose medical tests, although some of them paid sickness benefits. The result of the clause would be that the bad lives would go to the trade unions and the good lives to the Friendly Societies. Mr. RAMSAY MACDONALD elaborated this point, but the CHANCELLOR of the EXCHEQUER maintained that the Friendly Societies must have a control over the persons whom they admitted as members. The amendment was ultimately negatived without a division.

In the early days of this week the House of Commons considered clauses of the National Insurance Bill dealing with the membership of approved societies, surpluses, deficits, and deposit contributors. A very interesting debate arose on the subject of deposit contributors and on the problem of dealing with persons who for reasons of health would not be accepted as members by the approved societies.

As the result of the debate on the question of the Post Office contributors, Mr. LLOYD GEORGE accepted an amendment brought forward by Mr. SHERWELL to the effect that the scheme in relation to them should only be provisional. It was only to have effect until Jan. 1st, 1915. In the meantime other measures would have to be devised. The amendment was carried.

The Health of the Navy.

The statistical report of the health of the Navy for the year 1910 is issued as a Blue-book. In it it is stated that the returns for the year 1910 show a continuous improvement in the general health of the fleet as compared with the preceding five years.

HOUSE OF COMMONS.

TUESDAY, OCT. 24TH.

Milk and Dairies Bill.

Mr. C. BATHURST asked the President of the Local Government Board when he proposed to introduce his long-promised Milk and Dairies Bill.—Mr. BURNS replied: I am afraid that the Government programme for the autumn session will not admit of the passing of the Milk and Dairies Bill this year.

Mr. C. BATHURST: May I ask the right honourable gentleman whether he proposes to introduce this measure in the early part of next session?—Mr. BURNS: Sufficient unto the day is the goodness thereof.

Mr. WATT: Will the Bill apply to Scotland?—Mr. BURNS: No, sir.

WEDNESDAY, OCT. 25TH.

The Nutritive Value of Bread.

Mr. C. BATHURST asked the President of the Local Government Board whether he had taken any administrative, or proposed to take any legislative, action in consequence of the reports of Dr. J. M. Hamill and Dr. Monier-Williams presented to his department in reference to the adulteration of baking-powders and self-raising flour, the bleaching of flour, the addition of so-called improvers to flour, and the respective nutritive values of breads made from the different constituents of the wheat grain in varying proportions.—Mr. BURNS answered: The matters referred to are still under consideration.

Mr. C. BATHURST: How long are they likely to remain under consideration?—Mr. BURNS: The honourable Member must know, and should know, that since the two reports to which he refers in his question were issued I have had to see a number of important deputations, and I have still to see two more on the subject.

MONDAY, OCT. 30TH.

The Sale of Milk.

Mr. BARNSTON asked the President of the Board of Agriculture whether he was now in a position to state the result of the inquiries which the Board had been making as to the manner in which the existing provisions of the law relating to the sale of milk were at present administered by local authorities.—Mr. RUNCIMAN replied: The inquiry is not yet completed. I am afraid that I cannot state when I shall be able to make a general statement on this subject. The work is being carried out by inspectors who have other duties to discharge as well. I understand that they are proceeding with all possible speed. I will, however, look into the matter.

National Insurance Bill Topics.

Mr. BARNES asked the Secretary to the Treasury whether dental attention, including the supply of artificial teeth, would be allowed as medical benefit if a medical attendant under the National Insurance Bill certified that illness arose from septic teeth and gums, and that he, the medical attendant, could not do anything further for the insured person unless his teeth were properly attended to; and would a company which had been proved to have been guilty of fraud be allowed to establish an approved society.—Mr. MCKINNON WOOD answered: With regard to the first part of the question, the matter will be one for the decision of the Local Health Committee, subject to the regulations of the Insurance Commissioners. With regard to the second, the Insurance Commissioners may on sufficient grounds withhold or withdraw approval from a society or separate section of a society.

Mr. CATHCART WASON asked the right honourable gentleman to state what provision there was in the National Insurance Bill for deposit contributors in the Highlands and Islands living at great distances from any medical officer receiving adequate consideration.—Mr. MCKINNON WOOD replied: The Local Health Committees on which the deposit contributors will be represented will be responsible for providing the benefits to which the deposit contributors are entitled. The proviso to Sub-clause (2) of Clause 32 was specially inserted to enable the local committees to deal with deposit contributors separately in such cases.

Mr. KELLAWAY asked the right honourable gentleman whether he was aware that the Pharmaceutical Society of Great Britain did not recognise the pharmaceutical certificates of any British Colony; and if, under the National Insurance Bill, the holders of British-Colonial pharmaceutical certificates who were in business as chemists in this country would be prohibited from supplying drugs and medicines under the Bill.—Mr. MCKINNON WOOD said in reply: I understand that the Council of the Pharmaceutical Society of Great Britain is now engaged in negotiations with the Colonial representatives. It is hoped that it may prove possible to formulate a by-law providing for the admission to the Register of Chemists of persons holding Colonial certificates of qualification equivalent to the British qualification.

Mr. KELLAWAY: Is it hoped to conclude the negotiations in time to make it possible for them to apply under the National Insurance Bill?—Mr. MCKINNON WOOD: I am not able to reply to that question.

TUESDAY, OCT. 31ST.

The Plague in India.

Mr. KEIR HARDIE asked the Under Secretary of State for India whether he could give any information concerning the progress of the plague in India, including the number of fatal cases during the past three months.—Mr. MONTAGU answered: The mortality from plague during the last three months in British India and Native States has been as follows: In July, 8987 deaths; August, 14,191; September, 28,618. There is very little plague in Northern India, only 13 deaths from it being recorded in the Punjab during September, but a severe epidemic has broken out in the Bombay Presidency, where 20,470 of the total number of deaths in September occurred. Madras and Mysore are also affected, though in a slighter degree.

The Prevalence of Anterior Poliomyelitis.

Mr. EDMUND HARVEY asked the President of the Local Government Board whether his attention had been called to the prevalence during the past year in certain districts in Yorkshire of the disease known as anterior poliomyelitis; and whether, in view of the character of the disease and its serious after-effects, he would cause investigations to be made into the nature of the disease, with a view of discovering the best means of cure and of avoiding its spread.—Mr. BURNS wrote in reply: My attention has been drawn to the prevalence of acute poliomyelitis not only in certain districts of Yorkshire, but also in several other counties, and three of my inspectors have for a considerable time past been engaged in investigations relating to it, the results of which along with information as to the pathology of the disease will be published in due course.

WEDNESDAY, NOV. 1ST.

Medical Men and the Royal Naval Reserve.

Mr. MIDDLEMORE asked the Secretary to the Admiralty whether any steps had been taken to induce medical men to take commissions in the Royal Naval Reserve, with a view to securing their professional services in war time, or whether such a step was in contemplation?—Mr. MACNAMARA said in reply: We have done a great deal in the direction suggested by the honourable Member. Revised regulations for medical officers, Royal Naval Volunteer Reserve, embodying improved conditions of service have recently been introduced and have been brought prominently to the notice of medical men throughout the country. The result so far is considered satisfactory.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London, W. LONGMANS, GREEN, AND CO., New York.

International Medical Monographs. General Editors: Dr. Leonard Hill, F.R.S., and Dr. William Bulloch. Syphilis from the Modern Standpoint. By James McIntosh, M.D. Aberd., Grocer's Research Scholar, and Paul Fildes, M.B., B.C. Cantab., Assistant Bacteriologist to the London Hospital. Price 10*s.* 6*d.* net.

DOIN, OCTAVE ET FILS, 8, Place de l'Odéon, Paris.

Formulaire des Agents Physiques. Par J. Larat, Chargé du Service d'Eléctrothérapie de la Clinique des Maladies Infantiles, G. Dagron, Ancien Interne des Hôpitaux de Paris, Ray, Durand Fardel, Secrétaire général de la Société d'Hydrologie Médicale de Paris, Médecin Consultant à Vichy, et Dubois (de Saujon), Directeur de l'Établissement Hydrothérapique de Saujon (Charente-Inférieure). Préface de G. Dieulafoy, Membre de L'Académie de Médecine, Professeur de Clinique à la Faculté de Médecine. Price Fr. 6.

Précis des Maladies des Vieillards. Par Adrien Pic, Professeur à la Faculté de Médecine de Lyon, avec la Collaboration de S. Bonnamour, Ancien Interne des Hôpitaux de Lyon, Chef de Laboratoire à la Faculté de Médecine. Préface du Professeur Bouchard. Price Fr.10.

FROWDE, HENRY, AND HODDER AND STOUGHTON, London.

Oxford Medical Publications. Practical Anæsthetics. By H. Edmund G. Boyle, M.R.C.S., L.R.C.P., Assistant Anæsthetist to St. Bartholomew's Hospital; Demonstrator of Anæsthetics to the Medical School of St. Bartholomew's Hospital. Price 5*s.* net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

Elementary Experimental Chemistry. By F. E. Weston, B.Sc. Lond., F.C.S. (First-class Honours in Chemistry), Head of the Chemical Department, the Polytechnic, Regent-street, London, W. Price 2*s.*

MILLS AND BOON, 49, Rupert-street, London, W.

Nerves and the Nervous. By Edwin Ash, M.D. Lond., Assistant Physician, Italian Hospital, London; Assistant Physician and Physician for Nervous Diseases to the Kensington and Fulham General Hospital. Price 5*s.* net.

Elementary Quantitative Analysis. By F. M. Oldham, B.A., late Scholar of Trinity Hall, Cambridge; Senior Science Master at Dulwich College. Price 1*s.* 6*d.*

MURRAY, JOHN, Albemarle-street, London, W.

Further Researches into Induced Cell-Reproduction and Cancer. Consisting of Papers by H. C. Ross, M.R.C.S. England, L.R.C.P. Lond., J. W. Cropper, M.B., M.Sc. Liverpool, and R. H. Ross, M.R.C.S. England, L.R.C.P. London. The McFadden Researches. Price 3*s.* 6*d.* net.

REID, ANDREW, AND CO., LIMITED, Printing Court Buildings, Newcastle-upon-Tyne.

University of Durham College of Medicine, Newcastle-upon-Tyne. Price not stated.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

Traitement Adjuvant du Strabisme. Par F. Terrien, Professeur agrégé à la Faculté Ophtalmologiste de l'Hôpital des Enfants-Malades, et Hubert, Ancien Assistant d'Ophtalmologie des Hôpitaux. Price Fr.4.

Étude sur les Fractures de l'Extrémité Inférieure de l'Humérus chez l'Enfant (Résultats éloignés). Par le Docteur André Trèves, Ancien Interne des Hôpitaux de Paris et de la Clinique Chirurgicale Infantile de la Faculté, Assistant de Chirurgie Orthopédique à l'Hôpital des Enfants-Malades. Price Fr.10.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ADAMS, MARTHA, M.B., B.S. Glasg., has been appointed Lady Medical Inspector to the Essex Education Committee for six months.

ALDERSON, G. G., M.B., B.C., has been appointed Obstetric Assistant to University College Hospital.

BARBER, P. E., L.R.C.P. Lond., M.R.C.S., has been appointed Professor of Midwifery in the University of Sheffield.

BARRIS, J. D., M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Physician to the City of London Lying-in Hospital.

BENTON, GRAHAM M., M.B., Ch.B. Vict., has been appointed Sixth Anæsthetist to the Manchester Royal Infirmary.

BRENTNALL, C. G., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

BUCK, HOWARD, M.B., Ch.B. Vict., F.R.C.S. Eng., has been appointed Resident Surgical Officer at the Manchester Royal Infirmary.

CHILD, W. N., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer at the British Lying-in Hospital.

CHUBB, G. C., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at University College Hospital.

CONDY, E. M., M.B., B.Ch. R.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Clonavaddy District of the county of Tyrone.

COOPER, F. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Trillick District of the county of Tyrone.

COURTS, A. C. S., M.B., B.S. Lond., has been appointed House Physician at University College Hospital.

CRESSWELL, FRANK PEARSON SKEFFINGTON, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed one of the Medical Referees under the Workmen's Compensation Act for County Court Circuits Nos. 24, 30, and 31.

DARLING, H., M.B., B.S. Lond., has been appointed House Physician at University College Hospital.

DIXON, JOSEPH FRANCIS, M.D. Dub., has been appointed Medical Superintendent of the Leicester Borough Asylum.

DOWNING, C., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Cardiff District of the county of Glamorgan.

FOWLER, W. C., M.B., B.S. Lond., has been appointed House Surgeon at University College Hospital.

HEDLEY, JOHN PRESCOTT, M.B., M.C. Cantab., F.R.C.S. Eng., M.R.C.P. Lond., has been appointed Physician to Out-patients at the British Lying-in Hospital.

HEY, WILSON H., M.B., Ch.B. Vict., F.R.C.S. Eng., has been appointed Visiting Surgeon to the Manchester Children's Hospital, Medical Superintendent to the Christie Cancer Hospital, Manchester, and Assistant Surgical Officer to the Out-patient Department at the Manchester Royal Infirmary.

HIBBERT, CECIL, F.R.C.S. Edin., has been re-appointed Medical Officer to the Central Branch of the Manchester Royal Infirmary.

HUTCHINSON, JAMES RANDAL, M.D. Vict., D.P.H., has been appointed Medical Inspector under the Local Government Board.

MORLEY, JOHN, F.R.C.S. Eng., has been appointed Surgical Registrar to the Manchester Royal Infirmary.

PHILLIPS, MILES H., M.B. Lond., F.R.C.S. Eng., has been appointed Lecturer in Gynæcology in the University of Sheffield.

PYE-SMITH, Professor R. J., Ch.M. Sheffield, F.R.C.S. Eng., has been appointed to represent the University of Sheffield on the General Medical Council.

SCOTT, ALEX. R. P., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior House Physician at the Prince of Wales's General Hospital.

SHATTOCK, C. E., M.B., B.S. Lond., has been appointed House Physician at University College Hospital.

STEPHEN, DAVID, M.B., B.S. Aberd., has been appointed Assistant Medical Officer at the Lincoln Mental Hospital.

VAUGHAN, R. G., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Caldicot District of the county of Monmouth.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AYR DISTRICT ASYLUM.—Junior Assistant Medical Officer. Salary £140 per annum, with board, lodging, and laundry.

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £80 per annum, all found.

BATH ROYAL UNITED HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Resident Medical Officer for six months. Salary at rate of £60 per annum, with board, residence, &c.

BIRMINGHAM CITY ASYLUM, Winson Green.—Junior Assistant Medical Officer. Salary £150 per annum, with board, laundry, &c.

BIRMINGHAM, CITY EDUCATION COMMITTEE.—Medical Officer for Inspection of School Children. Salary £260 per annum.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CAMBRIDGE COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, and attendance.

CROYDON UNION.—Assistant Medical Superintendent of the Infirmary and Assistant Medical Officer of the Workhouse and Children's Homes. Salary £140 per annum, with usual residential allowances.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, apartments, laundry, &c.

DONCASTER, ROYAL INFIRMARY AND DISPENSARY.—Senior House Surgeon and Assistant House Surgeon, unmarried. Salaries £90 and £60 per annum respectively, with board, apartments, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Second Casualty Officer for six months. Salary at rate of £40 per annum, with luncheon and tea. Also Assistant Surgeon.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—House Physician for six months. Salary at rate of £60 per annum, with board, residence, and washing.

GLASGOW, UNIVERSITY OF.—Examinerships.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Surgeon for six months. Salary at rate of £40 per annum, with board, lodging, and laundry.

HITHER GREEN, S E, PARK HOSPITAL FOR CHILDREN.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for six months. Salary 30 guineas.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Physician to Out-patients. Also Surgeon to Out-patients. Also Medical Registrar. Salary £127 10s. per annum. Also House Surgeon for six months. Salary £30, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

ILFORD URBAN DISTRICT COUNCIL.—Assistant Medical Officer of Health. Salary £250 per annum.

ITALIAN HOSPITAL, Queen-square, W.C.—House Surgeon for six months. Salary £60 per annum, with board and residence.

LEICESTER INFIRMARY.—Honorary Surgeon.

LINCOLN CITY FEVER HOSPITAL.—Assistant Medical Officer of Health and Resident Medical Officer, unmarried. Salary £150 per annum, with rooms, coals, light, and attendance.

LISCARD, CHESHIRE, WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and service.

LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Resident Medical Officer. Salary £250 per annum, with board and residence.

LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Salary at rate of 50 guineas per annum, with board, residence, and washing.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—House Surgeon and Assistant House Surgeon, both unmarried. Salary £100 and £80 per annum respectively, with board, lodging, and laundry.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Honorary Assistant Physician.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood.—Honorary Dental Surgeon. Also Honorary Radiographer.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—House Surgeon. Salary £60 per annum, with board, residence, and laundry.

NORWICH, JENNY LIND INFIRMARY FOR CHILDREN, Unthank-road.—Resident Medical Officer (female). Salary £50 per annum, with board, apartments, and laundry.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Pathologist. Salary £100 per annum.

PORTSMOUTH WORKHOUSE INFIRMARY, WORKHOUSE, AND CHILDREN'S HOME.—Second Assistant Resident Medical Officer. Salary £120 per annum, with apartments, rations, &c.

RADIUM INSTITUTE, 16, Riding House-street, Portland-place, W.—Assistant Medical Superintendent. Salary £250 per annum.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon for six months. Salary £60 per annum, with board, lodging, and washing.

ROYAL EAR HOSPITAL, Soho.—Honorary Assistant Anæsthetist.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Dental Surgeon.

ROYAL NAVAL MEDICAL SERVICE.—Fifteen Commissions.

RICHMOND, SURREY, ROYAL HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board and apartments.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Physician, unmarried. Salary £100 per annum, with board, residence, &c.

UNIVERSITY OF LONDON.—Examiners.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—Senior Resident Medical Officer. Salary £120 per annum, with board, residence, and washing.

WALSALL AND DISTRICT HOSPITAL.—House Physician and Casualty Officer. Salary £80 per annum, with board, residence, and laundry.

WEST AFRICAN MEDICAL STAFF.—Appointments. Salary £400 per annum.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, &c., 73, Welbeck-street, W.—Clinical Pathologist for six months. Salary £50 per annum.

WHITTINGHAM, NEAR PRESTON, COUNTY ASYLUM.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, apartments, and washing.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

WREXHAM INFIRMARY.—Resident Medical Officer. Salary £100 per annum, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Tottenham, in the county of Middlesex; and at Dumfries, in the county of Dumfries.

Births, Marriages, and Deaths.

BIRTHS.

BATES.—On Oct. 29th, at Vicars-hill, Lewisham, S.E., the wife of George Llewellyn Bates, L.R.C.P., M.R.C.S., L.D.S., Harley-street, W., of a son.

WEBB.—On Oct. 28th, 1911, at 119, Elgin-crescent, Notting Hill, W., the wife of W. S. Webb, M.D., L.R.C.P., &c. (late West African Medical Staff), of a daughter.

DEATHS.

PULLIN.—On Oct. 26th, at Abernethy House, Sidmouth, Thos. H. S. Pullin, M.D., F.R.C.S. Edin., aged 87 years.

STANLEY SMITH.—On Oct. 25th, at 68, Wimpole-street, Cavendish-square, peacefully after a short illness, E. Stanley Smith, M.D., M.R.C.P., aged 59 years. Funeral at Kensal Green at 3.30 on Saturday, Oct. 28th. Friends please accept this, the only intimation.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A MEDICAL OFFICER'S SALARY.

BOARDS of guardians, as is only too well known to the medical profession, do not always err on the side of generosity and sympathy towards their medical officers. An account in the *Bradford Observer* of a recent meeting of the Bradford board of guardians reveals a condition of over-work and under-pay in the terms of employment of the medical officer of No. 1 district under that board which calls for public attention, particularly at a time when the amount and method of remuneration for medical service has become a public question. We learn that the deputy chairman of the Bradford board of guardians proposed that, subject to the consent of the Local Government Board, the salary of this medical officer should be increased from £50 to £100 per annum, exclusive of medicines and dispensing, which should in future be provided by the guardians. In answer to a critic the deputy-chairman justified his proposal by the statement that "the doctor had spent all the money allowed him in medicines; he had had nothing for himself. During the past year he had made no fewer than 3500 visits, which ran out at 3½*d.* per visit, so that really the doctor did not get paid for the medicine he gave, and the guardians thought it was time for every man to receive his hire." It is satisfactory to note that the motion was carried without further ado.

CHOLERA AND PLAGUE IN RUSSIA.

Mr. A. W. Woodhouse, British Consul at St. Petersburg, in his report for the past year just received at the Foreign Office, writes: "During 1910 conditions of public health in Russia were severely tried by a recurrence of plague and intensification of the cholera epidemic which had prevailed for three years previously on a much smaller scale. This increase of cholera is shown in the following comparison of figures for the past four years:—

Year.	Provinces and territories affected.	Cases.	Deaths.
1907	50	12,717	6,442
1908	69	30,709	15,543
1909	49	22,632	10,605
1910	72	216,091	101,002

The epidemic raged throughout the year without interruption from the time of its reappearance in the spring in Southern Russia. The chief nurseries of the disease appeared to be at two or three points in the province of Ekaterinoslav, especially in the district of Bakhmut, which is the seat of mining industries and several great ironworks, employing many thousands of workmen. From here it spread over the country through Rostov-on-the-Don and Baku, the latter district having been the centre whence the Caucasus and trans-Caucasus received the contagion. The attention of the Russian authorities in combating the epidemic was chiefly directed to sanitary precautions and medical assistance along the courses of the principal water-ways. Every boat carrying passengers was placed under the observation of a medical officer on board, and 71 medical stations were established along the Don, Volga, Dvina, Neva, the Ladoga Canal system, and the rivers of Siberia.

"The first outbreak of bubonic plague in 1910 occurred at Odessa in the middle of May, and from that time until the end of November there were 140 cases, 42 of which ended fatally. The general medical opinion was that the contagion had been brought to the town by the sea. One more solitary case was disclosed there in December, and two or three deaths from plague occurred also at Batoum and Baku. A region more seriously affected by it was the Kirghiz Steppe in the province of Astrakhan, where 180 deaths took place out of 226 cases. A special medical commission of inquiry was sent into this district in the autumn. The character of the disease seems to change from bubonic in summer to pulmonary plague in the cold season. The greatest danger was from the Russian railway zone of the Chinese Eastern line through Manchuria, where 1043 Chinese and 32 Europeans contracted the disease, and 1020 Chinese and 29 Europeans died of it, between Oct. 26th, 1910, and Jan. 27th, 1911."

THE GALE AND SANITATION.

A CORRESPONDENT writes: "From the public health standpoint the value of the gale on the south coast last week is apt to be overlooked. Watching the great waves dashing on the beach the mind is carried away, firstly, by the magnificent spectacle afforded by the rough sea; and secondly, by the sight of the damage done to the foreshore. Considering the fierceness of the gale the damage done was comparatively slight, while the benefit derived must be an important consideration to health resorts. The gale drove the sea at high tide over the entire beach, not stopping at what is known as high-water mark and in many cases trespassed even much further. The result was that the accumulation of stones was thoroughly cleansed by sea water. It must be borne in mind, too, that such a cleansing process had not taken place since the previous gale in December. However careful local authorities are over their beach at the seaside they cannot cleanse it in the way it is periodically purified by a rough sea. More than ever was this cleansing process needed on this occasion after the long period of drought and great heat."

A DANGER TO HEALTH IN PUBLIC ELEMENTARY SCHOOLS.

To the Editor of THE LANCET.

SIR,—When our legislators framed their education laws they seem to have forgotten to arrange for fine weather to be provided for the carrying out of their grand educational scheme. The result of their forgetfulness has been the illness and death of many children who have reached school after exposure to heavy rain drenched with wet, and in this state they have gone through three hours' schooling. It has been stated by a judge that "attendance is not legal if a child is not in a fit state to attend." It is evident that if a child is dangerously wet he is not in a fit state, because he may contract a severe illness. Therefore, in the absence of the school doctor it should be the duty of the teacher to dry the clothes, or, if that is impossible, the child should be sent home. Very few, if any, of the medical inspectors have called attention to this matter.

The coöperation of the parents should be obtained in order to protect the children from this risk, but parents have been reduced to indifference to the welfare of their children by the action of some of the school attendance officers. Some of these officials regard themselves as competent to decide whether the explanations of the parents for the absence of their children are valid or not. Their duty is only to ask the parents the cause of absence and then report to the authority. An effort should be made to encourage parents to use their discretion as to when it is right to keep a child at home. Health is the best of all gifts, and should not be damaged or hazarded for a smattering of learning. Wet clothes often prove the starting-point of incurable disease.

I am, Sir, yours faithfully,

Torquay, Oct. 30th, 1911. H. H. TIDSWELL.

AN "AMMOCHLORIQUE" INHALER.

FOR the production of ammonium chloride fumes, simulating smoke, this apparatus answers well. It is small and compact and simple in action. In form it is like an ordinary hooked tobacco-pipe, the glass bowl containing the "laboratory" in which ammonia and hydrochloric acid are brought together to form ammonium chloride. The reagents are contained in glass bulbs with easily fractured tube ends. A wetted sponge is placed at the bottom of the bowl and the contents of a fractured ammonia tube are allowed to drop upon it. Next a sealed pipette of hydrochloric acid is placed in an open glass tube fitted into the rubber stopper of the bowl. On breaking off the ends of the pipette the acid falls into a small bulb at the lower end of the tube provided with an exit hole. Air drawn through the pipe by means of suction at the stem mouthpiece is first charged with hydrochloric acid. It then encounters the sponge saturated with ammonia when ammonium chloride is formed which reaches the respiratory organs in the state of smoke. The apparatus was submitted to us by Messrs. C. J. Hewlett and Son, Limited, of 35-42, Charlotte-street, London, E.C.

THE WOES OF A PUBLIC VACCINATOR.

To the Editor of THE LANCET.

SIR,—The enclosed may be worthy of a corner in your paper under the above title:—

P.V.: "Well, Mrs. ——, do you wish me to vaccinate your baby this morning?"

Mrs. ——.: "No thank you, sir, my husband says he would rather pay and have it done properly."

I am, Sir, yours faithfully,

Oct. 28th, 1911. R. B. F.

"AURORA" HEALTH CARAVAN.

FOR the past three months the "Aurora" Health Caravan—belonging to the Women's Imperial Health Association of Great Britain, of which H.R.H. Princess Louise Duchess of Argyll is Patron—has been touring the West of England under the charge of Major C. A. Thimm, who may be remembered as being formerly connected with the Sleeping Sickness Bureau, Burlington House, and whose "Bibliography of Trypanosomiasis" is a standard work of reference on that subject. During the tour Major Thimm held open-air meetings in all the villages through which he passed, and gave simple and instructive "Health Talks," and when visiting cities and the large towns public halls were engaged and well-known medical men and others sent from London to lecture on behalf of the association, among whom have been Dr. David Walsh ("Infant Mortality," "Teeth in Connexion with the Health of the Nation—Medical Side"); Dr. Murray Leslie, the chairman of the association ("Prevention of Consumption"); Mr. George Thomson, L.D.S. ("Teeth in Connexion with the Health of the Nation—Dental Side"); Dr.

Lilian Simpson ("Home Nursing"); Dr. J. G. Garson ("Hygiene of Consumption"); and Mr. C. G. Moor, M.A., F.I.C. ("Foods for Grown-Ups, Children, and Babies"). Major Thimm received from the medical officers of health of the districts he travelled through the greatest assistance and encouragement.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for November, 1911:—

September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Oct. 31st–Nov. 4th (London, Royal Horticultural Hall).—Twenty-second Universal Cookery and Food Exhibition.
Nov. 1st–14th (London).—"The Englishwoman" Exhibition of Arts and Handicrafts.
,, 3rd–11th (London, Olympia).—Tenth International Motor Exhibition.
,, 9th–11th (Cape Town).—Congress of the South African Branch of the Royal Sanitary Institute.
,, 10th–25th (Manchester).—Smoke Abatement Exhibition.
,, 14th and 15th (Vienna).—Jubilee of Union of Austrian Dental Surgeons.
,, 21st–23rd (Montreal).—Canadian Public Health Association (First Annual Meeting).
November (Rome).—Fourth International Congress of Physical Education.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

PATHOLOGICAL SECTION (Hon. Secretaries—J. C. G. Ledingham, A. E. Boycott): at 8.30 P.M.

LABORATORY MEETING, Lister Institute, Chelsea Gardens, S.W. (nearest station, Sloane-square).

Dr. Bayon: (1) Demonstration of Organisms from Cases of Leprosy; (2) Attempts to Differentiate various Acid-fast Organisms by Complement-fixation and Animal Tests.
Prof. E. A. Minchin: Demonstration of Intracellular Phase of *T. Lewisi* in the Stomach of the Flea.
Dr. Funk and Dr. Cooper: Demonstration on Pigeon Beri-beri.
Dr. Funk: The Cause and Cure of Beri-beri.
Dr. H. C. Ross and Dr. Cropper: Demonstration of Division-figures in Lymphocytes.
Dr. E. H. Ross: The Developmental Cycle of the Lymphocytozoon of the Guinea-pig (Kurloff's Body).
Dr. Henderson-Smith: The Immunisation of Rabbits with Varying Doses of Typhoid Vaccine.
Dr. Priestley: An Attempt to Differentiate the Diphtheroid Group of Organisms.
And other Papers and Demonstrations.

FRIDAY.

GENERAL MEETING OF FELLOWS at 4.45 P.M.

Election of Candidates for Fellowship.

CLINICAL SECTION (Hon. Secretaries: James Galloway, Charles H. Fagge): at 8.30 P.M.

Cases:
Dr. W. Essex Wynter and Mr. J. Murray: Toxic Cirrhosis, with Splenoportal Thrombosis and Ascites (Banti's Disease) treated by Femoral Drainage.
Dr. H. P. Hawkins: (?) Splenic Anæmia with Question of Excision of the Spleen.
Dr. N. S. Finzi: Malignant Growth of the Cheek which has Disappeared under Radium Treatment.
Dr. Reginald Miller: Hæmochromatosis with Diabetes.
Mr. W. Sampson Handley: Ivory Exostosis of the Frontal Sinus.
Dr. Norman Dalton: (1) Malignant Anæmia, Hæmolytic Type; (2) Malignant Anæmia, Aplastic Type.

Paper:
Prof. Rogers: The Treatment of Cholera by the Intravenous Infusion of Hypertonic Saline Solution.

(Members of the Epidemiological Section are specially invited to attend this meeting.)

HUNTERIAN SOCIETY, Metropolitan Hospital, Kingsland-road, N.E.

WEDNESDAY.—4 P.M., Clinical Afternoon.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor-road, S.W.

WEDNESDAY.—5 P.M., Lieut.-Col. H. E. R. James, C.B., and Major C. E. Pollock, R.A.M.C.: Medical Arrangements in the Field, with Special Reference to the Functions of the Clearing Hospital.

NEW LONDON DERMATOLOGICAL SOCIETY, Western Skin Hospital, 179, Great Portland-street, W.

THURSDAY.—4.30 P.M., Dr. D. Walsh: The Influence of Cardiac Valvular Disease upon Cutaneous Disorders. Clinical Cases.

OPHTHALMOLOGICAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Card Specimen will be shown by Mr. F. Moore. 8.30 P.M., Prof. Straub (Amsterdam): The Pathology of Dust-like Opacities in the Vitreous Body and of Descemet-dots.—Mr. A. Ormond: Ocular Conditions found in Mongolian Idiots.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

TUESDAY AND FRIDAY.—5 P.M., Major H. C. French: Syphilis.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. P. Dunn: Diseases of the Conjunctiva.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Saunders: Clinical, with cases.
WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine. (Lecture II.).
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Bernstein: Blood Examinations—Serology.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Pardoe: Clinical (Urinary Surgery).
SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.15 P.M., Special Lecture:—Mr. W. Turner: Empyema.
TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Dr. J. Taylor: Ocular and Visual Signs and Symptoms in Nervous Disease.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. H. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson).
TUESDAY.—Clinic:—10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. W. H. Duncan: The Etiology, Pathology, and Bio-chemistry of Malignant Disease.
WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).
FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie). 4.30 P.M., Lecture: Mr. R. P. Brooks: The Conjunctiva in Health and Disease.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Maguire.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Batten: Muscular Atrophy.
FRIDAY.—3.30 P.M., Clinical Lecture:—Mr. P. Sargent: Trigeminal Neuralgia.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY AND FRIDAY.—3.45 P.M., Lecture:—Dr. D. McKenzie: Ear.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Dr. W. K. Sibley: Treatment of Skin Diseases by Hyperæmia.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Syphilis (continued): Papular (I., Miliary; II., Lenticular; III., Squamous; IV.. Moist), Pustular (I., Small; II., Large), Nodular and Gummatous.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.

MONDAY.—5 P.M., General Meeting.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. W. J. S. Bythell: X Ray Diagnosis of Stone in the Kidney. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.,, Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (11th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 1st, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Oct. 26	29·28	S.W.	...	62	55	42	45	47	Fine
,, 27	29 10	S.E.	0·11	57	52	45	45	47	Foggy
,, 28	29 65	N.	...	84	50	41	40	42	Cloudy
,, 29	30 26	W.	...	87	57	36	34	39	Fine
,, 30	29 92	S.W.	0·21	67	59	39	54	57	Cloudy
,, 31	30 07	S.W.	0·15	95	55	41	42	43	Fine
Nov. 1	30·16	S.W.	...	77	52	43	42	43	Fine

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The Hunterian Lectures
ON
RECENT DEVELOPMENTS IN HE RECOGNITION, TREATMENT, AND PROPHYLAXIS OF SYPHILIS.

Delivered before the Royal College of Surgeons of England on Nov. 7th and 10th, 1911,

BY H. C. FRENCH, M.R.C.S. ENG., L.R.C.P. LOND.,
MAJOR, ROYAL ARMY MEDICAL CORPS.

LECTURE I.

Delivered on Nov. 7th.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—In being honoured by the request of your Council to deliver two Hunterian lectures the mind unconsciously turns to the time-honoured name of John Hunter.

VALUE OF HUNTER'S OBSERVATIONS ON INDURATION.

His demonstration of induration in the syphilitic (Hunterian) chancre in the primary stage, as a clinical sign of early syphilitic infection is, after the lapse of over a hundred years, a more infallible indication when it exists than a positive Wassermann-Neisser-Brück serum diagnosis reaction. Further, such induration is commonly present when the spirochæta pallida of Schaudinn, discovered in March, 1905, cannot be demonstrated. From time to time persons have attempted to detract from the great value of Hunter's work on syphilis because he erroneously taught that gonorrhœa and syphilis were one and the same disease. Owing to Hunter's initial error we have sometimes been asked to set aside all authoritative teaching. We must not forget, however, that his was necessarily an age of dogmatism, and that other portions of his clinical teaching, like Sir Astley Cooper's classification of dislocations of the hip-joint, have stood the test of time and the judgment of posterity—the best criterion of all good work. As Cicero says, "Men in their lifetime plant trees for another generation to benefit by."

It is not by any means rare to see men or women simultaneously suffering from the two diseases, gonorrhœa and syphilis, and, occasionally, from scabies and non-infecting chancre in addition. In some instances, before the gonorrhœa resolves, a syphilitic chancre, or even rash, may be developing. I have notes of many such cases. I note in particular a man with gonorrhœa, who developed in hospital a syphilitic chancre in the calf of the left leg with discretely enlarged glands, followed within three months by a roseolar rash.

Another difficult case occurred in association with gonorrhœa where there was a deep-seated indurated mass on the under surface of the penis about an inch from the meatus urinarius. I asked a Fellow of this College to kindly open the abscess. He sent the man off the operating table as he considered that there could be no possible doubt that it was a Hunterian indurated urethral chancre. As urethral syphilitic chancres ordinarily occur at the meatus, and I had seen other cases of this nature, I opened the supposed chancre in his presence, and on deep incision the pus flowed freely from a peri-urethral abscess, and syphilis did not later supervene. Phimosis in association with purulent balanitis may or may not mask an underlying syphilitic ulcer, the real nature of which is only disclosed on operation, or later. The gonococcus may occasionally be demonstrated in a purulent balanitis and no urethral discharge be present.

With such a multiplicity of possible contingencies and no ultra-microscope, Hunter's mistake is excusable. The correctness, however, of the clinical fact of induration in a syphilitic chancre in association with discrete enlargement of adjacent lymphatic glands is a bequest the value of which has been insufficiently realised. At the present time there is a tendency, more especially in dealing with early syphilis, to set on one side valuable clinical facts in favour of bacteriological methods, and to pronounce an infallible verdict on the sole evidence of a Wassermann reaction. This test, in my experience and in that of other persons, may sometimes be negative when constitutional manifestations of syphilis are present, and not infrequently positive in non-syphilitic conditions.

I propose with your kind indulgence to deal with the diagnosis of early syphilis from three points of view: (1) Demonstration of spirochæta pallida of Schaudinn; (2) Wassermann-Neisser-Brück serum diagnosis reaction; and (3) clinical evidence.

I. DEMONSTRATION OF SPIROCHÆTA PALLIDA.

Major L. W. Harrison, R.A.M.C., at Rochester-row Military Hospital, states that he only succeeded in demonstrating the spirochæta pallida in 152 out of 202 cases of syphilitic sores. He suggests that in the remaining 25 per cent. of cases local antiseptics or other causes may have prevented the demonstration. Another observer found the spirochæta in 35 out of 52 cases of syphilis.[1] It is instructive to realise that local antiseptics have this valuable bactericidal property, which is equally applicable to all stages. Stress was laid by me on this very point 13 years ago, in writing that[2] "The application of the rules of antiseptic, aseptic, and general surgery to the wounds of syphilis is valuable in proportion to the extent and manner in which they are used. It is noticed what extremely successful results follow the removal of the local products of pus formation." Mr. Ernest Lane, referring to the exudate from initial lesions, states: "I have encountered several cases in which the treponema was not discovered after repeated examinations, and in which the case ultimately proved to be one of syphilis." This is a not infrequent experience, and I have seen numerous failures in the hands of skilled and highly trained observers to demonstrate the spirochæta pallida in chancres that were obviously syphilitic. The organism probably lies embedded in fibrous indurations, and in some cases may be demonstrated in sections.

Dr. Reinke, at Wiesbaden in 1910, demonstrated granules in the lung of a child in an autopsy performed after treatment by salvarsan. The granules were derived from spirochætæ.[3] Dr. Balfour considers[4] "that granule shedding in treponema pallidum occurs before any treatment of the case is begun. It is, therefore, in all probability a feature in the life-history of the spirochæta. ..... The same is true of other spirochætes associated with that of syphilis, and is specially well seen in the case of spirochæta refringens. ..... The granules being of the nature of resistant spores, and so far as those derived from T. pallidum are concerned, doubtless play an important part in relapses and in the later manifestations of syphilitic infections."

The fact that in syphilitic chancres several varieties of spirochætæ exist and naturally shed granules suggests for our consideration whether there is any developmental relationship between these numerous varieties of spirochætæ always found in association in the primary syphilitic chancre. It is only in the blood and under scabs or in lesions of true constitutional syphilis that we find the treponema pallidum apart from other spirochætæ. We have an analogy for such possible development in the case of other organisms, as, for instance, paratyphoid organisms and those of Eberth's bacillus of enteric fever.

Noguchi[5] recently claims "to have made pure cultures of the spirochæta pallida which were pathogenic for the rabbit, and produced diseases identical with those set up by syphilitic material. ..... Two strains of the spirochæta pallida in pure culture were obtained, and when inoculated into the testicle of the rabbit gave rise to typical lesions containing numerous spirochætes." Other observers point out in this connexion[6] "that experimental investigations in syphilis have become more general since the demonstration by Tomaczewski of a testicular infection in the rabbit. This animal is more suitable than monkeys on the score of expense, the lesions are well localised for observation and are very rich in spirochætæ. Positive inoculations are readily obtained on the skin of the scrotum or deeply into the testis. Some disadvantage is, however, to be found in the fact that in the rabbit the disease is practically local and liable to spontaneous cure. No generalised symptoms are observed, although the virus is demonstrable in the internal organs by means of inoculations of these organs into other animals." What are we to infer from this? Has the rabbit special properties in its blood which prevent the evolution of external generalised manifestations of syphilis?

A principal feature of this disease in man is a repeated and long-continued series of skin and nervous symptoms. Syphilis in man may also undergo spontaneous cure. Hata worked extensively on the rabbit when determining the value of "606" In America the question has arisen whether experiments on herbivorous animals can be fairly contrasted with, or are as conclusive as, those on monkeys or on man?[7]

II. WASSERMANN TEST.

Coming to my second heading—namely, Wassermann serum diagnosis tests—it is proposed to deal with this question from the clinical side, as the purely pathological aspects have already been so ably portrayed last year by Professor Emery in his Hunterian lectures on Immunity Reaction in Diagnosis, especially of Tuberculosis and Syphilis. As laboratory methods and clinical facts relating to the Wassermann test do not always coincide, the results of some Wassermann tests, independently performed on cases under my care by Captain T. H. Gibbon, at the Pathological Laboratory, Malta, may prove of interest.[8] The controls, with few exceptions, were negative in the case of soldiers giving no history of syphilis. In the primary stage the results, in conformity with the experience of others, were not infrequently disappointing. In the secondary stage, however, in cases on their first course of mercurial treatment, or earlier, the results were stated to be positive in 40 out of 43 cases. These were usually men with unquestionable constitutional syphilis, the larger number having been recently placed on the syphilis register.

The reaction was positive in 14 out of 18 cases who were on their second, third, or fourth course of mercurial treatment by injections of intramuscular insoluble grey oil. In one negative case with recent syphilis the man was a heavy drinker. The test was further applied to 36 other cases of men who had completed two years' regular mercurial treatment by the above method; the reaction was positive in 25 out of 36 cases. In one of the negative cases the man was suffering from mercurial stomatitis. In another negative case gummatous ulceration was actually present.

These results were obtained with Fleming's modification of Wassermann and, as regards secondary syphilis, compare favourably with those obtained by Wassermann's original method. As regards early syphilis the results are difficult to interpret, and I therefore quote the cases in detail.

Results of Wassermann Reaction in Early Cases.

CASE 1.—Lance-Corporal A was admitted on 6/11/09 with a non infecting chancre, no induration, and suppurating buboes, both inguinal; operation. No mercury given. On 30/11/09 the Wassermann test was "positive." He was discharged hospital on 16/12/09. Syphilis did not later supervene.

CASE 2.—Private B was admitted on 22/11/09 with a non-infecting chancre situated on corona glandis. Local treatment; no mercury. On 28/11/09 chancre healed; no evidence of induration. Suppurating left inguinal glands, for which an operation was performed. Wassermann test "positive" on 13/12/09, and "negative" on 26/12/09. Syphilis did not later supervene.

CASE 3.—Private C, admitted on 11/1/10 to 28/1/10. Small non-indurated ulcer on tip of prepuce, and a suppurating bubo right inguinal glands, which burst on 12/1/10. Local treatment. No mercury. 27/1/10, Wassermann doubtful. Syphilis did not supervene.

CASE 4.—Private D was in hospital from 8/11/09 to 23/11/09 with a non-indurated ulcer on the frenum; inguinal glands normal. The Wassermann test was "positive" on 9/12/09 The case, on this sole evidence, was diagnosed syphilis and placed on the syphilis register. The principal medical officer was referred to, and caused the soldier to be medically re-examined by a second medical officer. There was no clinical evidence of syphilis, nor did that disease later supervene. The principal medical officer directed the case to be erased from the syphilis register.

CASE 5.—Private E was in hospital 24/8/09–4/9/09. Local treatment; no mercury. The Wassermann test was "positive" on several occasions, the last occasion being 27/11/09. He was placed on the syphilis register on this sole evidence on 31/12/09. There was no clinical evidence of syphilis then or since. The case was similarly dealt with as with case No. 4.

CASE 6.—Gunner F, admitted from 3/11/09–25/11/09. No induration of chancre. Inguinal glands: one gland only slightly enlarged as the result of simple inflammatory action, which subsided under local treatment; no mercury. Wassermann "negative" 25/11/09, and "positive" 28/12/09. Syphilis did not supervene.

CASE 7.—Private G admitted from 13/12/09–23/12/09. Slight abrasion, no induration inguinal glands normal. Local treatment; no mercury. Wassermann "positive" 20/12/09. Syphilis did not supervene.

CASE 8.—Private H, admitted 15/12/09–7/1/10. Abrasion glans penis, inguinal glands normal. Local treatment; no mercury. He had also a suspicious unhealthy ulcer on the knuckle, and the lymphatic glands above the elbow on the same side were enlarged but tender. Local treatment; no mercury. Wassermann test "positive." Syphilis did not supervene.

CASE 9.—Private I was admitted on 28/11/09 to 31/12/09. Multiple sores, due to secondary inoculation from one near frenum. No induration. Inguinal glands normal. Wassermann test "positive" 31/12/09. Syphilis did not later supervene.

CASE 10.—Rifleman J was admitted on 15/9/09–10/11/09. Large ulcer 1 in. long. No induration. Inguinal glands normal. Local treatment; no mercury. Wassermann test "positive" on 28/12/09 and on 31/12/09. Syphilis did not supervene.

CASE 11.—Private K, admitted on 13/2/11 with an indurated fissured chancre on dorsal aspect of the roll of prepuce reverted. Large hyperplastic mass superficially suppurating in left inguinal region for which an extensive operation was performed on 22/2/11. On 8/3/11 the Wassermann test was negative. Treatment by mercurial inunctions was resorted to in despite of the test. On 30/3/11 superficial glossitis present, but induration of chancre much reduced. 19/4/11 discharged hospital, to continue mercurial injection treatment as out-patient. In June, 1911, he was readmitted to hospital with well-marked typical patchy syphilitic alopecia on occiput. Anæmic, no rash to date 1/7/11, when he was discharged hospital.

Value of the Test.

The question of the value of the Wassermann reaction in the diagnosis of early syphilis was raised from the clinical side a year ago. I wrote[9]:—

> The test, in the primary period, is unfortunately very uncertain, and not infrequently in my experience when a negative result has been recorded syphilis has later supervened. .....
>
> In some ten to twelve instances, recently, at Malta, in which the result was reported to me as positive in cases of chancres, and where mercurial or other treatment was not employed, syphilis did not supervene. The chancre and the glands in these instances were not indurated or discretely enlarged. It may be said that the test was defective. Possibly, but the pathologist obtained 98 per cent. of positive results in secondary cases—that is, after rash had occurred.
>
> In the case of an officer recently who suffered from arterio-sclerosis associated with a clear history of antecedent syphilis, the test was strongly positive according to one reliable laboratory opinion in London, and yet three weeks later, without treatment, a negative result was reported from another laboratory. In other instances the test may be negative, and later positive, or *vice versâ*, without any material change in the immediate surroundings of the patient.
>
> The test, therefore, in order to be conclusive, requires to be standardised. In order better to ensure scientific accuracy it might be preferable that the clinical signs should be unknown to the pathologist who performs the test. Such independent results are more convincing.

Following this, another observer from the clinical side states[10]:—

> We are not disposed to place too implicit reliance upon the presence or absence of Wassermann's reaction in coming to a diagnosis, for our experience is that perfectly definite cases of syphilis with actual lesions at the time of examination may repeatedly give negative reactions.

Another observer, who has unrivalled opportunities at the London Lock Hospital, both from the clinical and pathological standpoint, stated at the meeting of the British Medical Association this year[11]:—

> Let me emphasise once again that a Wassermann reaction in the primary stage of syphilis is valueless, since the moment this reaction becomes positive the secondary or stage of general infection has been reached.

Mr. H. W. Bayly states[12]:—

> I have personally examined well over 2000 sera. It seems to me, however, that the most essential of all factors in a comparative test such as this is that all factors except the one to be tested should be constant. With Hecht's, Bauer's, Stern's, or Fleming's technique variants are substituted for constants.

Major L. W. Harrison states:—

> In his hands the modification by Stern has given a positive reaction in about 2 per cent. of normal cases. ..... And gives a positive reaction earlier than the original.

On the foregoing evidence are we prepared to accept unquestioned the dogmatic bacteriological assertion of Dr. Paul Fildes?[13]—

> 1. That from a positive finding there is within certain understood limits no appeal; the individual yielding such a result is, again within certain limits, to be regarded as actively syphilitic and must be treated as such.

The same writer further states that—

> It is well known that many cases give negative results when obviously syphilitic.

Another bacteriologist, in reviewing a recent work on the subject, states[14]:—

> 2. A number of the histories failed to convince us of the syphilitic nature of the symptoms. For instance, a case of pernicious anæmia is attributed to syphilis on the grounds of a specific history and a positive Wassermann reaction. In this, and in some other instances, the author seems to have fallen into the error of labelling every lesion syphilitic which coincides with a positive Wassermann reaction with or without a specific history. We are convinced that nothing is more likely to bring the test into discredit than allowing the presence of a positive Wassermann reaction to blind us to possible causes other than syphilis for the symptoms which a patient may display.

Boas[15] emphasises the importance of "carrying out all Wassermann's reactions in a quantitative manner—a method which is impossible in the case of all the ordinary suggested modifications. He obtained much better results with the original test in a quantitative manner, and stated that the Wassermann reaction has not, and will not, obviate the necessity for clinical observation in syphilis."

In a recent leader on the subject in the *British Medical Journal* a writer states [16]: "Even among laboratory workers confusion has arisen by reason of the number of modifications and simplifications of Wassermann's original process. Before we can truly estimate the accuracy and reliability of the test it is essential that the relative merits of the original method and of all modifications should be decided, if necessary, by the establishment of a committee of enquiry."

In addition to a positive Wassermann reaction in the ten cases previously cited of unquestionable non-infecting (soft) chancre at Malta, positive results have also been obtained by other observers in various non-syphilitic conditions, such as gonorrhœa, scarlet fever, yaws (fairly constant), leprosy (very high percentage, especially in the tubercular variety), malaria (35 per cent. before the administration of quinine), puerperal eclampsia, lupus erythematosus, trypanosomiasis, pneumonia, enteric fever, tumours, herpes, aortic disease, relapsing fever (54 per cent.), alopecia areata, in some persons under narcosis and in dead bodies. As regards the latter, of 101 specimens of serum from cadavera 59 (that is, 60 per cent.) gave a positive reaction.[17] Sabouraud of Paris is now of opinion that extensive alopecia areata is more commonly due to syphilis, either acquired or hereditary, than to any other single cause.[18] Du Bois investigated 14 cases of alopecia areata typical in every respect, and in 11 found a positive Wassermann reaction where there were no symptoms of syphilis, hereditary or acquired.[19] Dr. J. H. Sequeira of the London Hospital, in showing a case of alopecia areata in a syphilitic subject at the Dermatological Society of London in July, stated "that he had had a number of cases of alopecia areata examined by the Wassermann test, but that this was the only instance in which a positive reaction had been obtained."[20]

In latent syphilis where manifestations are absent Boas only obtained 37 per cent. of positive results, as contrasted with 97 in secondary and 95 per cent. in tertiary manifestations.[21] It is interesting to consider what is the meaning of this test? Can it be dependent on an excess of albuminous or other products of disintegration arising from increased metabolism?

Before coming to my final heading and dealing with some clinical aspects in the diagnosis of early syphilis, I propose placing a few specimens on the screen. This is in accordance with the usual custom in order to demonstrate material in the Museum of the College. Owing to a large number of the wax models and paintings being too large for the epidiascope your indulgence is craved if the choice of material is somewhat limited.

III. CLINICAL EVIDENCE.

I put the clinical aspect last, but in my opinion it is by no means the least valuable. It does not perhaps glitter like the gold of the spirochætæ, nor sound like the brazen cymbal of a positive Wassermann reaction, but as regards induration in the chancre it has the intrinsic merit of home manufacture. Sir Jonathan Hutchinson states: "If the patient has never had syphilis before, whatever are the characters of any primary sore which he may exhibit, the chances are two to one that the sequel will prove that it contained the germs of true syphilis." Owing to advantage having been taken of this statement by certain persons to unduly extol the claims of several new remedies in the therapeutics of syphilis, I have studied this point closely for many years amongst some thousands of in-patients. In the British army, in England and abroad, where numerous cases of venereal sore come under early notice, soldiers are first treated in hospital. Commencing, however, from September, 1903, men on discharge from hospital remain under continued observation. Exact diagnosis on clinical grounds is thus more feasible than in civil life, where cases are wholly treated as out-patients, where their actions are uncontrolled, and where they commonly communicate disease to others. Relative frequency is dependent on numerous factors, such as epidemicity. Soldiers, more especially in England, may resort to civil practitioners and chemists in order to avoid loss of pay by reason of admission to hospital. No doubt in civil practice many cases are only seen by specialists when there is a strong probability of syphilis.

Character of Venereal Sores and Condition of Glands.

I conducted a close investigation at Cairo amongst 200 consecutive in-patients with venereal sores. The cases on discharge from hospital were kept under prolonged observation. There were 45 cases of syphilis—that is, a relative frequency of 3·5 non-infecting chancres (soft chancres) to 1 of syphilis.[22] Previous and present experience and carefully collected military statistics support this general average.

In 155 out of the above 200 cases the condition was conclusively demonstrated on clinical grounds to be non-infecting chancre (soft chancre). The chancre was not indurated and there were not any discretely enlarged and indurated glands in any of the cases. The lymphatic glands commonly suppurated and were operated on in 41 instances. In 36 out of the 45 cases of syphilis induration in the chancre was detected and the lymphatic glands were typical. Rash was later observed in 41 out of the 45 cases. I left the station before the remaining 4 cases had time to develop a rash, but all four had indurated chancres and discretely enlarged lymphatic glands. Pseudo-chancre induré only occurred twice amongst the 200 cases. There were 7 cases of phagedæna: 4 occurred in syphilis primary, and 3 in non-infecting chancre. The relative frequency, however, is of slight value in arriving at a correct diagnosis, the exact nature of the chancre and the condition of the adjacent lymphatic glands being of the utmost importance as regards diagnosis and treatment. In the foregoing investigation at Cairo, which I have since verified at Woolwich, and again at Malta, induration in some degree was almost invariably present at some time in syphilitic chancres, although it need not necessarily be obvious on the occasion or occasions on which the medical man happens to see the case, since it may have disappeared or may not have developed. The induration should be felt with the fingers. It is due to fibrous tissue with few vessels except on the surface. It is rapidly dissipated by adequate treatment with mercury or with potassium iodide, and is much more marked on the tense corona glandis. It is commonly less marked and frequently overlooked on the frænum. In the soft substance of the glans, or on the external skin of the penis it may be absent or not appreciable (parchment induration). On the glans a yellow film may form. Induration, with rare exceptions, occurred also in the proximal lymphatic glands in the primary stage, and these were bilaterally enlarged either shortly before or just as the rash came fully out. There was either a discrete bullety enlargement or hyperplastic non-suppurating mass, which rarely ended in suppuration in the case of syphilis, and the amygdaloid or bullet nature of the individual glands could be later made out as the mass slowly subsided under mercurial inunctions. These hyperplastic mattings in the groin usually resulted from concealment, irritation, and active exercise in the chancre stage, and such causes are apt to induce relapse in syphilitic chancres if the treatment is not sufficiently intensive to remove the induration. In the case of non-infecting sore, suppurating buboes rapidly resulted from concealment or neglect in the initial stages. The adjacent lymphatic glands in some instances may be slightly, temporarily, and painfully enlarged as the result of a non-infecting chancre or from other causes, but such glands commonly subside with rest. The glands in untreated or insufficiently treated syphilis, however, usually persist in despite of rest, become discretely larger, and are commonly painless. An increase of induration in the chancre, or the increasing anæmia of the patient in most untreated cases of syphilis will also put us on our guard until one or other of the classical symptoms of generalisation appears and finally clears the diagnosis.

Pseudo-chancre induré, first described by Professor Fournier in Paris, and also by Sir Jonathan Hutchinson in this country, is a condition where induration is stated to occur in a chancre which is non-syphilitic. The fact of the nearest lymphatic glands being normal will usually clear the diagnosis. It is feasible that in some instances such a condition may occur from reinfection in a person already the subject of constitutional syphilis, being, in fact, a local inflammatory reaction.

Various Points in Diagnosis.

Acquired syphilis on the genitals is nearly always accompanied by ulceration, and in certain phases of the ulcer it is quite impossible from the local appearance to diagnose syphilis. Induration may occur early or late in the base or edges of the ulcer, but when slight may escape our vigilance. In the case of artificially inoculated syphilis on the skin by

vaccination or otherwise, a papule is the usual initial lesion, and in rare instances I have seen such occur on the glans penis. The vast majority of syphilitic ulcers, however, probably come under the category of so-called "mixed" infections, in which the bacillus of Ducrey or other organisms exist simultaneously with the spirochæta pallida. The ulceration, purulent products, and, in phagedæna, the active necrosis or even sloughing of tissue, are mainly dependent on accidental factors, such as neglect, exercise, and the irritation of a tense prepuce. It can therefore be readily understood why suppurating buboes may occur in connexion with syphilis. Scars on the penis are very dangerous criteria on which to diagnose syphilis, as the largest scars are often due to loss of substance in a non-infecting chancre with phagedæna. Scars on the penis without any collateral evidence were formerly accepted as strongly suggestive of syphilis by writers on nervous diseases, but statistics compiled on such slender data should be rejected. Both non-infecting and infecting chancres may be indolent in healing, and the incidence of appearance after exposure to contagion is frequently a doubtful criterion on which to base a diagnosis, since truthful histories are hard to elicit and syphilitic chancres are commonly due to "mixed infections." The time limits were worked out many years ago on experimental or vaccinal inoculations, being 10 to 40 days, with an average of 25 days. Although a syphilitic chancre is in the large majority of instances single, yet the non-infecting variety of chancre also frequently appears single, more especially in hospital, where auto-inoculation has been prevented by aseptic or antiseptic treatment. Amongst patients presenting multiple sores, balanitic excoriations, or abrasions, one of these may later prove to be syphilitic, or a ring of induration may develop from the whole excoriated surface. Urethral chancres usually occur at the meatus with urethral discharge, and may prove to be erosive in nature; induration occurs in most cases as the ulcer heals, and both chains of inguinal glands are usually implicated. Erratic chancres are rare in England and usually syphilitic. In France, Germany, and Denmark extra-genital chancres are stated to occur in 5 per cent. of cases[23]; as far as army practice is concerned probably 1 per cent. The most common situations are the lip and tonsil. I have seen one, however, in the centre of the forehead, and one on the calf of the leg. The nearest lymphatic glands when the chancre is situated on the face are commonly ultra-typically enlarged.

Because a chancre is erratic it is not *ipso facto* syphilitic, although more commonly it is so. Non-infecting like syphilitic chancres may occur on any part of the body, and phagedæna may supervene in either. I have seen a non-infecting chancre on the finger and syphilis did not supervene (Case 8). Wax models of this condition are shown in the St. Louis Hospital Museum. There is also a specimen of a non-infecting ulcer in the groin in which phagedæna supervened. I have seen an unusually severe case of this condition which spread from the groin over the buttocks and between the legs—so-called "creeping bubo" of old works on surgery. They may spread all over the body. In the case in question the man was in hospital under observation over a year. The condition appeared at first sight to be a tertiary syphilitic ulceration in which phagedæna was occurring. There was, however, no clinical evidence of syphilis—the patient was about 20 years old—and syphilitic remedies were absolutely unavailing. The condition eventually resolved under local remedies and baths.

The period of time from contagion until generalisation occurs is a more or less constant factor. It is stated in the Regulations for Army Medical Services that after two months a case of "venereal sore" is to be diagnosed "soft chancre." If syphilis later occurs it will be dealt with as disease supervening. This point is one of great practical importance at the moment, more especially in the Services, because numerous persons have claimed to abort syphilis, and others have claimed to first cure and then re-inoculate it. From an army statistical point of view it would appear more rational to wait longer and definitely decide the diagnosis, as thereby one instead of two diseases is shown in the returns. The period of time, in my experience, in which generalisation takes place (as evidenced by rash or sore-throat) is 12 to 16 weeks from the date of contagion. The rash or other symptoms, as the result of treatment, may in some instances be latent and not be manifest for a longer period than four months, according to the intensive nature and value of particular forms of treatment. In other cases early syphilis may have been unrecognised and untreated, and mild varieties of rash may come and go in a few days. In such cases the patient commonly presents himself with intense general adenitis, albuminuria, iritis, or other severe manifestations of syphilis.

In conclusion, therefore, the diagnosis of early syphilis would not always appear to be as simple as many persons would have us believe. We naturally wish to prevent as far as possible the later occurrence of tertiary, malignant, and parasyphilitic conditions. In order to obviate these grave conditions it is requisite to both diagnose and treat syphilis early. Whatever each individual may think about the relative significance of Wassermann reactions, the fact must be admitted that in many instances we are as dependent to-day on a correct clinical interpretation of what we see as in the past when John Hunter wrote.

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Remarks
ON
THE DIAGNOSIS AND TREATMENT OF URINARY TUBERCULOSIS.

Made before the Harveian Society on Oct. 26th, 1911.

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MR. PRESIDENT AND GENTLEMEN,—The title limits the scope of these remarks, the subject being not genito-urinary but urinary tuberculosis; that is to say, genital tuberculosis only comes into consideration so far as it may be the primary lesion and the cause of the urinary affection, and so becomes an aid to diagnosis. Acute tuberculosis of the urinary organs as a part of acute general tuberculosis need not be dealt with, for the signs of the local affection are lost amid those of the general infection. The subject therefore restricts itself to chronic tuberculosis of the kidney and its pelvis, of the ureter and bladder, for except as the result of direct extension from the prostate or bladder I do not know that tuberculosis of the urethra has been described.

MORBID ANATOMY.

It is well to start with the morbid anatomy of the condition, for the diagnosis rests largely upon the pathological data.

A few general propositions may be laid down: (1) That tuberculosis of the urinary organs tends to remain for a long time, or altogether, a local disease; (2) that it is generally a primary disease and but rarely the result of secondary infection from other parts; (3) that it is often bilateral, affecting the same parts on both sides, though not necessarily to the same degree; (4) that it may end, like all other forms of tuberculosis, in general infection—i.e., in acute general tuberculosis, but that this is not the usual mode of termination; (5) that the most destructive forms are the result of secondary infection with other organisms; (6) that the affection is commonest in young people; (7) that there is no marked difference between the sexes.

[The lecturer here showed in illustration the following series of specimens:—1. The left kidney converted almost entirely into caseous masses, but with practically no breaking down.

Such a kidney it might be thought would be best removed. So it might be if the other kidney had not been also seriously affected. The specimen showed how extensive the destruction of the kidney may be before life becomes impossible; in other words, how large a reserve in excess of what is absolutely required the kidneys possess. 2 and 3. Similar but less extensive disease in the kidneys. 4. The actual kidney here was not greatly damaged, but the pelvis was involved, and the case would probably have presented itself during life as one of pyonephrosis. 5. The lesion here was localised, being limited to the tip of one of the pyramids. 6 The origin of the ureter from the pelvis was involved. This would probably lead to obstruction and cause hydro- or pyo-nephrosis. 7. A tubercular tumour or mass as large as a walnut in the middle part of the ureter. This was, however, associated with tubercular lesions in both the kidney and bladder. 8. A bladder with tubercular ulceration at the mouth of the ureter. 9. A similar specimen with the disease at the neck or trigone. 10. A bladder in which the primary infection was in the kidney. 11 A similar specimen where the prostate and testicle were first involved. 12. A bladder with both ureters and kidneys exhibiting extensive tuberculosis throughout. Dr. West continued:—]

These specimens show that the infection of the urinary tract is not by extension from a tubercular focus near—e.g., a tubercular gland. It cannot be from without. Nothing then remains but that it must be through the blood. If so the question arises why it should locate itself as it does. It must be because the organ involved offers diminished resistance to the infection, and this may be due to previous disease or injury or to some other more obscure cause. In this relation it is interesting to know that it has been shown experimentally that when a part is injured and infective organisms injected into the blood, the infection may develop in the injured part only and nowhere else.

DIAGNOSIS.

The first symptoms that bring the patient under observation are usually (1) increased frequency of micturition; (2) occasional hæmaturia; and (3) pain, vesical or renal as the case may be.

The examination of the urine may show the presence of albumin and pus in varying amounts, and frequently associated with blood. Casts are not often found even in the renal cases. The amount of albumin is usually small and hardly more than the pus would account for. Pus may be present in very small amount, but in the renal cases the amount may be considerable.

The blood may be intimately mixed with the urine, giving it the usual smoky or dark colour, if the kidney be the seat of disease. If the blood comes from the bladder it is usually not intimately mixed with the urine, is brighter in colour, and often forms a definite deposit when the urine stands, the supernatant fluid containing little or none, and small clots may be present. If the tuberculosis involves the neck of the bladder, the urine first passed may be free from blood, the blood appearing at the end of micturition only, at which time pain is felt.

Pain may be very trifling or even altogether absent. It is most likely to be present when the lesion is on the neck of the bladder, and is then felt usually towards the end of micturition. When the lesion is in the pelvis of the kidney the pain is referred to the loin, and is probably due to some obstruction there which leads to temporary distension. If the distension be permanent and cause hydro- or pyo-nephrosis the pain may be considerable.

The cases fall into two clinical groups according as the symptoms are those of cystitis or pyelitis.

1. The symptoms of subacute cystitis of long standing in a young person would excite grave suspicion of tubercle. It would be necessary to exclude gonorrhœa and calculus as causes, and new growth too, though this would be unlikely. Tubercle would be almost certain if tuberculosis were found in the testicle, to which it might be secondary.

Bacteriological examination of the urine would then be made, and if the bacillus coli were absent tubercle only would remain; but, of course, tubercle could not be absolutely excluded if the bacillus coli were found, for there might be a double infection. Tubercle bacilli are often not easy to find in urine, even when centrifuged, and it is stated that they have been found in the urine of healthy persons. Of this I have no knowledge, and I am sceptical about it, for they may well be the smegma bacillus, which is also an acid-fast bacillus. If not discovered by direct examination the tubercle bacillus may be proved to be present by cultivation or by inoculation into guinea-pigs.

The general tuberculosis tests—e.g., von Pirquet or tuberculin—might be employed. If they yielded positive results they would merely show the presence of tubercle somewhere in the body and not necessarily in the urinary organs. The seat and extent of the tuberculosis could be investigated by the cystoscope.

The next question would be "Are the kidneys sound?" Tuberculosis of the bladder is rarely primary, and if there be no tubercle in the genital organs it would follow that presumably the kidneys were the seat of the primary mischief.

2. The kidney symptoms would be pain in the loin and tenderness on pressure, or a tumour which could be felt or demonstrated by the X rays. In this case, again, of course, calculus especially, and possibly new growth, would have to be excluded, as well as bacillus coli infection. If with symptoms of cystitis there be renal symptoms as well, the probability of the kidney being also tubercular is very great.

Where one kidney is affected the next question to be answered is whether the other kidney is sound; and this is of the greatest importance if surgical operation is contemplated. The use of the separator may be of some assistance here. Unfortunately, it may well be that the mischief in the second kidney may be so early or slight as to give little or no evidence of its presence. And even when the disease is advanced there may be little or nothing to show for it.

Tuberculosis of both kidney and bladder is quite compatible with good general health for a long time. Even symptoms may be absent till the pelvis of the kidney or the bladder becomes involved. This is perhaps the most important fact to remember in connexion with early tuberculosis of the urinary organs. When cystitis develops the health may suffer on account of the pain and frequency of micturition and the broken rest entailed. With pyelitis the hectic fever associated with suppuration will lead to great impairment of health; or the case may terminate more or less suddenly with the signs of general pyæmia or uræmia or of general tuberculosis.

TREATMENT.

The *cystitis* must be treated, of course, on general lines—by rest, urinary sedatives, and washing out if necessary. I do not think any surgical operation on the bladder holds out promise of cure. It could only be recommended as a palliative measure for the relief of symptoms. Tuberculin injections, whether of old or new tuberculin, or of bovine tuberculin, have not in my experience proved to be of much value. At any rate, I have not been able to convince myself that the cases have done better with this treatment than they would have done without. Still, good results have been recorded sufficiently often to encourage the hope that in the future it may be attended with greater success and I should use tuberculin injections as an adjuvant. It is, however, possible to do harm with them and to kindle into activity a lesion which was at the time quiescent. It is very doubtful whether the very small doses have any or much demonstrable effect upon the course of the disease, while large doses may certainly do mischief.

The treatment of severe *pyelitis* must be almost entirely surgical. To open and drain the kidney is a simple operation, but except as a palliative measure is not desirable, for the sinus will not heal, may itself become tubercular, and secondary infection is likely to occur, which may seriously aggravate the patient's condition.

The fact that tuberculosis of the kidney remains for so long a local disease naturally raises the hope that removal of the diseased kidney may effect a cure. Unfortunately, the other kidney is frequently affected too, and it is most difficult, if not impossible, to be ever moderately certain that the other kidney is sound.

To remove a kidney, though the mere operation may be not difficult, is in itself a grave procedure, for it at once deprives the patient of one-half of the total stock of a gland which is essential to life. It is true that there is a great reserve of kidney substance in the healthy body. Yet it is also true

that the reserve is not unlimited. Two-thirds of the kidney substance may be destroyed before the limit is reached—that is to say, that men can live so long as they have one-third of the kidney substance still in functional activity. If, then, one kidney be completely destroyed or removed, two-thirds of the other kidney must still be active if life is to be maintained; in other words, if one-third of one kidney be diseased the removal of the other one would be followed by the patient's death.

Even in a very diseased kidney portions of it may still be doing useful work, and this, little as it may be, may be just the amount necessary in conjunction with the other kidney to ward off grave symptoms of renal inadequacy.

To remove a tuberculous kidney requires, then, the most serious consideration, and cannot fail to be attended with serious risk. If the other kidney is presumably tuberculous too, the case is, I think, practically unsuitable for such an operation.

Tuberculous disease of the kidney may, it is true, be unilateral, but as a rule only in the very early stages, and then the diagnosis is so difficult; but even in quite early stages post-mortem evidence proves that both sides may be affected, though clinical proof of it be lacking.

When the disease in one kidney is advanced enough to be capable of certain diagnosis, the chances of the other kidney being affected too are very considerable, and the removal of a kidney then would be only palliative treatment and not likely to lead to cure.

Again, when the bladder is also tubercular, removal of one kidney would not cure the bladder nor prevent secondary infection of the other kidney even if it had been free of disease at the time of operation.

Removal of the kidney would thus seem to be reserved especially for those cases in which the tubercular disease is strictly limited to one kidney, and then the diagnosis is rarely made early enough.

All that I wish now to do is to protest against regarding the removal of a tubercular kidney as an operation to be lightly decided on. It is a very grave act, requiring the most serious consideration and in all cases involving grave risks. The very ease and success with which the mere operation can now be done renders this caution, I think, the more necessary. The question is not whether the operation can be safely and successfully done, but what will be the condition of the patient afterwards, and how far his chances of life will be altered for better or worse.

WASSERMANN REACTION IN GENERAL PARALYSIS.

THE CONTROL OF A SERIES OF WASSERMANN REACTIONS IN CASES OF GENERAL PARALYSIS BY POST-MORTEM EXAMINATION.

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(*From the Pathological Laboratory of the London County Asylums.*)

TWO years have now elapsed since the publication of a joint paper in the *British Medical Journal* with Dr. Henderson Smith of the Lister Institute; in this paper statistics were given on the result of a series of Wassermann reactions on the cerebro-spinal fluid, and (in a few instances) on the blood serum of cases of general paralysis of the insane, and of other forms of insanity as controls. A considerable number of the cases having now died Dr. F. W. Mott has suggested that the practical value of the reaction should be critically tested by comparison of the results obtained, with the ultimate diagnosis post mortem.

For the purpose of this test only those cases have been considered in which the cerebro-spinal fluid was withdrawn during life, and in which the clinical diagnosis has been controlled by post-mortem observation, including in the majority of cases, and always in a doubtful case, the microscopic examination of the cerebral cortex. I may here mention that Dr. Mott has been kind enough to examine and give his opinion on the sections of all the doubtful cases. The greater number of the cases comprise those which furnished the data for the previous paper; the reactions on the fluids of the rest of the cases have been performed at the Pathological Laboratory at Claybury Asylum.

The list is far from being comprehensive, for a large number of cases have recently been examined at the Claybury Laboratory, but are still living; and although the analysis of the Wassermann test on these cases would give practically identical results with those now recorded, they fail to fulfil the conditions required for the paper—namely, that the final appeal should rest with the post-mortem findings. There are, however, among these cases several which possess some points of interest to which attention should be directed. In addition, a considerable number of fluids have been examined which were only withdrawn and tested after death. These have also been excluded from the list.

Results of Wassermann Reaction.

In 80 cases in which the cerebro-spinal fluid was withdrawn during life by lumbar puncture and examined by the Wassermann test, clinical diagnosis has been controlled by post-mortem examination. Of this number 67 cases gave a positive Wassermann reaction during life, and all of these showed at death the characteristic changes of general paralysis. Of the remaining cases which gave negative results 2 were found at necropsy to be cases of general paralysis. The Wassermann reaction, therefore, failed in only 2 cases out of 80 (i.e., in just under 3 per cent.), and in both cases only one examination of the fluid during life was made; the percentage incidence, therefore, of positive results in cases of general paralysis = 97 per cent. In a few instances the blood serum also was examined, and was positive in every case of general paralysis of the insane.

With regard to the two cases of general paralysis in which the result of the Wassermann test was negative during life, one of the cases was commented on in the previous paper. The cerebro-spinal fluid gave a negative reaction two months before death—the first time it was tested. The blood serum was examined three days before death and gave a positive reaction, and both cerebro-spinal fluid and blood serum withdrawn after death gave a positive reaction. A cytological count on the cerebro-spinal fluid was not made. The second case was punctured once only, three months before death. The Wassermann reaction was negative; a cytological count showed a slight excess of lymphocytes. Clinically the case was looked upon as one of general paralysis, and this diagnosis was confirmed at necropsy.

Among the other cases which gave a negative reaction and have died there are six which require special notice, inasmuch as they were considered to be either certain or suspected cases of general paralysis.

TABLE I.—*Negative Wassermann Reactions Confirmed by Necropsy.*

—	—	Form of mental disorder.	Wassermann result.	Post-mortem macroscopic and microscopic appearances.
1	M.	General paralysis.	—	Not general paralysis.
2	M.	Acute mania; general paralysis ?	—	,, ,, ,,
3	M.	General paralysis.	—	,, ,, ,,
4	M.	Mania; general paralysis ?	—	,, ,, ,,
5	M.	Acute mania; general paralysis ?	—	,, ,, ,,
6	M.	General paralysis.	—	,, ,, ,,

CASE 1.—Male, aged 37. Length of stay in asylum, two months. Diagnosis on admission, general paralysis. History prior to admission: Patient had led a steady life; he was easily worried; he had suffered a long time from violent occipital headaches. There was a family history of phthisis; one of his sisters was an inmate of Brookwood Asylum. On admission: Patient was rambling and incoherent in conversation; his pupils reacted; the knee-jerks were present. Six days later: Speech was tremulous and uncertain; he complained of headache and confusion; he was restless and talkative and did not know where he was. He was somewhat grandiose about his own and his wife's means. His pupils were stated to be inactive to light and unequal.

Lumbar puncture was performed three weeks before death. The Wassermann reaction was negative. There was some excess of lymphocytes in the cerebro-spinal fluid.

Necropsy.—Post mortem the brain showed no changes to the naked eye suggestive of general paralysis. The membranes were not thickened, and there was an absence of vascular congestion. There was no excess of fluid, and the brain showed little or no evidence of wasting; there were no granulations either in the lateral ventricles of the brain or on the floor of the fourth ventricle. The brain was small in size; of a total weight of 1150 grammes; the weight of the pons and cerebellum alone was

710 grammes. As the weight of the pons and cerebellum is approximately one-eighth of the total brain weight this brain showed a congenital deficiency of weight of the cerebral hemispheres of about 210 grammes, which in the absence of any evidence of cortical wasting was probably due to a cerebral under-development. This is further supported by the microscopic appearances.

Microscopic characters of the cerebral cortex.—There was a complete absence of the changes usually found in general paralysis. There was no increased vascularity of the cortex, no infiltration of the vessels with plasma cells or lymphocytes. There was absence of "rod cells" (Stäbchenzellen), isolated elongated cells first described by Alzheimer in cases of general paralysis. There was an absence of neuroglial proliferation. Some of the ganglion cells of the cortex showed degenerative changes, others were fairly normal in appearance. There was, in fact, an absence of the widespread degeneration usually seen in general paralysis. There was a slight amount of lymphocytic proliferation of the meninges, due probably to a terminal meningeal inflammation.

Dr. Mott, after seeing the sections, was of the opinion that the case was one of insanity associated with cerebral under-development, and was certainly not a case of general paralysis. The microscopic appearances were, he thought, very similar to those observed in a case of congenital imbecility recently under his notice, of which the following are brief case-notes:—

Congenital imbecility.—Female, aged 21. Length of stay in asylum was four years. Diagnosis on admission was congenital imbecility. She was stated to be simple and childish; her gait was steady. The pupils reacted to light; the knee-jerks were present. She gradually became more demented and quite helpless. About three months before death she was considered to be a case of general paralysis. She was then very demented and able to answer only the simplest questions. Death ensued from tuberculous broncho-pneumonia. The Wassermann reaction on the cerebro-spinal fluid removed after death was negative.

Dr. Mott, at the post-mortem examination, thought the case might be one of juvenile general paralysis, but a microscopic examination proved that this was not the case.

CASE 2.—Male, aged 50. Length of stay in asylum, 19 months. Diagnosis on admission, acute mania; ? general paralysis. This patient had previously been in an asylum in India. He had another attack in Melbourne 15 years afterwards. He was stated to have been a man of temperate habits, and no cause was known to account for his mental condition. Condition on admission: The tongue was furred; pulse rapid and of high tension. Pupils large; reacted sluggishly. Reflexes normal. Speech and reaction quick; attention feeble; memory fair. He had delusions of grandeur, suspicion, persecution, and exaltation. Three weeks after admission he had considerably improved and was quiet and fairly coherent. He still had troubles of persecution and his facial muscles were tremulous.

Lumbar puncture was performed four months before death. The Wassermann reaction was negative and no lymphocytes were found in the centrifuged deposit of the cerebro-spinal fluid. The cause of death was capillary bronchitis and broncho-pneumonia.

The macroscopic and microscopic appearances of the brain showed no evidence of general paralysis.

CASE 3.—Male, aged 49. Length of stay in asylum, 2 years and 4 months. Lumbar puncture was performed 15 months before death. A negative Wassermann reaction was obtained. There were a very few cells in the centrifuged deposit of the cerebro-spinal fluid.

This man was looked upon as a general paralytic on admission, and, in fact, right up to death. The notes mention, however, that in 1880–81 he had been in Hamburg Hospital for four months with right-sided hemiplegia and motor aphasia. He is stated on admission to imagine that he is possessed of immense wealth. Tongue tremulous. Pupils, left larger than right; both react well to light and accommodation. Knee-jerks increased on the right side, but absent on the left. He reacts to questions fairly well, but is rather confused. He is grandiose in manner. He acknowledges to an attack of syphilis 20 years ago. He died from the effects of carcinoma of the tongue with secondary malignant infiltration of the lungs.

Necropsy.—At the post-mortem examination the brain of this patient showed none of the naked-eye changes characteristic of general paralysis. There was, however, considerable atheroma of the vessels at the base of the brain, and also in the aorta and coronary arteries. The kidneys were fibrotic. A microscopic examination of the brain showed none of the characteristic changes of general paralysis, but the vessels of the meninges and of the grey matter of the cortex stood out firmly; there was a general thickening of the coats, and in several places there had occurred hæmorrhages into the sheath of the vessels.

The case, therefore, proved to be one of thickening and sclerosis of the cerebral vessels, probably the result of previous syphilitic infection resulting in organic dementia.

CASE 4.—Male, aged 37. Length of stay in asylum, 1 year and 5 months. Diagnosis on admission, mania, ? general paralysis. On admission the notes state: "Tongue tremulous. Pupils dilated; react sluggishly to light; both react to accommodation. Knee-jerks exaggerated. Is simple and childish in his manner and behaviour; laughs irrelevantly, and seems not to realise his position, which ought to impress him more than normally as he has been a clerk under the Metropolitan Asylums Board for many years." A note made four days later states that his pupils were unequal and were both inactive to light. He had morbus cordis with loud systolic murmur. The patient remained in much the same mental state, being rambling during a conversation and the subject of auditory hallucinations. Death was due to lobar pneumonia.

Lumbar puncture was performed a week after admission, and again about three weeks later. On both occasions the fluid was negative.

Necropsy.—Post mortem there was nothing macroscopically or microscopically to indicate general paralysis of the insane.

CASE 5.—Male, aged 50. Length of stay in asylum, 5 months. Diagnosis on admission, acute mania, ? general paralysis. Condition on admission: A poorly nourished man with a sallow complexion; double arcus senilis, and atheromatous arteries. Admitted in a state of great excitement and under restraint. Knee-jerks exaggerated; pupils somewhat contracted; no reaction to light. Hallucinations of sight and hearing. He was rather on grandiose terms with himself and his speech was shaky. He had no knowledge of time or place. Three months later the notes stated that he was still dull and confused, and his memory was impaired. The pupils were unequal and reacted only sluggishly to light. The knee-jerks were exaggerated. Immediately prior to death he developed râles over both lungs. He had two convulsive attacks, the latter being attended with temporary paralysis of the left arm.

Lumbar puncture was performed three months before death. The Wassermann reaction was negative, and there were no cells in the centrifuged deposit of the cerebro-spinal fluid.

Necropsy.—Post mortem there were marked arcus senilis and atheroma of the cerebral arteries and of the aorta and coronary arteries. The kidneys were granular; the lungs broncho-pneumonic. Neither the macroscopic nor microscopic appearances of the brain were at all suggestive of general paralysis.

CASE 6.—Male. This case was diagnosed as general paralysis. The Wassermann reaction on the cerebro-spinal fluid was negative. Post mortem he was found not to be a case of general paralysis, but of organic brain disease (arterio-sclerosis, softening of the brain, and cerebral hæmorrhage).

Among the cases which gave a negative reaction there were some who were looked on as either certain or suspected cases of general paralysis. Although they are still living, I think that a table showing the clinical diagnosis at the time of puncture, together with the present condition, would be of interest.

TABLE II.—*Negative Wassermann Reaction Confirmed by Subsequent Diagnosis.*

No.	Sex.	Date of puncture.	Wassermann.	Clinical diagnosis at time of puncture.	Result and final diagnosis.
1	M.	1/2/09.	—	? General paralysis. ? Organic brain disease. (Head injury.)	Confusional insanity. Discharged 22/2/09.
2	M.	1/2/09.	—	? General paralysis.	Alcoholic mania. Discharged 19/3/09.
3	M.	20/6/09.	—	? "	Confusional insanity (alcoholic). Discharged 6/8/09.
4	M.	20/6/09.	—	General paralysis.	Dementia præcox.
5	M.	20/6/09.	—	Strong suspect, general paralysis.	Mania (alcoholic). Discharged 22/1/10.
6	M.	20/6/09.	—	General paralysis.	Delusional insanity.

It will be seen from this table that 4 out of the 6 cases have been discharged from the asylum, and in every case the original diagnosis has been subject to alteration. These results, then, show that a negative Wassermann reaction may be of considerable value in cases of doubt, and is not to be regarded as valueless, as some maintain. To be of real value, however, a negative result should be confirmed by another examination of the fluid. The result of the reaction of the blood serum in cases in which the cerebro-spinal fluid is negative may be of further considerable aid in arriving at a correct diagnosis.

Observations on the Results Obtained.

A comparison of the percentage of positive reactions on the cerebro-spinal fluid of cases of general paralysis recorded in this paper with those obtained by other observers shows that they are in close agreement. Marie, Levaditi, and Yamanouchi have obtained a positive reaction with the cerebro-spinal fluid in 93 per cent.; Raviat, Breton, and Petit, 93 per cent.; Morgenroth and Stertz, 100 per cent. Plaut, out of 147 cases, obtained a positive reaction in 139, doubtful reactions in 2, and negative in 6.

Schölberg and Goodall tested the sera of 49 cases of general paralysis, and obtained a positive result in only 75·50 per cent., and with the cerebro-spinal fluid of 41 cases the percentage of positive results was 41·46. It is impossible to account for the extremely low percentage obtained by these observers. It is certainly not due to the precaution taken to eliminate the personal equation.

Max Nonne has mentioned a point of great importance in the performance of the test—namely, that even when the original method is employed the failure to obtain a positive result may be due solely to the employment of too little of the cerebro-spinal fluid. He states that as much as 1 c.c. can be taken without any fear that a positive reaction will be given in a non-specific case. In support of this statement I may mention that in a case of general paralysis recently examined, and in which the diagnosis was confirmed post mortem, total prevention was obtained with 0·8 c.c. of cerebro-spinal fluid, but there was complete hæmolysis with

0·5 c.c., which shows at once that the case would have been missed if the larger amount had not been taken.

At Claybury we constantly use 0·8 c.c. of cerebro-spinal fluid as one of our dilutions in a total volume of 3 c.c., and so far as we are aware we have not met with a positive result in any case apart from general paralysis. The need, therefore, of using comparatively large doses of cerebro-spinal fluid is further proof of the necessity of employing the original Wassermann reaction instead of the various modifications which have been devised, especially those which employ only infinitesimal quantities of reagents.

Apart, however, from those cases which may possibly be missed by the employment of insufficient doses of cerebro-spinal fluid, there remains the small percentage which fail completely to give the reaction. The reason for this is not yet understood. They are not confined to cases of incipient general paralysis; the reaction may fail in advanced and rapidly progressive cases; it is also said to be absent in some cases where the disease is stationary, and in remissions. This negative phase is stated to be often replaced by a positive one, and hence the necessity of recognising the importance of another examination of the fluid at a later date.

The Examination of the Blood Serum in Cases of General Paralysis.

The number of cases in our series in which the blood serum has been examined, as well as the cerebro-spinal fluid, is too small to be of statistical value. In every instance, however, in which the cerebro-spinal fluid gave a positive reaction the serum gave a similar result.

Marie, Levaditi, and Yamanouchi in an early paper recorded only 59 per cent. of positive results with the blood serum of general paralytics. Plaut, however, examined the cerebro-spinal fluid and blood serum of 147 cases of general paralysis; the reaction was doubtful or negative in the cerebro-spinal fluid of 8 of these cases, but the blood serum was positive with every case. His opinion is that the blood serum gives a more delicate and more constant reaction in cases of general paralysis than does the cerebro-spinal fluid. His results have recently been confirmed by Boas of Copenhagen, who has obtained a positive reaction with the serum in each of 139 cases of dementia paralytica.

The Wassermann Reaction in Cerebral Syphilis.

Two cases only of syphilitic affection of the central nervous system have come under our notice. In both cases a negative Wassermann reaction was obtained with the cerebro-spinal fluid. Plaut in his monograph records the result of the examination of the cerebro-spinal fluid and of the serum in 20 cases. The cerebro-spinal fluid gave a negative reaction in 17 and a positive in 3 (i.e., a negative reaction in 83 per cent. of the cases). The serum gave a negative reaction in 1 and a positive in 19 Marie, Levaditi, and Yamanouchi in 6 supposed cases of cerebral syphilis found the cerebro-spinal fluid to be negative in 5 and positive in 1; of the sera, 3 were positive and 3 negative.

Frenkel and Heider in 7 cases found the cerebro-spinal fluid gave a negative reaction in 5 and positive in 2. Forster in 4 cases found the cerebro-spinal fluid negative in 3 cases and weakly positive in 1. Stertz found the cerebro-spinal fluid negative in 8 cases examined.

It may therefore be taken that, as a rule, the reaction in syphilis of the central nervous system is positive with the serum and negative with the cerebro-spinal fluid.

The Cytological Examination of the Cerebro spinal Fluid.

In the majority of the cases recorded a cytological examination was made of the cerebro-spinal fluid. In all the cases of general paralysis so examined lymphocytes and plasma cells were found in pathological excess. In one case, which microscopically was proved to be a case of general paralysis, a slight increase in lymphocytes was observed; and also in one case of general paralysis, in which a negative Wassermann reaction was obtained, there was a slight increase in cells, but hardly sufficient to be considered a pathological excess. It has been shown by Plaut and others that the number of cells in the fluid bears no relation to the intensity of the reaction. Cases of general paralysis may be found in which the Wassermann reaction is strongly positive, but no cells are present, and the reverse may also occur. A similar condition may be met with in syphilis of the nervous system. Plaut has shown that there may be an excess of lymphocytes in cases of secondary and tertiary syphilis without any involvement of the nervous system.

Mononuclear cells in excess may be found in Landry's paralysis and in herpes zoster. The presence of mononuclear cells in the cerebro-spinal fluid is therefore in no wise specific of general paralysis or of syphilis of the nervous system. Moreover, in both these diseases they are liable to variations. The rule, however, is that lymphocytes and plasma cells are found in excess in both general paralysis and syphilis of the central nervous system.

Value of the Wassermann Reaction.

From what has been said it is clear that the correct interpretation of the Wassermann reaction on the cerebro-spinal fluid can only be arrived at after careful consideration of the clinical symptoms, together with a Wassermann reaction on the blood and a cytological examination of the cerebro-spinal fluid. Used in this manner and with due regard for the few anomalous reactions which may occur it is certain that the reaction is one of the most reliable and valuable tests for general paralysis that we have. In fact, it is, in the opinion of many, a more reliable test than is the Widal for typhoid fever. Not only will it determine 90 per cent. of cases of general paralysis, but it will if used properly help to clear up the diagnosis in cases of alcoholic insanity, polyneuritic mental psychoses, neurasthenia, cerebral tumour, and other conditions which may in a few of their features simulate general paralysis. It is certain to be largely employed in the future in medico-legal cases to decide how far syphilis has been responsible for cases of insanity following on head or other injuries.

The differential diagnosis between general paralysis and syphilis of the central nervous system may sometimes be extremely difficult, but considerable assistance can be obtained by a study of the Wassermann reaction and cytological count on the cerebro-spinal fluid to which allusion has already been made. A positive reaction in the blood serum means no more than that the person has had syphilis. It is not diagnostic of general paralysis or of cerebral syphilis. A negative reaction with the serum, according to Plaut and Boas, practically dismisses the possibility of active syphilitic or parasyphilitic affections. The practical advantage of this is that in cases where it is not advisable to resort to lumbar puncture an examination of the blood serum alone will often be of material assistance. If a negative result is obtained it may save the necessity for lumbar puncture; a positive result in a patient suffering from nervous or mental disease, however, makes the examination of the cerebro-spinal fluid more necessary than ever.

It is of very great importance to remember that the accidental contamination of the cerebro-spinal fluid with blood in a case of a person suffering from syphilis may lead to a wrong diagnosis of general paralysis, due simply to the fact that a sufficient amount of the serum has become mixed with the cerebro-spinal fluid to give a positive Wassermann reaction on the fluid. The following instance affords a very good practical illustration of this.

A female, aged 63. Mental condition, dementia (? alcoholic). Patient died rather suddenly. The cause of death, ascertained post mortem, was the rupture of an aneurysm of the aorta into the thorax. The whole of the aorta and cerebral vessels were markedly atheromatous, with numerous plaques of pearly white fibrosis, undoubtedly syphilitic. There was no evidence of general paralysis or syphilitic brain disease. The ovaries were scarred and there was a chronic adhesive salpingitis and parametritis. The blood serum (removed post mortem) gave a marked positive Wassermann reaction. The cerebro-spinal fluid, also withdrawn after death, was mixed with some blood; this, too, gave a positive Wassermann reaction, but much less marked and almost certainly due exclusively to the presence of the blood serum in the fluid.

Description of the Method Employed.

The method employed throughout the work, both at the Lister Institute and at the Pathological Laboratory at Claybury Asylum, has been that used by Wassermann. General experience has shown that this method is by far the most reliable, and admits of more accurate standardisation than do any of the labour-saving modifications which have been suggested as substitutes for the original method.

The technique used in the laboratory at Claybury is practically identical with that described in the previous paper written in collaboration with Dr. Henderson Smith. For hæmolysin we have used, in the majority of cases, the serum of a rabbit immunised against ox corpuscles. This was supplied to us by the Lister Institute and has been in our possession for close on two years. It has been kept in sealed tubes in the cold chamber, and during this time its

titre has remained practically constant. In a few cases we have used rabbit's serum immunised against sheep's corpuscles when ox blood was not available (this was also kindly supplied by the Lister Institute).

For complement we have used the serum of the guinea-pig. The animal has been killed over-night and the clear serum collected the following morning after a night's sojourn in the cold chamber. For artificial antigen we have invariably made use of the liver of a syphilitic fœtus. Experience has shown that the success of the test depends almost completely upon the use of a good extract, and on repeated standardisation of all the reagents employed, so as to detect and make correction for any possible variations which may occur.

Carl Browning, Ivy McKenzie, H. R. Dean, D'Este Emery, and others have shown that liver extract is able of itself to absorb complement, and that the amount of complement capable of absorption varies with each individual extract, and also is liable to variation in the same extract. An artificial antigen must contain a sufficient quantity of lipoids, and these lipoids are apparently in an easily dissociable condition, for the addition of a drop of a solution of iodine and potassium iodide demonstrates the presence of choline or a similar substance, and also a film prepared from the extract readily takes the Scharlach stain. The suitability of an extract to act as an artificial antigen depends very materially upon its methods of preparation. This has long been recognised in the laboratory at Claybury Asylum, and various methods have been used in order to obtain a clean extract of the liver. These methods have been recently corroborated by Noguchi, who has shown that the liver extract prepared in the ordinary way (i.e., by simple watery or alcoholic extraction), besides containing the "antigen" proper, may contain in addition bodies possessing hæmolytic and anti-complementary properties. In the process of extraction, therefore, these substances must be eliminated as far as possible.

The method employed in the laboratory is as follows. The weighed liver of a syphilitic fœtus is ground up with a sufficient quantity of silver sand and plaster-of-Paris so that after a few hours it can be reduced to a powder. The use of gypsum has been adopted in order to obtain an anhydrous residue, from which salts, jecorin, and other constituents of the liver cannot be extracted with cold alcohol. Latterly we have adopted the procedure of washing this powdered residue with acetone previous to the extraction with cold alcohol. This acetone washing removes from the mass bodies which have anti-complementary and hæmolytic properties. The ground-up liver is allowed to dry at room temperature. The dry residue is transferred to a flask and sufficient quantity of alcohol added. The flask is put aside at room temperature for two or three days. The alcoholic extract is then filtered off and the filtrate made up with washings with alcohol, so that 4 c.c. is equivalent to 1 gramme of liver. In this way lecithin and other phosphatids which are most suitable as antigens are best extracted. Liver extract so prepared we have found to act uniformly in a 1 in 5 saline dilution, and also to keep for months without much alteration if suitably stored. Our extracts are stored in the cold chamber in dark bottles.

In performance of the test an approximation of the intensity of the complement absorption has been obtained by keeping the quantities of complement, liver extract, and sensitised blood cells constant and introducing falling doses of cerebro-spinal fluid or serum, positive and negative controls being put up at the same time. The preliminary standardisation of the minimum hæmolytic dose of the immune body was never neglected, and thrice this quantity was invariably used. It may be here mentioned that these quantities have remained remarkably constant. The dilutions of the cerebro-spinal fluid have been so arranged that with a negative fluid hæmolysis has occurred in every tube without exception, while in cases of general paralysis prevention occurred in all or most of the series of tubes.

It has only been by very careful observation of the strength of the liver extract that so definite a reaction has been obtained, so that any absorption of complement brought about by the liver extract alone should be insufficient to affect the series. All tests have been fully controlled, and in view of the intricacies of the reaction we consider this procedure to be absolutely essential.

Summary.

A positive Wassermann reaction was obtained with the cerebro-spinal fluid of 67 out of 69 cases of general paralysis of the insane (a percentage incidence of positive reactions of 97 per cent.).

In only two cases of general paralysis did the cerebro-spinal fluid fail to give a positive reaction before death. In one of the cases the cerebro-spinal fluid was negative two months before death, but positive after death. The blood serum of this patient tested three days before death gave a positive reaction. In the second case the cerebro-spinal fluid gave a negative reaction three months before death. This was the only occasion on which the fluid was examined.

Six cases of suspected general paralysis in which the Wassermann reaction was negative have died, and have been proved by post-mortem examination and careful microscopic investigation not to have been cases of general paralysis. Of 6 other cases of suspected general paralysis the cerebro-spinal fluids of which gave a negative reaction, 4 have been discharged from the asylum, and in all the original diagnosis has been altered.

The reaction cannot be obtained in the cerebro-spinal fluid of any other forms of insanity, except in a few rare cases of syphilis of the central nervous system.

In all cases an excess of lymphocytes in the cerebro-spinal fluid indicates organic disease, but not necessarily either syphilis or parasyphilis.

A positive reaction with the cerebro-spinal fluid, in conjunction with lymphocytosis, points much more strongly to parasyphilis, especially general paralysis, than to cerebral or spinal syphilis.

Every case of general paralysis is said to give a positive serum reaction, but a positive serum reaction merely indicates that the patient has had syphilis. Consequently, if there is a positive serum reaction, associated with nervous or mental phenomena, lumbar puncture should be performed, and if the cerebro-spinal fluid gives a positive reaction the indication is strongly in favour of general paralysis.

It is advisable if a negative reaction is obtained in the fluid, and there are other indications pointing to the possibility of general paralysis in the pre-paralytic stage, to make another puncture at a subsequent date and examine the fluid.

Although many modifications and simplifications of the Wassermann method have been introduced, in view of the importance of this test from the medico-legal point of view, it is highly desirable to use the most reliable method. Many of these modifications fail by giving positive results when the original method would give a negative.

The only modification of the original Wassermann method we have used lies in the preparation of the liver extract, whereby substances which adversely influence the reaction are eliminated. The liver is reduced to an anhydrous powder by mixture with plaster-of-Paris and silver sand; it is then washed with acetone, and finally extracted with cold alcohol.

I wish to express my thanks to Dr. Mott for his kindness in examining the microscopic sections, and also for his advice throughout the work; and to Mr. Sydney Mann for the chemical work in the preparation of the liver extracts, and for his assistance with the tests conducted in the laboratory.

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ON AN EPIDEMIC OF CONJUNCTIVITIS

ASSOCIATED WITH THE PRESENCE OF A GRAM-POSITIVE DIPLOCOCCUS RESEMBLING, BUT DISTINCT FROM, THE PNEUMOCOCCUS.

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THE following paper deals with an epidemic of conjunctivitis in an institution, and the facts are considered worthy of record, in the first place, because the outbreak was associated with the presence of an organism which, we believe, has not previously been described; and, secondly, because of the liability of this organism to be confused with the pneumococcus in a superficial[1] examination, such as is generally employed in ophthalmic practice.

Clinical Notes.

At a preparatory boarding school for boys (with about 100 pupils, aged from 8 to 14 years) in the country, an epidemic of mild ophthalmia occurred in the spring, presenting some unusual features, chiefly bacteriological.

Three of the boys, who were brothers, were allowed to leave school on a Saturday in order to attend the marriage of a sister at a considerable distance from the school. On the following Monday one of them developed ophthalmia, but he seemed to be better on the Tuesday, and on the Wednesday he was apparently quite well. On that day he returned to school with his two brothers, and on the following Monday (Feb. 27th) one of the brothers and also another boy in a different form, and in no way intimately connected with the three brothers, developed ophthalmia. On Feb. 28th these two boys and another boy had ophthalmia, and the original boy, who had been affected while he was away, had a slight relapse.

On March 3rd there was a fresh case; on the 6th there were three fresh cases; on the 7th two; on the 8th one; and so on until, on April 4th, the forty-ninth, and last, case was the eldest of the three boys who had gone to the wedding.

It should here be noted that all the cases were isolated from the very beginning, as soon as any signs of irritation were observed. In most of them the treatment consisted in the application of 20 per cent. argyrol once a day, which, after half an hour, was washed away with boric solution; irrigation with boric solution three or four times a day, and paroleine was applied. The boys were kept in darkened rooms and were not allowed to use their eyes. In 9 out of the 49 cases a relapse occurred—generally ten days to a fortnight from the commencement of the disease. As a rule, the duration of the inflammation was short—from two to five days. Some of the cases were considerably longer in duration, but in none of them did the condition lead to any serious complication or inconvenience at all. The characters of the affection were those of a simple conjunctivitis. Beginning in one eye it usually spread to the other. There was injection of the vessels of the orbital and palpebral conjunctiva, particularly of the lower eyelid; very little œdema; only slight purulent exudation and some photophobia; very little headache or tenderness of the eyes.

The mode of propagation was difficult to ascertain. All the boys have separate towels, but in the "change room" which is used after games there are roller towels which are made use of by several boys.

The occurrence of ophthalmia in a boys' school is, of course, very usual, but this epidemic was distinguished by two features: first, the mildness of the cases, and, secondly, the extent to which the epidemic spread, practically half of the boys in the school being affected.

The only other cases in the school, besides those of the boys, were a table-maid in the headmaster's private house, who began to be affected on March 12th, and who had a relapse on the 23rd, and one maid who was in attendance on the boys and constantly amongst them, who became affected on March 17th. It is interesting also to note that the mother of the three boys who attended the wedding suffered from the affection a week after the first boy became ill. It should be mentioned that there was no other illness in the school at the time.

Bacteriology.

General.—The organism, to be afterwards described, was obtained in pure culture from the conjunctival sacs of all the cases that were examined—five in number. The cultures from these cases were made on blood agar, and the appearance of the colonies after 24 hours' incubation at 37° C. was identical, as far as one could tell, with the appearance that the pneumococcus produces—namely, fine, discrete dewdrops.

In films made directly from the conjunctival secretion, which was very scanty, the organism appeared as a Gram-positive diplococcus, whose elements were elongated and in some instances typically lancet-shaped. As regards the presence or absence of capsules in the organism in the secretion it was difficult to be certain, one reason being that the organisms were few in number. Even supposing the capsules were absent,[2] this in no way lessens the liability to confusion with the pneumococcus, for with undoubted pneumococci in the sputum capsules are often not demonstrable even by methods specially suitable for the purpose. As mentioned above, the secretion was scanty and the organisms were few in number in it. This is noteworthy, as in the epidemics of pneumococcal conjunctivitis recorded in the literature the secretion is usually said to be copious and the organisms abundant.

Cultural characteristics.—The organism grows well on blood agar at 37° C. On gelatine at 18° C. it does not grow. There is no growth on potato at 37° C. It grows well on inspissated blood serum at 37° C. Litmus milk incubated at 37° C. is usually unchanged; sometimes a little acid is formed after a long time but never any clot.

In broth, glucose broth, and peptone water at 37° C. it grows, but the fluid remains clear except for little punctate spots on the sides of the tube and a slight deposit at the bottom of the tube due to the accumulation of these "spots." The "spots" are little clumps or colonies of the organisms caused by the adhesion together of the bacteria, and corresponding with this cultural appearance chains are not found microscopically but irregular clumps.

Maltose, glucose, galactose, and dextrin are usually fermented with acid production; lactose and cane are sometimes fermented and sometimes not; while inulin, dulcite, raffinose, salicine, inosite, sorbite, and adonite are not fermented. In these latter, however, growth has taken place, as evidenced by the "spots" mentioned above, on the sides and bottom of the tubes. It is important to note that inulin is *not* fermented either alone or in His's inulin serum medium. (It is to be noted that in the preparation of these sugar media the sugars and peptone water are sterilised separately and then added to one another.) The tubes are inoculated with a pipette from a thick emulsion made by scraping blood agar growths into broth.

When the organism is grown in fluid sterile rabbit serum, the serum remains clear except for the "spots" referred to above on the sides and bottom of the tube. This differs markedly from what takes place in the case of the pneumococcus, where a dense uniform turbidity is produced through the serum. (See Fig. 1.)

The organism, therefore, differs culturally from the pneumococcus in its action on litmus milk, its fermentation of sugars, and especially its non-fermentation of inulin, and the production of punctate spots and absence of turbidity in fluid media.

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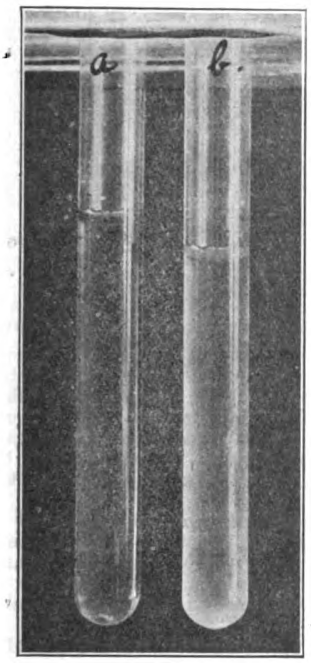
[1] "In ophthalmic practice we generally examine a smear preparation, and the difficulties which we have mentioned (i.e., of distinguishing streptococcus from pneumococcus) rarely come into the question, unless, perchance, we have to deal with a mixture of streptococcus and pneumococcus." Axenfeld: Bacteriology of the Eye, 1908. Translated by McNab, p. 188.

[2] "They (the pneumococci in the eye secretion) differ from those found in pneumonic sputum in that the capsule is not so obvious. Although many of the diplococci may be round and short, we never fail to find large numbers of the typical elongated forms from which in a Gram-stained slide a *certain diagnosis* can be given and a differentiation from other diplococci (gonococci and staphylococci) readily made." Axenfeld, loc. cit., p. 183.

Microscopical appearances of the organism in culture.—The organism is non-motile. It is a Gram-positive diplococcus, the elements of which are elongated and in a great many instances of typical lancet shape. Figs. 2 and 3 are microphotographs from 24 hour blood agar cultures of a typical pneumococcus and this organism respectively. The large number of lancet-shaped forms in Fig. 3 is especially noticeable. These photographs also show that while in the pneumococcus the diplococcal elements are usually discrete, there is a marked tendency to agglomeration with this organism. This is further shown by what happens when one filters through filter paper emulsions made from blood agar cultures of the organisms; with equally turbid emulsions the pneumococcal emulsion comes through practically as turbid as before, while the emulsion of this organism comes through practically clear. So much was this the case that comparative agglutination tests with this organism and the pneumococcus were impossible.

The size of each coccus is from 0·7 to 1μ long by 0·5μ broad at its widest part, being thus of the same size as the pneumococcus.

FIG. 1.



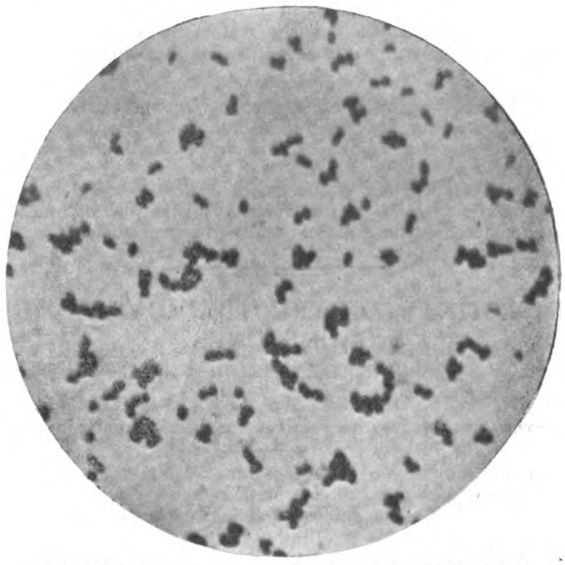
Photographs of cultures. Test-tube *a* contains the organisms described, grown in liquid rabbit serum. Test-tube *b* contains pneumococci grown in the same medium. Note the marked turbidity as compared with *a*.

The organism stains readily with the ordinary dyes. There are no spores present. With regard to the presence of capsules in the organism in cultures, this point has not been definitely settled. They were not obtained after several trials on fluid rabbit serum, using His's method of staining, but an undoubted culture of pneumococcus of the same age, treated at the same times and in exactly the same ways, similarly showed no capsules. (Both cultures had been subcultured on artificial media for some months.)

Inoculation experiments.—The organism has not been found to be pathogenic to either mice or rabbits. A small rabbit was inoculated intraperitoneally with some secretion, freshly removed from the eye of one of the cases, without any noticeable effect. Extensive 24-hour agar cultures immediately on isolation were injected subcutaneously into mice without effect. This is noteworthy, because during the period while this investigation was going on one of us (J. P. McG.) had occasion to be working with over 130 strains of pneumococci, and there never was a failure to produce a lethal effect on injecting subcutaneously into mice a very much smaller dose of these strains; in some cases this was also true six months after the first isolation of the strain. At this time, too, a 24-hour agar culture was applied to the conjunctival sac of a rabbit without effect.

The organism was isolated in March, 1911, and was kept going by frequent subculture on blood agar till October, when the following additional experiments were made.

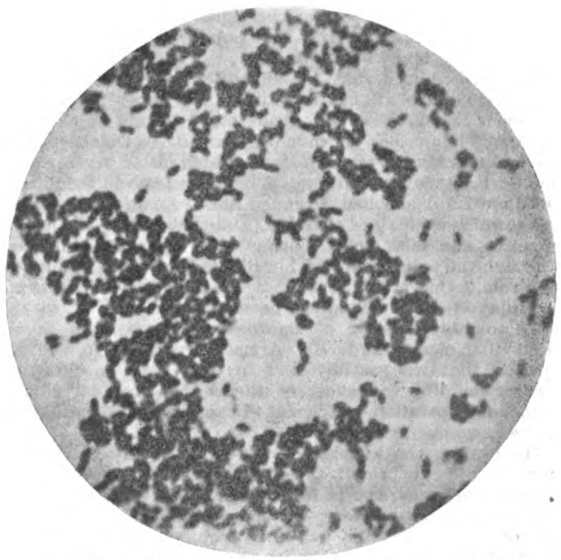
FIG. 2.



Micro-photograph of Gram-stained film from 24-hour blood agar culture of a typical pneumococcus. × 1500.

A mouse was injected subcutaneously with two 24-hour agar cultures without effect. Another mouse was inoculated intraperitoneally with two 24-hour agar cultures. It was quite well next day, but was killed for two reasons: First, to try to increase the virulence by passage, and secondly, to see if the organism would develop capsules in the tissues of an animal. Culture from the peritoneum and heart blood proved sterile, and no organisms were seen in films from the peritoneal cavity or heart blood.

FIG. 3.



Micro-photograph of Gram-stained film from 24-hour blood agar culture of the organism described. Note the agglomeration as compared with Fig. 2, and also the large number of lancet-shaped organisms. × 1500.

A small rabbit was injected intravenously with two 24-hour blood agar cultures. The rabbit remained quite

well, and frequent examination of its blood after inoculation failed to reveal the presence of any organisms. A monkey (*Macacus rhesus*) was inoculated in its left conjunctival sac with a 24-hour blood agar culture of the organism without effect.

As regards the presence of capsules in the organism *in vivo*, this point has not been settled owing to the inability to grow the organism in either of the species of animals used.

Agglutination.—As previously stated, owing to the spontaneous agglomeration of the organism, this was impracticable.

Conclusions.

1. From five cases of an epidemic of conjunctivitis in an institution we have obtained in each case a pure culture of a Gram-positive diplococcus, with elongated and lancet-shaped elements.

2. The superficial examination ordinarily employed in ophthalmic practice is insufficient to distinguish it from the pneumococcus, from which it really differs markedly.

INTESTINAL OBSTRUCTION CAUSED BY GALL-STONES:

A CLINICAL MEMORANDUM.

BY EDMUND OWEN, M.B. LOND., F.R.C.S. ENG.,
CONSULTING SURGEON TO ST. MARY'S HOSPITAL, PADDINGTON, W.

ON the afternoon of Saturday, June 24th last, Mr. R. Stow Armstrong asked me to see with him a lady aged about 60 years who was the subject of violent pains in the abdomen and of uncontrollable vomiting. On the day before (Friday, 23rd) she had been to see the Royal Progress, having had, before starting, some tea and toast at about 7 A.M. She had had nothing more, but on returning from the spectacle, at about mid-day, she felt very sick and, stopping the carriage, got out and vomited, bringing up, as she said, "quarts" of orange-coloured fluid. She was in great pain all that night, but she had no more vomiting till the next afternoon—at about the time of my seeing her.

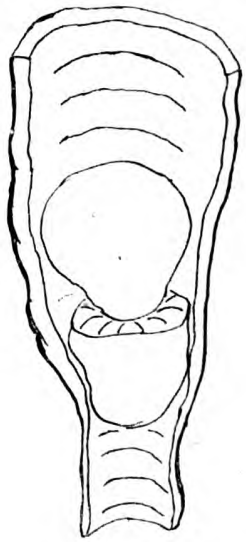
I found the patient in bed, looking extremely ill, and complaining of pains which occurred in paroxysms in the right iliac fossa and round the navel. There was great tenderness in the former region, but there was none of that rigidity of the lower part of the right rectus which usually accompanies appendicitis. Her pulse, 84, was small and was dropping many beats.

The patient said that for about ten years she had been subject to sharp attacks of pain in the upper part of the abdomen, which came on about every second week, and, lasting 24 hours, left her much exhausted. In October, 1910, she had had a very severe attack, which lasted seven weeks, and during this time she had a coppery taste in the mouth. On June 22nd she had attended the Coronation procession, but towards evening of that day (Thursday, 22nd) she lost all appetite and felt sick; during the night she vomited. Through the many years of her illness her bowels had acted, as a rule, twice a day, but from the Thursday night to the Saturday afternoon there had been no action.

There was a feeling of hardness and resistance in the right iliac fossa, and Mr. Armstrong and I formed the opinion that we possibly had to deal with an intestinal obstruction due to cancer of the cæcum, and we advised immediate operation on account of rapidly increasing distress and weakness.

On opening the abdomen in the iliac fossa I came at once upon a piece of small intestine the walls of which were greatly thickened, and in the interior there was a hard mass, evidently of gall-stones. The mass was firmly wedged and the overlying intestine was discoloured, as if Nature were about to prepare the way for the escape of the mass by ulceration. By a little coaxing the stones were pushed up into the thickened and dilated piece of intestine and were easily removed through a longitudinal incision. The edges of the wound in the bowel were stitched together, and the incision was then hidden under a row of Lembert sutures of fine silk. The loop of bowel was carefully wiped with gauze and dropped back into its place, and the abdominal wound was closed. After the operation the chief trouble was caused by wind, but this gradually subsided. The pulse, which just before the operation was dropping every second or third beat, steadily improved, and in a few days it became almost regular. The surface stitches were taken out at the end of a week, the wound being soundly healed. A few days later, however, the wound had to be opened to allow the escape of a localised collection of pus, and although after this all went on well, at the end of a fortnight two sutures came away. After this the wound closed, and the patient left for the country on the twenty-fourth day, feeling, she said, better than she had done for many years.

The accompanying illustration shows in diminished scale



Scheme showing muscular coat of small intestine thickened in its attempt to force on gall-stones.

the two stones, and the thickening of the wall of the bowel due to the increase of the muscular tissue which had been developed in the effort to get rid of the obstruction. Doubtless the fits of intense pain were caused by the bruising of the nerves of the wall of the bowel against the stones under the powerful action of the thickened muscular coat.

The stones, which were of about the size of walnuts, were lying close together, and their ends had been so rubbed against each other by the violent muscular action that the upper part of the lower stone was smoothly hollowed out, whilst the lower end of the upper one was rounded and polished.

At first sight this case was very like one of appendicitis, showing, as it did, general distress, abdominal pains, a tender mass in the right iliac fossa, and vomiting. But there was absence of that constant sign of appendicitis—rigidity of the lower part of the rectus and of the neighbouring muscles. Still, this sign is not always present when the appendix is inflamed. Indeed, there is no sign which by itself is characteristic of appendicitis, and in certain cases pretty nearly every sign is absent. In some cases, rare, I admit, there may be advanced disease of the appendix, though the aspect of the patient, the pulse, and the temperature give no cause for alarm, and where the abdominal signs are but slightly marked. And the moral to be drawn is, that in all cases of doubt as regards the presence of appendicitis the greater safety will be in making an exploratory incision. It was quite possible that the case here related might turn out to be one of appendicitis, but it proved to be one of far greater rarity and, I think, well worthy of being recorded.

Great Cumberland-place.

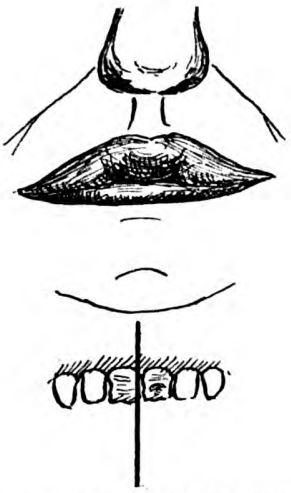
NORTH-EAST LONDON POST-GRADUATE COLLEGE.—Sir James Crichton-Browne, F.R.S., will give an address on "Nerves and Nervousness," at 4.30 P.M. on Thursday, Nov. 16th, in the lecture hall of the North-East London Post-Graduate College, Prince of Wales's General Hospital, Tottenham, N., to which qualified medical practitioners are invited.

"COMFORTER" CARIES.

BY ERIC H. R. HARRIES, M.D., B.S. LOND., D.P.H.,
SENIOR ASSISTANT MEDICAL OFFICER, CITY HOSPITAL FOR INFECTIOUS DISEASES, FAZAKERLEY, LIVERPOOL.

CAUSE and effect seem sufficiently closely related in the conditions illustrated in this article to justify the title I have given to it. For the "nomenclature" I am indebted to the interesting contribution by Mr. W. H. Bowen on "Comforter" Otitis Media,[1] which recently appeared in these pages.

FIG. 1.



CASE 1.—A male, aged three years and seven months, admitted for diphtheria. Exhibits hypertrophy of upper lip and commencing caries of upper central incisors. Breast-fed for 13 months. No evidence of rickets or syphilis. Other teeth sound.

FIG. 2.

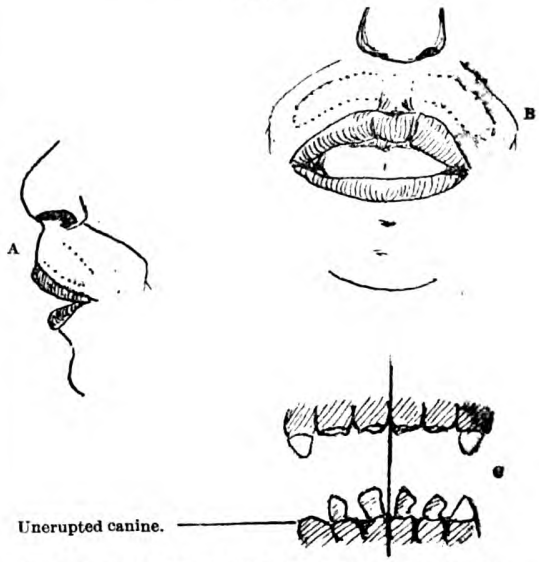


CASE 2.—A female, aged three years, admitted for measles. Shows some hypertrophy of upper lip. Pus at root of carious right central incisor; left central incisor has disappeared. Breast-fed for 17 months. No evidence of rickets or syphilis. Other teeth sound. R.C.I., Right central incisor.

[1] Bowen: "Comforter" Otitis Media, THE LANCET, Sept. 9th, 1911, p. 758.

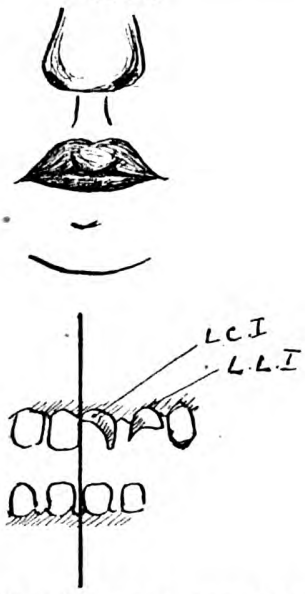
The children from whom the accompanying sketches were made were admitted during the present year for various infective conditions. At the time of admission they were all sucking comforters, and a history of its habitual use was obtained from the mother in each case.

FIG. 3.



CASE 3.—A male, aged one year and five months, admitted for epidemic diarrhœa, using comforter. The mother stated that the child had "a new one nearly every day as he bites them up." The case exhibits deformity of upper lip and a well-marked visible and palpable hypertrophied segment of the orbicularis oris. The upper incisors are represented by carious stumps; the lower incisors are badly formed, small, and irregular. Palate somewhat highly arched. Adenoids not marked. Never breast fed. "Sterilised" milk and lime water for 13 months. A, Profile; hypertrophied segment of orbicularis oris shown by dotted lines. B, Hypertrophied segment of orbicularis oris shown by dotted lines. Appearance of child's mouth in repose. C, Upper incisors decayed almost to alveolar margin. Lower incisors small and irregular.

FIG. 4.



CASE 4.—A female, aged three years, admitted for measles. Constantly sucked "dummy." Shows caries of left central and lateral incisors. Other teeth sound. No evidence of rickets or syphilis. Breast-fed for 17 months. L.C.I., Left central incisor. L.L.I., Left lateral incisor.

Most small children of the poorer classes in Liverpool, as elsewhere, suck comforters, and the sketches of course only represent a few cases under my personal observation in

which I have noted extensive caries, or marked hypertrophy of the upper lip, or both, associated with persistent "indulgence" in the "dummy." It would be as foolish to assert that caries results in all or the majority of infants who have been indulged in the comforter for lengthy periods as to assert that all smokers of clay pipes develop epithelioma. I present these cases merely as concrete instances of the damage which, I submit, has been caused by the appliance.

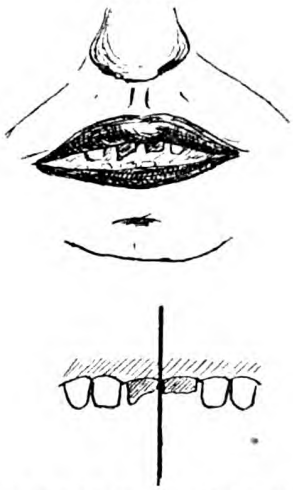
The details of each case are noted under the corresponding figure:—

Case 1 shows marked hypertrophy of the upper lip and commencing caries of the upper central incisors. Case 2 also exhibits some hypertrophy and asymmetry of the upper lip. The left upper central incisor has disappeared, while the right upper central incisor shows advanced caries and pus at the alveolar margin. Cases 1 and 2 were breast-fed for 13 and 17 months respectively.

Case 3 shows a different form of hypertrophy—viz., that of a segment of the orbicularis oris. I allowed the child to suck its comforter in order to observe what happened. I was left in no doubt that this hypertrophied segment of muscle had been produced by constant sucking and—if I may use the term—"prehensile" efforts to keep the "comforter" in position. The parents both had excellent teeth and were surprised at the way the child's teeth had decayed. The extensive nature of the caries is shown in the diagram. The child was 17 months old at the time of observation, and had never been breast-fed. Further details are given under the figure.

In Case 4 the child exhibited marked caries of the two upper left incisors. She had been breast-fed for 17 months. Case 5 shows caries of the two upper central incisors. The child's palate was also highly arched, and it had marked adenoids.

FIG. 5.

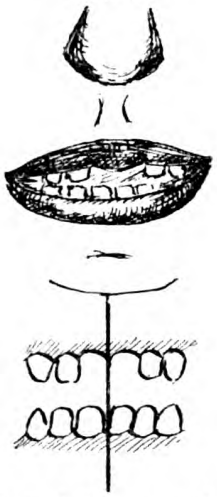


CASE 5.—A male, aged three years and five months, admitted for scarlet fever. Shows caries of upper central incisors. Persistent "dummy" user. The mother said the child sucked the "dummy" all night. High-arched palate. Marked adenoids. No evidence of rickets or syphilis. All other teeth sound.

Case 6 was admitted with a comforter, as were all the others. The two upper central incisors were missing, and the gap was completely filled by the dummy. The teeth, however, had been knocked out as a result of a fall. The case is, therefore, not a genuine one, but I have included it as an interesting coincidence.

It will be noted that with one exception all these children were round about three years of age. The mothers had never taken sufficient trouble to break the child of its habit of sucking the "accursed instrument," as Dr. Eric Pritchard calls it. That the "comforter" is quite unnecessary is shown by the readiness with which infants in hospital—hitherto persistent "devotees"—dispense with its use. The class of children from which the present cases were drawn possess mothers with no powers of observation at all, and with imaginations equal to any emergency, hence I am unable to give any reliable dates of onset of the caries. I have eliminated rickets and syphilis in each case. Except for the acute condition for which the children were admitted they appeared to be constitutionally sound. Only the teeth indicated were affected. Dentition in Case 3 was not complete, the child being only 17 months old. In the remaining cases primary dentition was complete.

FIG. 6.



CASE 6.—A female, aged three years and seven months, admitted for scarlet fever. Sucking "dummy" on admission which exactly fitted the gap. Constantly uses "dummy." The case is, however, spurious, as the teeth were knocked out by a fall.

If there be some other factor of a general nature causing this early caries it is curious that no other teeth were affected. Whether the condition is produced by some direct action of the rubber upon the teeth, or whether it is due to the introduction of septic matter which is scraped off by and worked around the upper incisors, I am unable to say. Possibly both factors are at work. The hypertrophy and asymmetry of the upper lip noted in these cases can readily be understood.

The question of dental caries in children is much to the front just now.[2] This small contribution to the subject may, therefore, be of some interest. These cases do not represent all in which I have come across the condition, but some of the most marked examples only.

Liverpool.

THE BLOOD CHANGES IN BILHARZIASIS,*

WITH SPECIAL REFERENCE TO EGYPTIAN ANÆMIA.

BY H. B. DAY, M.D., B.S. LOND., M.R.C.P. LOND.,

PROFESSOR OF CLINICAL MEDICINE, EGYPTIAN GOVERNMENT SCHOOL OF MEDICINE; PHYSICIAN, KASR EL AINY HOSPITAL, CAIRO.

THE recent article in THE LANCET by Captain G. W. G. Hughes, R.A.M.C.,[1] draws attention to the extent of the ravages of bilharziasis and ankylostomiasis in Egypt, more particularly in the perennially irrigated area of the Delta. Although the native agricultural population are the main sufferers Europeans may also be attacked as in a case of bilharziasis recently described in these columns by Mr. F. C. Madden.[2]

Bilharziasis is generally contracted in childhood, almost certainly by bathing in infected water. Thus Kautsky[3] found 78 per cent. of school children infected, while among adult males at least 35 per cent. have the disease (F. Milton). Sandwith[4] states that it is found in 38 per cent. of necropsies. The symptoms may last as long as 15 or 20 years after infection, but the severe cases commonly seen in male adults working in irrigated fields are due to continued reinfection.

Of late years the blood changes in bilharziasis, first noted

[2] Vide Wheatley, "The Causes of Dental Caries," Public Health, September, 1911.

* With the advice of Professor Looss I have in the word "bilharziasis" adopted the new spelling (bilharziasis, not bilharziosis) in conformity with the nomenclature of other infections such as ankylostomiasis and trypanosomiasis. The superior figures refer to the bibliography at the end.

by Coles, have been studied by several workers. In 1903 Douglas and Hardy[5] published an analysis of 50 cases occurring in British soldiers infected in South Africa, dealing principally with the qualitative changes in the leucocytes. Their results were confirmed by Balfour[6] of Khartoum, and also by Kautsky[3] and lately Zweifel[7] of Cairo, who both call special attention to the anæmia produced by loss of blood in this disease, which they hold to be the main cause of the anæmia so prevalent in Egypt.

The purpose of this paper is to show that while certain changes in the leucocytes and moderate anæmia are characteristic of bilharziasis, severe anæmia is rare except in cases complicated by sepsis or other disease. Further analysis of a series of cases of severe anæmia admitted to hospital shows that ankylostomiasis is the common, though not the exclusive, cause of the so-called Egyptian chlorosis.

In a patient suffering from bilharziasis we may distinguish at least four distinct factors which influence the blood changes: (1) The presence of the bilharzia worms in the blood-vessels; (2) the loss of blood accompanying the discharge of ova; (3) septic infection of ova-discharging surfaces, which in the case of the intestine may lead to exhausting diarrhœa—"bilharzial dysentery"; and (4) the coexistence of other diseases, of which the most common are ankylostomiasis, endemic cirrhosis, and pellagra.

1. The presence of bilharzia worms in the blood-vessels causes characteristic alterations in the white corpuscles. There is generally a slight leucocytosis with a marked increase in the numbers of eosinophile and large mononuclear cells. The polynuclear leucocytes are diminished, while lymphocytes are unaffected. The following figures are taken from various writers:—

Author.	No. of cases examined.	Average total number leucocytes.	Percentage.				Total eosinophiles per c.mm.
			Polynuclear.	Lymphocytes.	Mononuclears.	Eosinophiles.	
Douglas and Hardy	50	Increased.	44·6	25·7	12·5	16·5	—
Kautsky	22	10,000	43·0	40·0		17·0	1700
Zweifel	16	9,737	66·0	29·5		14·4	1401
Self	15	9,476	45·3	21·4	9·5	23·7	2246

The figures of Douglas and Hardy and of Kautsky are almost identical and represent the average uncomplicated case. Zweifel's figures are taken from adult patients attending hospital for treatment, some of whom had septic complications. Hence the much higher polynuclear average and the lower eosinophilia. My own figures are taken from an examination of 15 cases of uncomplicated bilharziasis admitted to hospital, the details of which are given in the table (Series 1.). Such in-patients represent mostly severe cases, hence the higher eosinophilia. The average number of large mononuclears was not so large as in the series published by Douglas and Hardy, but their figures were raised by the inclusion of cases with old malarial infection.

The eosinophilia appears due to the products of metabolism of the bilharzia worm which are excreted directly into the blood of the host. It can be artificially produced by the injection of dead worms or hatched ova (the ciliated miracidia). The following table shows the result of the subcutaneous injection of eight young worms (sterilised by heat) in a healthy adult:—

—	Before injection.	After six hours.	Second day.	Third day.	Fourth day.	Sixth day.	Eighth day.
Total No. of leucocytes ...	4800	5000	4986	5817	6233	4155	4986
Percentage: Polynuclear	70·0	75·5	75·0	77·0	60·5	56·6	68·3
Percentage: Lymphocytes	22·5	20·0	23·0	18·0	30·5	32·0	21·3
Percentage: Large mononuclears	4·0	2·5	1·0	3·0	3·0	5·6	4·0
Percentage: Eosinophiles	3·5	2·0	1·0	2·0	6·0	6·0	3·3
Total eosinophiles (per c.mm.)	148	100	50	116	374	249	164

A similar result followed the injection of 1000 miracidia:—

—	Before injection.	Second day.	Third day.	Fourth day.	Fifth day.	Seventh day.	Ninth day.
Total No. of leucocytes ...	4571	4255	6233	5403	5403	4986	5403
Percentage: Polynuclear	76·0	66·0	61·5	70·0	65·6	60·0	72·0
Percentage: Lymphocytes	15·75	28·75	31·75	23·3	28·6	32·0	20·0
Percentage: Large mononuclear	3·5	2·5	4·25	3·3	2·6	1·25	5·0
Percentage: Eosinophiles	2·25	3·75	2·5	3·3	3·0	6·75	3·0
Total eosinophiles (per c.mm.)	103	159	156	178	162	336	162

It will be seen that the chief changes are a slight general leucocytosis due to an increase of eosinophiles and lymphocytes, the other varieties being hardly affected. Examination of the injected area showed a dense infiltration with eosinophiles. Such local accumulation explains the presence in bilharzial urine of eosinophiles in much higher proportions than in the blood. Conversely, when the disease is of limited extent the removal of bilharzial tissue containing worms will lower the eosinophilia. Thus in the example given (Case A) a boy with extensive disease of the penis and perineum had the para-urethral infiltration excised with a marked effect on the blood within a week.

As far as can be judged from clinical examination the degree of eosinophilia and other blood changes are roughly proportional to the intensity of the affection, provided the patient's general condition be good. The highest eosinophilia was obtained in the case showing the most extensive lesion, while in old-standing cases with only a few calcified ova in the urine there may be none, as the worms have probably died out.

2. The constant loss of blood due to the discharge of ova through a mucous membrane causes a secondary anæmia proportional to the duration and severity of the hæmorrhage. The loss of blood varies greatly, even in the same patient, but in the large majority of cases only a few drops are noticed at the end of micturition or defæcation. Bilharzial disease of the intestine is especially apt to cause anæmia on account of the tendency to septic infection and diarrhœa.

The vegetable diet of the Egyptian predisposes him to anæmia, and the average hæmoglobin percentage is under 90 in health. In his examination of school children Kautsky found an average hæmoglobin percentage of from 80 to 90 in health, while in those infected with bilharziasis it was reduced to 75. The number of red cells was little reduced (average 4,860,000), but even in cases with 5,000,000 or more red corpuscles the hæmoglobin was reduced. These figures are of special value as complications were rare, and ankylostomiasis specially excluded. In my series of nine uncomplicated cases the average count was 4,112,000, but these represent mostly severe cases and not the average condition. The anæmia is distinctly of the chlorotic type, with a low colour index; nucleated red cells are only occasionally found.

In contrast with the anæmia produced by ankylostomiasis that due to bilharziasis is much more amenable to treatment with simple hæmatinics. Thus a boy of 15 (Case B) with intestinal bilharziasis, anæmic for three years, had on admission only 20 per cent. hæmoglobin, but on iron and arsenic this increased to 60 per cent. in a fortnight. In spite, however, of continued treatment no further improvement was obtained. Such anæmia greatly obscures the leucocytic changes characteristic of the disease. The reappearance of the typical blood-picture with improvement of the anæmia under treatment is well shown in the Cases B and C. No doubt if the blood examination in Series 1 had been made at the end instead of at the beginning of treatment the average eosinophilia would be greater.

3. In many cases of severe bilharziasis—due to continual reinfection—septic complications ensue with disastrous results. These form the great majority of those cases admitted to hospital. There are three main channels of sepsis. In bilharzial infiltration of the para-urethral and perineal tissues septic infection is apt to spread from the urethra, rectum, or skin, leading to fistulous openings and chronic suppuration. This is the least dangerous form, and

free excision may effect a cure. Advanced bilharzial disease of the bladder is often complicated by sepsis, which may readily prove fatal by involvement of the kidneys. This extension occurs the more readily since the ureters are often partially blocked below by bilharzial growth and dilated above. Intestinal bilharziasis is generally associated with some degree of sepsis, and when the disease is extensive considerable ulceration may ensue from detachment or destruction of papillomata Not only bacteria but amœbæ and flagellates flourish, setting up a chronic dysentery which is most refractory to treatment.

A series of 20 cases of bilharziasis complicated by septic infection, usually of long standing, is detailed (Series 2), which on comparison with the figures of aseptic cases reveals the following differences: (*a*) The average age is greater, corresponding to the longer duration of the disease. (*b*) The leucocytosis is higher from an increase in the polynuclears, but the eosinophilia is much reduced The lymphocytes and large mononuclear cells are unaffected. (*c*) The anæmia is much more pronounced, as shown by the average number of red corpuscles (3,354,000). The hæmoglobin is reduced to a still greater degree, and I have notes of five other cases (to be referred to later) in which the average percentage was only 18·5.

4. The association of other diseases with bilharziasis similarly tends to increase the anæmia and obscure the characteristic leucocytic changes. Amongst the fellaheen the commonest general diseases after bilharziasis are ankylostomiasis, endemic cirrhosis, and pellagra In each of these three last affections at least as much anæmia may be present as in a case of uncomplicated bilharziasis. Reference to the ten cases detailed in Series 3 will show that the average loss of red corpuscles exceeded that found in septic bilharzia cases.

Endemic cirrhosis affects a considerable proportion of the poorer population, quite 10 per cent. It is closely allied to, if not identical with, Banti's disease and causes anæmia of a splenic type with leucopenia and relative lymphocytosis.[8] Associated with bilharziasis it lowers the eosinophilia and aggravates the anæmia, which is much more difficult to ameliorate by treatment. Pellagra acts in much the same way.

It will be seen that the average eosinophilia in the four cases of combined ankylostoma and bilharzia infection was under 11 per cent., whereas in cases of aseptic simple bilharziasis it was considerably higher (23·7). Although ankylostomiasis causes a high eosinophilia in the early weeks after infection, this is soon reduced, especially when anæmia is established (Boycott)[9].

In estimating the relative action of bilharziasis and ankylostomiasis in causing the well-known Egyptian anæmia, both Kautsky and Zweifel hold that the former alone is the main factor. They base their conclusions on the following statistics:—

Author.	Condition.	Numbers examined.	Average Hb.	Minimum.
Kautsky.	Uninfected children.	22	80–90	65
,,	Bilharzia alone.	71	70–75	50
Zweifel.	,, ,,	16	70	55
Kautsky.	Bilharzia and ankylostoma	26	70–75	45
Zweifel.	,, ,,	5	70	60
Kautsky.	Ankylostoma alone.	5	80–90	75

Zweifel summarises his results thus: 1. Bilharzia ova are more commonly found than ankylostoma. 2 Greater visible loss of blood occurs in bilharziasis. 3 There is no difference in loss of hæmoglobin between cases infected with bilharzia and those infected with ankylostoma as well. 4. The hæmoglobin percentage of the blood of normal people and of those infected with ankylostoma is the same. 5. The blood of bilharzia patients has a lower hæmoglobin value than the blood of healthy persons or of those infected with ankylostoma. No worker in Egypt will dispute the first two conclusions, but the insignificant rôle assigned to ankylostomiasis appears to me unjustified. Kautsky himself is careful to state that he selected children in preference to adults for his investigations on account of the lower incidence of septic complications and of ankylostomiasis in the former. Further, although the fæces of 25 per cent. of the children examined contained ankylostoma ova, these were only found in scanty numbers; five or six slides were frequently searched before finding one.

It is obvious, as Boycott well puts it, that we must distinguish between cases of ankylostoma infection and patients ill with ankylostomiasis. The terrible anæmia that can be produced by this disease is well exemplified by the experience at Porto Rico, where half the agricultural population had less than 50 per cent. hæmoglobin. The statistics of Kasr el Ainy—the largest hospital in Egypt—show that during the last year 450 cases of ankylostomiasis and 285 cases of bilharziasis were admitted. 68 per cent. of the bilharzia patients were taken in for surgical treatment and showed moderate or slight anæmia, while of the remaining 32 per cent. in the medical wards only a small proportion showed marked anæmia (under 50 per cent. hæmoglobin). The average Egyptian fellah makes no complaint of a diminution of hæmoglobin to 75 per cent., and our experience shows that it is most exceptional for any patient to seek admittance for simple anæmia until his hæmoglobin is reduced far below this figure. Thus Sandwith found that the average amount of hæmoglobin in 173 ankylostoma cases examined on admission was only 26 per cent. In only three patients did the red corpuscles number over 4,000,000, while in 28·3 per cent. they were reduced below 2,000,000.

In order to determine the relative effects of various diseases in producing anæmia in Egypt I have analysed a series of 90 cases of severe anæmia admitted to my wards. The average hæmoglobin percentage was below 20 (highest 40; lowest five); the observations were made by Oliver's hæmoglobinometer and his daylight reading scales. It must be remembered that this intense anæmia is generally more apparent than real, since the volume of blood in the body may be largely increased, as shown by Haldane's CO method.

Analysis of 90 Cases of Severe Anæmia.

Main infection.	Complication.	No. of cases.	Average Hb.
Ankylostomiasis.	(None evident.)	52	17·92
	Endemic cirrhosis.	14	15·07
	Pellagra.	5	16·00
	Pellagra and cirrhosis.	1	22·00
Bilharziasis.	Sepsis.	5	18·50
	Cirrhosis.	1	20·00
Ankylostomiasis with bilharziasis.	—	8	14·50
	Cirrhosis.	1	18·00
	Pellagra.	2	15·00
Gastric carcinoma.	—	1	35·00

It will be noted that ankylostomiasis alone or in combination with other diseases was present in all but seven cases, and that the lowest hæmoglobin values were obtained in cases of combined infections. Bilharziasis with its sequelæ was alone responsible for just over 5 per cent., but had an important share in another 13 per cent. It may be objected that in only 18 per cent. of the cases was bilharziasis held to be an important factor or the sole cause of the anæmia, whereas a much larger proportion of hospital patients have the disease. It is quite true that microscopical examinations demonstrate the presence of ova in a larger percentage, but I do not believe such slight infections to be responsible for such high degrees of anæmia for the following reasons:—(*a*) In none of the cases excluded was there albumin or pus in the urine, nor diarrhœa or blood in the stools. (*b*) Unless septic complications such as cystitis and diarrhœa were present a slight bilharzial infection did not cause marked anæmia. (*c*) Improvement in the anæmia, ascertained by regular hæmoglobin estimations, was entirely dependent on the expulsion of ankylostoma worms.

To summarise the results of these investigations:—

1. Bilharziasis is characterised by a slight general leucocytosis due to a considerable increase in eosinophile and large mononuclear cells, the polynuclears being diminished.

2. These changes are roughly proportional to the intensity of the disease provided the patient's general condition is good. The presence of grave anæmia, sepsis, or complicating disease obscures these changes, which reappear on improvement.

3. Secondary anæmia is present to a moderate degree in

Table showing the Results of Blood Examinations in Cases of Bilharziasis.

Series.	Age.	Main bilharzial lesion.	Remarks.	Total number.		Percentage.					Total eosinophiles per c.mm.
				Reds.	Whites.	Polynuclears.	Lymphocytes.	Large mononuclears.	Eosinophiles.	Basophiles.	
1. Aseptic uncomplicated cases—1	14	Bladder.	Admitted for contusions.	—	15,375	60·75	18·25	9·0	11·75	0·25	1806
2	28	,,	Slight. Admitted for piles.	—	—	64·0	23·33	6·33	6·33	0·0	—
3	15	,,	Admitted for concussion.	3,504,000	8,337	31·0	23·0	17·0	29·0	0·0	2417
4	12	,,	—	3,952,000	5,714	32·0	31·0	15·0	20·0	1·0	1143
5	30	,,	—	5,520,000	9,558	70·0	10·0	5·0	15·0	0·0	1434
6	22	,,	—	4,400,000	4,986	49·0	31·66	7·33	11·66	0·33	578
7	10	,,	Admitted for a tubercular ulcer.	—	9,973	35·25	25·5	8·25	30·25	0·75	3017
8	45	Intestine.	—	3,424,000	6,233	57·0	15·5	7·5	20·0	0·0	1264
9	15	,,	—	3,376,000	6,100	40·5	30·0	14·5	15·0	0·0	915
10	16	,,	—	3,816,000	10,389	35·6	20·4	7·6	36·4	0·0	3782
11	15	Bladder and intestine.	—	—	—	41·25	24·25	9·5	25·0	0·0	—
12	10	,, ,,	No diarrhœa.	6,240,000	13,298	52·0	18·5	6·0	23·5	0·0	3125
13	12	,, ,,	,,	—	14,450	40·75	16·25	4·5	38·5	0·0	5563
14	25	,, ,,	,,	2,824,000	9,973	23·0	17·33	8·66	51·0	0·0	5086
15	25	Bladder and pubes.	—	—	8,311	47·5	15·0	14·75	22·25	0·50	1849
Averages... ...	19·6	—	—	4,112,000	9,476	45·3	21·4	9·5	23·7	0·1	2246
Special—Case A	15	Penis and perineum.	Excised May 18th. May 12th.	—	7,480	61·0	12·5	4·5	20·25	1·75	1515
			,, 25th.	3,700,000	7,890	73·25	11·25	7·75	6·5	1·25	512
Case B	15	Intestine.	On admission. Hæmoglobin 20%	2,296,000	7,895	78·33	13·0	3·66	5·0	—	395
			On discharge. Hæmoglobin 60%	3,728,000	7,064	51·5	18·0	6·0	24·5	—	1730
			Dates of examination—								
Case C	25	Bladder and intestine.	Jan. 14th.	3,328,000	5,817	42·33	27·0	16·0	14·6	—	849
			Feb. 4th.	4,000,000	6,649	43·0	20·66	13·0	23·33	—	1549
			,, 25th.	4,512,000	6,649	34·0	25·66	9·66	31·0	—	2061
			Mar. 22nd.	5,152,000	10,805	28·66	12·0	2·33	57·0	—	6156
2. Septic cases—			Complication.								
1	45	Perineum and bladder.	Fistulæ. Died.	—	12,061	63·75	17·5	13·0	5·75	0·0	693
2	15	Perineum and penis.	Fistulæ.	3,500,000	7,480	61·0	12·5	4·5	20·25	1·75	1515
3	45	Peri-anal.	Fistula.	—	7,895	62·5	18·25	5·0	14·0	0·25	1106
4	45	Perineum.	Fistulæ.	4,504,000	10,805	85·0	11·33	3·0	0·66	0·0	71
5	35	Perineum and bladder.	Fistula; pyonephrosis. Died.	2,768,000	41,500	90·0	7·0	2·0	1·0	0·0	415
6	25	Peri-urethral.	Abscess.	—	—	76·33	6·66	17·0	0·0	0·0	0
7	16	Bladder and penis.	Cystitis.	—	7,064	49·25	29·25	12·0	9·0	0·5	636
8	29	Bladder and intestine.	,,	—	7,480	44·25	27·0	5·0	23·75	0·0	1773
9	8	Bladder.	,,	4,326,000	9,142	59·33	20·66	10·66	9·33	0·0	850
10	20	Bladder and intestine.	Cystitis; pyelonephritis. Died.	1,664,000	8,311	71·0	20·66	8·33	0·0	0·0	0
11	30	Intestine.	Diarrhœa.	—	13,713	62·75	25·25	5·5	6·25	0·25	856
12	30	,,	,,	—	12,050	52·75	15·75	23·25	7·75	0·5	930
13	25	,,	Dysentery.	3,024,000	9,973	73·0	14·0	1·0	12·0	0·0	1296
14	30	,,	Diarrhœa.	4,096,000	6,233	49·6	25·6	12·0	12·8	0·0	797
15	22	Intestine and bladder.	,,	4,688,000	4,987	51·66	33·33	8·66	6·33	0·0	315
16	40	,, ,,	,,	3,248,000	6,649	80·0	12·0	7·0	0·0	1·0	0
17	35	,, ,,	,,	2,640,000	6,500	63·5	24·0	6·0	6·5	0·0	422
18	29	,, ,,	Dysentery; cystitis; nephritis. Died.	—	25,764	85·0	12·0	2·75	0·25	0·0	64
19	20	,, ,,	Diarrhœa; cystitis.	—	9,142	61·25	16·25	15·75	6·25	0·5	571
20	24	,, ,,	,, ,,	2,736,000	8,726	45·33	17·66	16·0	20·33	0·66	1770
Averages... ...	28·4	—	—	3,354,000	11,340	64·4	18·4	8·9	8·1	0·2	918
3. Combined diseases—1	20	Bladder and intestine.	Ankylostoma.	3,168,000	5,202	49·3	24·3	7·6	17·3	1·3	899
2	25	,, ,,	,,	3,328,000	9,973	52·3	23·3	7·6	16·6	0·0	1655
3	30	Intestine.	,,	4,272,000	7,064	57·6	22·3	11·0	9·0	0·0	635
4	10	,,	,,	1,500,000	5,760	60·6	27·0	12·0	0·3	0·0	19
5	30	,,	Ankylostoma and pellagra.	—*	3,300	64·0	28·0	8·0	0·0	0·0	0
6	25	,,	Ankylostoma; endemic cirrhosis.	1,632,000	6,650	70·3	17·0	7·3	5·3	0·0	352
7	15	Bladder.	Endemic cirrhosis.	3,096,000	5,403	45·0	35·0	7·0	13·0	0·0	702
8	33	Bladder and intestine.	,, ,,	—*	8,500	60·0	20·0	14·0	6·0	0·0	510
9	30	Bladder.	Cirrhosis with ascites.	3,200,000	6,649	57·3	22·0	9·0	11·0	0·6	731
10	50	,,	Bronchitis	3,824,000	13,713	76·0	14·0	4·0	6·0	0·0	823
Averages... ...	26·8	—	—	3,066,666	7,221	59·2	23·3	8·7	8·4	0·2	606

* Both very anæmic. No. 8 on admission had only 16 per cent. hæmoglobin.

most cases. Even when the red corpuscles show no reduction in numbers there is a loss of hæmoglobin (Kautsky).

4. Profound anæmia may be caused by excessive loss of blood, prolonged suppuration, and especially chronic diarrhœa.

5. Bilharziasis is the commonest worm infection in Egypt and is responsible for most cases of moderate anæmia in children.

6. Ankylostomiasis incapacitates a larger proportion of the population than does bilharziasis.

7. Ankylostomiasis is a much more frequent cause of severe anæmia than is bilharziasis. The term "Egyptian chlorosis," if used at all, should not be applied to the secondary anæmia produced by bilharziasis.

8. The combination of both infections or the association with other diseases, such as cirrhosis, tends to aggravate the anæmia.

In conclusion, I wish to thank my colleagues at Kasr el Ainy Hospital for details supplied and permission to examine patients under their care.

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THE

COMPARATIVE VALUE OF THE VARIOUS METHODS OF ANTISYPHILITIC TREATMENT AS ESTIMATED BY THE WASSERMANN REACTION.

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IN THE LANCET of May 7th, 1910, I published, in conjunction with Mr. Charles Gibbs, a preliminary note on this subject and recorded the results obtained in 231 cases in which a qualitative Wassermann reaction was used, and 93 cases in which the test was made roughly quantitative by the use of two amounts of complement. Since that date I have made 270 additional quantitative estimations of the Wassermann reaction in 100 cases. The advent of salvarsan has delayed the publication of this completed note as I thought it best to wait till I had had nine months' experience of the new remedy.

The technique used in the estimation of the Wassermann reaction has been the original one, with the exception that for antigen rabbit heart extract has been used instead of extract of syphilitic organs. I have made numerous parallel experiments with rabbit heart extract and the extract of syphilitic organs prepared by Professor Wassermann and sent out from his own laboratories, and have obtained quite as, if not more, satisfactory results with the rabbit heart extract as with the syphilitic organs extract.

I am still of the opinion that the original technique (with the above modification) is far preferable to the numerous simplified methods (Stern, Fleming, &c.) in which constants are replaced by variants.

My further experience confirms our original conclusions that inunction and intramuscular injection are by far the most rapid methods of producing a negative Wassermann reaction by mercurial treatment.

Salvarsan usually produces a negative reaction more quickly than mercury, but apparently the percentage of negative results after one or two intravenous injections of the doses employed (0·4 grm.) is lower than that observed after a year's course of efficient mercurial treatment.

The following tables give the results that were obtained with the various treatments as far as the Wassermann reaction is concerned. + signifies complete inhibition of hæmolysis, ± partial inhibition, and − complete hæmolysis. Complete inhibition of hæmolysis with both amounts of complement I call "strongly positive," while "positive" denotes that though there is complete inhibition with the smaller amount of complement there is hæmolysis with the larger amount. If the hæmolysis with the smaller amount of complement is partial only, I record the result as "doubtful." All the cases recorded were "strongly positive" before the treatment was commenced, and therefore "positive," "doubtful," and "negative" all show influence of treatment in a roughly quantitative manner.

TABLE I.—*Pills (122 Tests).*

Wassermann Reaction with Less than Six Months' Treatment in 45 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−

	Strongly positive.	Positive.	Doubtful.	Negative.
Number of cases	41	2	1	1
Percentage of cases	91	4	2	2

Wassermann Reaction with Six to Twelve Months' Treatment in 33 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	20		3					
Percentage of cases	61		9		9		21	

Wassermann Reaction with Treatment for Eighteen Months or Over in 44 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	8		5		10		21	
Percentage of cases	18		11		22		48	

TABLE II.—*Calomel Intramuscular Injections (109 Tests).*

Wassermann Reaction after One Course of 12 Injections in 54 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	27		13		5		9	
Percentage of cases	50		24		9		16	

Wassermann Reaction after Two Courses in 35 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	11		7		4		13	
Percentage of cases	31		20		11		37	

Wassermann Reaction after Three Courses in 20 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	2		2		0		16	
Percentage of cases	10		10		0		80	

TABLE III.—*Salvarsan (73 Tests).—Injections of Salvarsan.*

Wassermann Reaction Four Weeks after One Intravenous Injection in 21 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	3		5		2		11	
Percentage of cases	14		24		10		52	

Wassermann Reaction Four to Eight Weeks after Two Intravenous Injections in 20 Cases.

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	1		1		4		14	
Percentage of cases	5		5		20		70	

Wassermann Reaction Four to Eight Weeks after Intramuscular Injection of Salvarsan in 12 Cases

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	5		1		1		5*	
Percentage of cases	42		8		8		42	

* Two of these relapsed to positive or doubtful.

RELAPSES.—*Wassermann Reaction Six to Nine Months after Two or More Intravenous Injections of Salvarsan in 20 Cases that had become Negative as the Result of such Treatment.*

Complement	5%	15%	5%	15%	5%	15%	5%	15%
Wassermann reaction	+	+	+	−	±	−	−	−
Number of cases	2		2		2		14	
Percentage of cases	10		10		10		70	

¶ Very frequently cases are met with that begin at "strongly positive," pass through the "positive" and "doubtful" stages and end at "negative." Of the total 53 cases treated with salvarsan and examined four weeks and over after treatment 30 (57 per cent.) became negative, while of 50 cases examined under four weeks only 9 (18 per cent.) were negative.

The results obtained, which give 42 per cent. negative after intramuscular injections, 52 per cent. after one intravenous injection, and 70 per cent. after two intravenous injections, seem to indicate that the intravenous route is the best, and that at least two injections should be given.

The dose given in the great majority of intravenous cases was 0·4 grm., and now that we know that usually larger doses can safely be given, we may hope to obtain a higher percentage of negative results and a lower percentage of relapses.

It will be seen from Table III. that 70 per cent. of cases treated with salvarsan became negative in from four to eight weeks after the second intravenous injection, and that 70 per cent. of these negatives remained negative six to nine months afterwards. Just about 50 per cent., therefore, of cases that before treatment were strongly positive became negative, and still remained so when examined six to nine months after treatment. Of course, a negative reaction persisting for six or nine months does not necessarily mean permanent cure, but it is at least extremely encouraging that there is no pathological evidence of relapse in half the cases. In some cases salvarsan, even in repeated doses (sometimes as many as six have been given), has no effect whatever on the reaction. I am inclined to think that cases that are going to relapse will show evidence of such relapse by the Wassermann reaction in under six months in the great majority of instances. On comparing Tables I., II., and III. it will be seen that only 48 per cent. of cases treated with pills become negative after 18 months' treatment, whereas 80 per cent. become negative after three courses (one year's treatment) of intramuscular injection. How many of these, however, would remain negative six months later if all treatment were discontinued it is impossible for me to say, as I have not had opportunities for such investigation. At the London Lock Hospitals we have considerable difficulty in getting patients to return for blood examinations after they have severed their connexion with the hospital.

I have had but little opportunity of investigating the effect on the reaction of treatment by inunction or suppositories, but the short series examined have been recorded in Tables IV.

TABLE IV.—*Suppositories (33 Cases).*

Treatment for Six Months and Under.

Complement	5%	15%	...	5%	15%	...	5%	15%	...	5%	15%
Wassermann reaction	+	+	...	+	−	...	±	−	...	−	−
Number of cases ...	20		...	6		...	4		...	3	
Percentage of cases ...	61		...	18		...	12		...	9	

TABLE V.—*Inunction (26 Cases).*

Treatment of Two to Three Months.

Complement	5%	15%	...	5%	15%	...	5%	15%	...	5%	15%
Wassermann reaction	+	+	...	+	−	...	±	−	...	−	−
Number of cases ...	3		...	10		...	3		...	10	
Percentage of cases ...	11½		...	38½		...	11½		...	38½	

and V. It would appear that suppositories are but little if at all superior to pills and that inunction is a very efficacious method of mercurial administration. I regret that I am not able to record and compare parallel tables of results following treatment by inunction and intramuscular injections.

If rapidity of change of reaction be taken as a test of efficiency of treatment I should place salvarsan first, inunction or intramuscular injection of insoluble mercurial compounds second, and mercurial pills and suppositories a bad third. I consider that the results obtained suggest the advisability of combined salvarsan and mercurial treatment.

The majority of the cases were female patients at the Lock Hospital under the care of Mr. Arthur Shillitoe and Mr. Charles Gibbs. The work has been carried out at St. George's Hospital by the kind permission of Dr. Charles Slater, director of the clinical laboratories.

Upper Berkeley-street, W.

ROYAL SOCIETY OF ARTS.—The Royal Society of Arts begins its 158th session on Wednesday next, Nov. 15th, with an address from Lord Sanderson, G.C.B., the chairman of the council. Five meetings are announced before Christmas, at which papers will be read on the Industrial Progress of America, by Professor James Douglas, LL.D.; on the Efficiency of the Aeroplane, by Mr. A. E. Berriman; on British Guiana, by Mr. J. A. J. de Villiers; on London Transport, by Mr. W. Yorath Lewis; and on Bengal Fisheries, by Dr. J. Travers Jenkins. Four Cantor lectures on "The Carbonisation of Coal" will be delivered by Professor Vivian Lewes, and two juvenile lectures on "Soap Bubbles" will be given in January by Mr. C. V. Boys, F.R.S. A long list of papers for the meetings to be held after Christmas is also published.

REMARKS ON THE MODERN METHODS OF DIAGNOSIS

AS ILLUSTRATED BY A CASE OF TUMOUR OF THE LUNG.

BY NORMAN DALTON, M.D. LOND., F.R.C.P. LOND.,
PHYSICIAN TO KING'S COLLEGE HOSPITAL.

THE patient, a man aged 51, was sent into King's College Hospital by Mr. T. A. Clarke of Wandsworth Common on April 7th, 1911, and placed under my care.

The family and past history were unimportant. On Jan. 9th, 1911, the patient felt a stabbing pain just below the right nipple. In the light of subsequent events it is probable that this pain occurred when the growth in the lung first reached the pleura. It was not made worse by coughing or deep breathing. He coughed a good deal and brought up ordinary phlegm. On the 10th he went to Mr. Clarke's surgery, who found pleurisy on the right side, but no signs of fluid. The patient attended at the surgery nearly every other day until Feb. 12th, when he felt better and went back to work, but in five days he was obliged to give up work on account of the pain below the right nipple. Since January he had steadily lost flesh and strength. On Feb. 17th he was seen at home, and frictions were found round the right nipple. He was under observation during the rest of February and March. During this time the temperature showed slight remittent fever, not exceeding 100° F.; the loss of flesh and strength continued, and the friction was still heard, but his chief complaint was a feeling of indigestion, probably caused by growths in the mediastinum. Towards the end of March the temperature became higher, often reaching 102°; he had night sweats, and the sputum contained plugs of pus with some blood. No tubercle bacilli were found. There was also now some dyspnœa, and crepitations were heard at the right base behind, and round the right nipple.

On admission the man looked very anxious, was hectic and breathed very rapidly. The pulse was 120, the breathing 28, and the temperature 102·4°; and I may say here that during the eight weeks in which he was in the hospital the pulse varied from 140 to 112, and the breathing from 40 to 28, while the temperature was remittent and varied from 103·8° to 99°, reaching the normal on only a few mornings. During the last week of his life the rises were less, but the temperature was never subnormal for 24 hours. There were no rigors at any time.

To return to the physical examination of the patient, we found that the apex beat of the heart was displaced to the left, being half an inch outside the left nipple, but it was not higher than normal, as is often the case in subphrenic abscess. The heart was otherwise normal, as was also the left lung. On the right side there was dulness from the upper limit of normal liver dulness to the right nipple, extending laterally from the sternum to about one inch outside the nipple. Over this area the breath sounds, vocal resonance, and vocal fremitus were lost. Around this area in front, in the lower axilla, and all over the right base there were slight crepitations, but no definite dulness nor any other abnormality. The upper part of the right lung was quite normal.

There was a fair amount of sputum, the character of which never changed. It was very thick, though not so tenacious as that of croupous pneumonia. It was uniform in consistence and colour, the latter being a reddish opaque brown, not at all translucent or currant-jelly-like. It was rather like the contents of a tropical abscess of the liver, so much so, that my house physician, Mr. T. H. Whittington, had it examined for amœbæ, but with a negative result. It was not to the naked eye like a mixture of pus and blood, but microscopically it contained red corpuscles and what looked like white blood corpuscles intimately mixed, and streptococci. The round white cells were very necrotic, and one of the most remarkable things about the tumour when examined after death was the rapid necrosis of the sarcomatous cells (see further on). There was nothing abnormal about the abdomen. The urine was normal.

The physical signs and high remittent fever suggested an empyema, and this idea was strengthened by finding a leucocytosis of 38·800 per c.mm., and a well-marked relative

increase of polynuclear corpuscles. The presence of blood in the sputum suggested an infarction as the cause of the empyema, more especially as the illness began with a sudden stabbing pain, but there was nothing in the rest of the body which might be the source of an embolus. The empyema might have followed a small aspiration pneumonia or possibly a subphrenic abscess. The position of the dulness was rather in favour of the last hypothesis. A needle was inserted about 1 in. below the right nipple, but no pus was found. Shortly after this the patient was X rayed. A shadow was seen corresponding to the area of dulness which we had found, so we did not get much help with respect to the nature of the dulness, but, on the other hand, it was seen that the diaphragm was moving freely on the right side, which made subphrenic abscess unlikely.

At this point we would have been content with a diagnosis of tumour of the lung but for the high fever and the high leucocyte count. In the early morning of April 24th the patient had a great increase of the pain about the lower part of the sternum and became rather collapsed, the temperature falling to 98°. During the day he passed six loose stools (he had had no diarrhœa before), the last five of which contained pus and blood. This revived the idea that an abscess was present in some position from which it could burst into the bowel. There was, however, no change in the physical signs nor in the condition of the patient. He soon rallied from the shock, no change in the physical signs followed, and in two days' time the patient was neither better nor appreciably worse than he had been before the pus appeared in the stools.

I was thus led to think that the blood and pus were not due to the rupture of an abscess into the bowel, but to a terminal colitis with ulceration of some solitary glands. At my request, therefore, Dr. P. B. Ridge tried the agglutination reaction of the patient's blood with Flexner's and Shiga's bacilli. No agglutination of the former occurred, but the serum in dilutions of 1 in 10 and 1 in 30 agglutinated Shiga's bacilli, though slowly. This, Dr. Ridge informed me, was a definite though weak reaction. The agglutination of Shiga's bacilli by blood serum is not a reliable sign of ulcerative colitis or dysentery, for it may occur in cases of multiple papillomata of the colon which end in cancer. It presumably means that Shiga's bacilli are infecting the blood, probably through some disease of the colon, but it does not indicate what the lesion in the colon is.

In this connexion I would like to mention the case of a child, now under my care, who is recovering from an attack of prolonged remittent fever. The temperature chart did not resemble that of enteric fever, nor were any symptoms of that disease present, but the child's blood agglutinated both typhoid bacilli and the bacilli of Shiga. If this child really had enteric fever, I would explain the agglutination of Shiga's bacilli by suggesting that it was one of those rare cases of typhoid in which follicular ulcerations occur in the colon, such a lesion being, in my opinion, sufficient to cause the blood to agglutinate Shiga's bacilli.

But to return to the case of tumour of the lung. The pus and blood soon disappeared from the stools, so that if a colitis had occurred it was certainly not a terminal one. By May 15th the dulness, loss of breath sounds, &c., had extended to about an inch above the right nipple, and an X ray examination showed a shadow corresponding to the dull area, and it could now be seen that the right side of the diaphragm no longer moved with respiration. The last point of interest in the case is that about a week before his death on June 1st a subcutaneous tumour of about the size of a white bean was found below the right nipple, exactly at the spot where the puncture had been made when the dull area was explored on the patient's admission to the hospital. It was freely moveable under the skin and over the chest wall, so that it was not in continuity with the tumour inside the chest.

Necropsy.—At the post-mortem examination a large tumour was found in the front part of the lower lobe of the right lung. It pushed down the liver in front and it touched the chest wall over the area which was found to be dull during life. The subcutaneous tumour mentioned above was proved to be not in continuity with the main tumour in the lung. There were some growths in the mediastinum. The tumour seemed to have been originally white and very soft, but everywhere, even in the small subcutaneous nodule, which was probably not more than a fortnight old, it had broken down to the diffluent reddish-brown material which had constituted the sputum. There were no secondary deposits in other viscera.

Microscopically the growth was found to be a round-celled sarcoma, but the degeneration made microscopy difficult. We had some idea at the post-mortem examination that the primary growth may have been in the thymus, as in the position of that organ there was a diffluent mass of growth even more degenerated than the others, and, therefore, probably of greater age. But, under the microscope, no evidence in support of this view could be obtained, and in the few cases of mediastinal growth which I have seen and have believed to have originated in the thymus, the tumours have not been specially hæmorrhagic nor prone to degeneration.

The "lung" around the tumour was intensely inflamed, the air vesicles being filled, some with leucocytes and a few epithelioid cells, and some with fibrin, as in a croupous pneumonia. A careful examination of the whole alimentary canal and its surroundings was made, but no trace of a perforation or an ulcer could be found, nor any sign that an abscess in contact with the alimentary canal had existed.

Remarks.—The points of interest in this case are, first, the apparent acute onset and the rapid growth of the tumour; secondly, the high leucocyte count and the high fever which made the case appear one of abscess. A leucocytosis of 38,800 per c.mm. is most rare in a case of tumour. I think that it may be explained by the intense pneumonia which we found after death, and it will be remembered that streptococci were found in the sputum. In fact, the patient *did* have septicæmia as well as a rapidly growing and a rapidly degenerating tumour. Still, the leucocytosis was a source of error, and I have no doubt that had the swelling been an abdominal one and exploratory puncture impracticable the patient would have been put to the mental distress of a useless exploratory incision. On the whole, the X ray department was, in this case, more useful to us than the laboratory.

Thirdly, the growth of the subcutaneous nodule, at the site of the exploratory puncture and separated from the main tumour, is interesting. I have known it occur in cancer of the peritoneum with ascites, at the point of paracentesis, but I have not seen it before in sarcoma. However, as secondary subcutaneous nodules may occur on the side of the chest wall in cases of sarcoma of the lung in which no puncture has been made, the position of the tumour at the point of puncture may have been accidental.

Lastly, the sudden appearance of blood and pus in the stools on April 24th, with symptoms suggestive of perforation into the bowel, is of interest, as it again raised the question of abscess for a few days. The post-mortem examination did not reveal the source of this pus, but as the discharge occurred five weeks before death it is quite possible that follicular ulcers may have been present in the colon, and that they may have healed rapidly in spite of the dying condition of the patient; and, seeing the agglutination reaction of the blood with Shiga's bacilli, I believe that this is what actually occurred.

Mansfield-street, W.

ROYAL INSTITUTION.—The eighty-sixth Christmas course of juvenile lectures, founded at the Royal Institution in 1826 by Michael Faraday, will be delivered this year by Dr. P. Chalmers Mitchell, D.Sc., LL D., F.R.S., secretary of the Zoological Society, his subject being "The Childhood of Animals." The lectures will be delivered on the following dates at 3 o'clock: Dec. 28th and 30th, 1911; and Jan. 2nd, 4th, 6th, and 9th, 1912.

SERVICE FOR MEDICAL MEN AT TORQUAY.—The second annual service for medical men and nurses was held at St Luke's Church, Torquay, on Oct. 22nd. There was a good attendance, and an eloquent sermon was preached by Prebendary B. R. Airy. Mr. Airy, in alluding to the work of members of the medical profession, spoke of the advantages of working hand in hand with the parish priest. He stated that from the earliest time the physician had been held in honour, and "to-day no one was more honoured, loved, trusted, and welcomed in every home in England." The collection at the service was given to the funds of the Torbay Hospital.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF ANÆSTHETICS.

Deaths under Anæsthesia.—Acute Post-Anæsthetic Bronchitis and (?) Pleurisy.—Persistent Vomiting during Induction of Anæsthesia for Extraction of Teeth.—Oral Airway in Anæsthesia.

A MEETING of this section was held on Nov. 3rd, Dr. W. J. MCCARDIE, the President, being in the chair.

Reports of three deaths under anæsthesia.—(*a*) Fat, flabby, very nervous woman, aged 50, died from respiratory failure during the induction for a proposed abdominal operation for uterine fibroids. Total quantity of anæsthetic used about 1 drachm of ether during the first few minutes and 30 minims of chloroform. Cessation of respiration occurred about seven and a half minutes after commencement of administration, and no spontaneous respiration occurred in spite of all usual remedies and artificial respiration for three hours. During life the patient complained of dyspnœa and palpitation on exertion. Post-mortem: Abdomen distended with uterine fibroids, omentum, and an enlarged and fatty liver. Heart infiltrated with fat, lungs emphysematous and markedly fibrosed. At no time during the administration or at death was there any pallor, dilatation of pupils, rigidity or spasm, or accumulation of mucus in the airway. (*b*) Pale, thin, markedly anæmic woman, aged 49, died from heart failure during induction for a proposed abdominal operation for uterine fibroids. Total quantity of anæsthetic 2 drachms of chloroform and a little ether towards the end of induction. Respiration normal till five minutes from commencement of administration, when seven or eight sighing breaths were taken, when there were wide dilatation of pupils and disappearance of pulse. Post mortem: Old pyonephrosis of kidney, collapse of base of left lung. Heart flabby and thin, but nothing definite. No excess of lymphoid tissue. (*c*) Well-nourished, well-developed girl, aged 15½. Total anæsthetic 4 drachms of A.C.E. administered in a single dose in a celluloid inhaler. Operation for tonsils and adenoids successfully completed and throat sponged out. A little later the patient coughed strongly, breathing ceased, colour became bad, no pulse palpable at wrist. Artificial respiration started and patient made two or three spontaneous attempts at breathing. Pupils were dilated. Post mortem: Marked signs of status lymphaticus.—Several members took part in the subsequent discussion, mainly directing their remarks to the various methods of artificial respiration—Schafer's method and possibly the perflation of the lungs with oxygen being considered the best.

Dr. J. F. W SILK reported a case of Acute Post-anæsthetic Bronchitis and (?) Pleurisy in a man, aged 34, to whom he had administered about 15 ounces of ether by the open method during an operation for radical cure of double inguinal hernia lasting—owing to adhesions, &c.—1¾ hours. No preliminary injection of atropine or other drug was given. The patient ultimately recovered. Dr. Silk was of the opinion that the case was rather one of pulmonary collapse. He reported the case in support of the view that the open method might give rise to troubles practically identical with those which arise with the closed methods.—In the subsequent discussion the frequency of trouble after operations for hernia and abdominal cases was noted and the prior use of atropine insisted on.

Mr. R COLLUM reported a case of Persistent Vomiting in a girl during the Induction of Anæsthesia for the Extraction of Teeth. On the first occasion the patient had had breakfast, and gas and oxygen and subsequently gas alone were tried. The next day the patient had no breakfast, and gas alone and two subsequent doses of ethyl chloride were tried. On the third day ethyl chloride was employed and the last of the teeth extracted. On every occasion and with each drug vomiting occurred.—In the subsequent discussion increasing the pressure of the gas in the bag, previous gargling with dilute carbolic acid, or a small dose of cocaine by the mouth were all suggested as means of preventing retching.

Mr. BELLAMY GARDNER then read a short communication insisting on the routine use in every administration of an anæsthetic of establishing an oral airway by means of a mouth-prop and tongue-clip. He dwelt on the insufficiency of nasal breathing in cases of anæsthesia and suggested that the words "asphyxial death space" be employed in teaching students in order to impress them with the necessity of maintaining a free airway in an unconscious patient.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.—Night Blindness.

A MEETING of this section was held on Oct. 27th, Dr. G. A. SUTHERLAND, the President, being in the chair.

The following cases were shown:—

Dr. J. PORTER PARKINSON: A case resembling General Paralysis of the Insane, in a girl, 9 years of age. The evidence of syphilis was in the maternal history and the remains of an iritis from which she had suffered three months previously. It was considered impossible to state definitely whether the case was one of general paralysis of the insane or one of diffuse cerebral syphilis.

Mr. O. L. ADDISON: Two brothers, aged 9 and 6 years, with Genu Valgum and Hyperextension of the Knees. Both cases exhibited the voluntary production of a noise during flexion and extension of the knee-joints.

The PRESIDENT: 1. Infantilism in a girl 16 years of age, who had the intelligence of a child of 6, at which age growth ceased, rickets appeared, and constipation became very marked. The abdomen was distended, and at times peristaltic waves were visible over the colon; the bowels never acted without aperients or enemata. 2. Extreme Rickets and Infantilism.

Dr. F. LANGMEAD: (1) Sclerodermia with Myositis Fibrosa, previously shown 12 months ago; and (2) Sclerema.

Mr. P. MAYNARD HEATH: 1. Intra-uterine Fracture of the Tibia with much Rarefaction of the Bone around the Site of Fracture. 2. Gigantism of the Forepart of the Foot in a girl six years of age. The deformity was noticed at birth, and at the age of three months an enlarged toe was amputated; since then the forepart of the foot had grown more than the rest of the body, and between the first and third toes there was a very pronounced swelling.

Mr. A. H. PAYAN DAWNAY: Double Third Nerve Palsy due to Acute Poliomyelitis.

Dr. T. R WHIPHAM: Recurrent Unilateral Œdema in a boy 14 years of age.

The following pathological specimens were shown:—

Dr. J. D. ROLLESTON: Diphtheria of the Fauces and the Lower End of the Œsophagus.

Dr. R. SALUSBURY TREVOR: (1) Aneurysm of the Right Coronary Artery, situated in the wall of the right ventricle and opening into the cavity of the right ventricle, associated with non-valvular infective endocarditis; and (2) Congenital Morbus Cordis (Cor Biatriatum Triloculare).

Mr. SYDNEY STEPHENSON read a paper on cases of Night-blindness with Peculiar Conjunctival Changes in Children. The communication dealt with a curious class of case not uncommon during the summer months in institutional children, where white frothy patches on the ocular conjunctiva were or were not associated with symptoms of night-blindness. He had found that in either circumstance the field of vision manifested slight changes, the light minimum was diminished, the fundus oculi showed changes, and lastly, the colour index of the blood was lower than normal. Mr. Stephenson believed the immediate cause of both affections was the dazzling of sunlight, and their remote cause some slight defect of nutrition, as evidenced by the changes he had found in the blood.

BALNEOLOGICAL AND CLIMATOLOGICAL SECTION.

Presidential Address.

A MEETING of this section was held on Oct. 27th, Mr. GEORGE H. THOMPSON (Buxton), the President, being in the chair.

After referring to his election as President in a few graceful phrases Mr. THOMPSON delivered his introductory address entitled "Baths and Climate in Relation to Spa Treatment; Some Reflections and Suggestions." He briefly sketched the development of modern spas, and pointed out that it was the first duty of health resorts to study the

peculiar properties of their natural mineral waters and their applicability in the treatment of particular diseases, and subsequently to provide accessory methods of treatment which were often essential to success. He pointed out that the recent discovery of radium had opened up a new field of research in connexion with the physiological action of mineral waters, and the investigations of Professor His gave promise of a real scientific basis being established to explain their activity. He was of opinion that spa authorities in the future would be compelled to provide equipment for treatment by radium emanations, and should be prepared to meet the outside competition of commercial institutes. In conclusion, he referred to the valuable help which had been given to balneology in this country by the Section and by the municipal authorities of the various health resorts, and contrasted this with the State aid provided in France and Germany for the development and maintenance of national spas.

After his address the PRESIDENT invited Dr. MONOD of Vichy to explain to the members of the Section the purport of his mission to this country. Dr. Monod said that he had been sent by the French Government to study the health resorts of Great Britain and to report thereon. He averred that Dr. Neville Wood's paper, "British Health Resorts for Foreign Invalids," which was read before the Section during the past session, had evoked great interest on the continent and was in large measure responsible for the action of his Government. He had been much impressed by the completeness of the therapeutic equipment of the different spas he had already visited, and he thought that many of his countrymen, for whom an entire change of surroundings would prove of the greatest advantage, would find in England resources not available at home. In conclusion, he pleaded that the whole question of spa treatment should be placed on an international basis.

LIVERPOOL MEDICAL INSTITUTION.

President's Address.

THE inaugural meeting of the session of this society was held on Oct. 12th, when an address was given by Dr. T. R. BRADSHAW, the President, on the Prognosis in Valvular Disease of the Heart. He analysed the results of a large number of cases and gave tables showing the number of years during which after the onset of the endocarditis the patients had remained free from any symptoms of heart disease.

Abscess of the Brain.—Wassermann Test for Syphilis.

A second meeting of the session was held on Oct. 26th, the PRESIDENT being in the chair.

Dr. A. NIMMO WALKER read a note on a case of Abscess of the Left Frontal Lobe of the Brain following empyema of the frontal sinus. The diagnosis had been difficult, as the only signs in favour of cerebral abscess had been drowsiness and a pulse of 50 to 60, whilst against abscess there had been rapid cerebration, temperature above normal, absence of vomiting and of optic neuritis, and presence of marked pulsation of the dura mater, but the abscess contained about half an ounce of pus. The patient, who was shown at the meeting, had made a good recovery and apparently had not suffered any mental damage. Dr. Walker asked for opinions on the relative values of the signs of cerebral abscess.—Dr. J. E. MCDOUGALL considered that a plastic operation would not be successful until adequate drainage had been established into the nose so as to bring about the closure of the small opening on the surface which was now present. On the question of the diagnosis of pus retained in the frontal sinus Dr. McDougall laid stress on the tenderness to pressure when applied to the floor of the sinus and the pain so much more marked at night. Skiagraphy, if available, was also useful both in the diagnosis of suppuration and in demonstrating the limits of the sinus.—Mr. E. MALCOLM STOCKDALE remarked that the diagnosis was greatly simplified by the presence of a local lesion (empyema of the frontal sinus), as it also was in certain brain abscesses arising in connexion with suppurative disease of the middle ear, where a definite tract of infection could be traced. Chronic suppurative disease of the frontal sinuses, although it might give rise to serious and fatal complications, was, owing to the absence of all symptoms with the exception of some nasal discharge which might cause no inconvenience, commonly overlooked unless an acute attack supervened. Mr. Stockdale suggested the obliteration of the frontal sinus as the proper treatment since active disease was still present.—Dr. W. B. WARRINGTON said that the inferences from the state of the dura might be misleading; pulsation was not apparent in cases in which exploration failed to reveal any cause of increase of pressure. Dr. Walker had followed the best method of treatment and diagnosis because he had not been content until each new symptom had received an adequate explanation.

Mr. R. C. DUN showed a patient, aged 11, with Cervical Ribs, demonstrated by radiography. No symptoms referable to the ribs were complained of.

Dr. FREDERICK P. WILSON read a paper on the Wassermann Test for Syphilis. He gave a brief account of the principles on which the test was based, and mentioned some reasons for discordant results. He drew attention to the unstable nature of the materials used in the test and the consequent necessity for their frequent restandardisation. He considered that all apparatus hitherto issued for use in the consulting-room was most unreliable. For the proper performance of the test a well-equipped laboratory was still essential. The diagnostic value of the test in the various stages of syphilis was next discussed and the influence of the treatment on the strength of the reaction pointed out. In parasyphilitic diseases there was no parallelism between the Wassermann test of the cerebro-spinal fluid and the globin reaction or lymphocytosis. The Wassermann reaction of the cerebro-spinal fluid was negative unless the syphilis had attacked the nervous system. The effect on the test was reviewed and the opinion expressed that salvarsan affected the test more rapidly than mercury, but that several injections might be necessary. It was not yet possible to say that a patient with no symptoms other than a persistent Wassermann reaction after thorough treatment was not cured, but the evidence was strongly in favour of such a conclusion. The test was not absolutely specific, but must rather be regarded as an adjuvant to the clinical examination.—Dr. R. W. MACKENNA said that he had found Wassermann's own method the best. He had obtained the reaction at the end of the third week in the primary stage. In the secondary stage a large number of the cases gave the reaction. In the third stage he had found that those cases which showed evidence of multiple lesions and which gave a history of irregular or infrequent treatment and frequent recrudescences almost always gave a strongly positive reaction. He had examined four cases of parasyphilis, and in each case had found a positive reaction. In a case of congenital syphilis in which no symptom of the disease manifested itself until the patient was over 25 years of age he had found a strongly positive reaction. There was no doubt that salvarsan was the most potent remedy for converting a positive into a negative reaction. After a preliminary course of mercury the conversion of a positive into a negative reaction followed more certainly. Where the patient received two injections of salvarsan separated by a vigorous course of mercury the reaction usually became negative after three or four weeks.—Dr. FRANK H. BARENDT considered that in doubtful cases the view of the clinician should prevail.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

President's Address.—Exhibition of Cases—Tabes with Severe Gastric Crises treated by Resection of Nerve Roots.

THE first meeting of the ninety-first session was held on Nov. 1st, Dr. BYROM BRAMWELL, the retiring President, being in the chair.

Dr. NORMAN WALKER showed a man who was the subject of an Antipyrin Rash. The eruption consisted of round, dark red, slightly elevated spots, chiefly on the hips, though isolated spots occurred on other parts of the body. The patient complained much of the fiery pricking itching sensation which was present in the spots and which had lasted for five years. Dr. Walker thought at first that it might be an early stage of mycosis fungoides. On closer inquiry, however, it was found that the man was a sufferer from migraine and had taken for many years migrainine in order to relieve

the headache. Migrainine consisted of 90 per cent. antipyrin with 10 per cent. caffeine. The eruption closely resembled that figured by Jacobi in his atlas as due to antipyrin.

Sir THOMAS R. FRASER showed a case of Syringomyelia with Unilateral Hyperidrosis. The case was that of a man, aged 22, unmarried, admitted to the Royal Infirmary on July 15th, 1911, with symptoms of spastic paraplegia, affecting especially the left leg. This condition had commenced about Christmas, 1910. The symptoms were clearly present on his admission to Ward 26 and persisted for several weeks thereafter. They subsequently, however, gradually abated and were at present very slight, though perhaps rather aggravated on this occasion through excitement. When he was first examined it was also found that his sensibility was definitely modified. The sensibilities to weight, touch, and locality were sharp and healthy, but over a large skin area thermal and pain sensibility were either entirely absent or defective, the lines of demarcation between normal and defective sensibility being fairly distinct. The localisation was almost symmetrical. Among the parts not involved were the head and neck. It had been observed that excessive sweating frequently occurred on the right half of the scalp, face, and neck, while the left half appeared quite dry. This unilateral hyperidrosis had existed for many years. It was readily induced by mental excitement, and pilocarpine caused sweating over those parts many minutes before it appeared on the corresponding parts on the left side of the head or elsewhere in the body.

Mr. H. ALEXIS THOMSON showed: 1. A case of Short Circuiting for Chronic Tropical Dysentery after failure to cure by appendicostomy. The patient was a man, aged 30, who had suffered from malaria and dengue in Singapore and the first attack of dysentery in Shanghai early in 1908. He had improved under change of air, but then relapses occurred. There were sloughs as well as pus in the motions, and he had lost over 2 st. in weight. Appendicostomy was performed on Dec. 29th, 1910, with subsequent slight improvement. Ileosigmoidostomy was performed on May 30th, 1911, and improvement at once set in; in three months he had put on 1½ st. to his weight. 2. A case of Ulcerative Colitis for which appendicostomy was performed 22 months ago. The patient, a man aged 27, had suffered from colitis for four years. He improved with four months' treatment in the medical wards of the Royal Infirmary, but then relapsed. His colitis was of the ulcerative type, with a large amount of blood in the motions. Great benefit was derived from saline irrigations through the appendix, and these still had to be continued, as he was subject to fits of mental depression brought on by his condition.

The PRESIDENT then delivered his Valedictory Address. After returning thanks to the members Dr. Byrom Bramwell gave a summary of the work which had been brought before the society during the two years in which he had held office. He stated that contributions, both as regards patients, exhibits, and papers, had been contributed fairly equally by physicians and surgeons, and he paid a tribute to the general practitioners who had taken a large share in the work of the meetings. He said that the financial statement was entirely satisfactory and that the balance was greater than at the corresponding period of last year. He thought that the society would gain great advantage if the meetings could be held in the Royal Infirmary, as large numbers of interesting cases could then be shown. Dr. Bramwell noted that the death-roll had been particularly heavy during his term of office; one honorary member, Dr. Hughlings Jackson, had been removed by death. He was the greatest of neurologists during his life and was the first who had demonstrated clinically and pathologically the motor areas of the brain. One corresponding member, Dr. Pavy, had also just recently died. Of the ordinary members, 14 had been removed: Dr. George Skene Keith, who was born in 1819 and lived until 1910, had been admitted a member in 1845. He was the last survivor of the party who inhaled chloroform round the table of Sir James Y. Simpson. At one time he had a great practice, but was now better known through his two books, "A Plea for a Simpler Life" and "Fads of an Old Physician." When he was 78 years of age he visited Spitzbergen along with his daughter, and two years later he by himself visited Burma, although the cataract which was operated upon when he was 82 years was already advancing. Dr. John Smith, born in 1825, died in 1910, became a member in 1856, and President in 1887. He was a remarkable man in many ways; he was the foremost surgeon dentist of his time; was one of the originators of the Edinburgh dental school; and one of the founders of the Hospital for Sick Children. It was not, however, as a professional man that he was so much admired as on account of his remarkable and loving personality. He was a skilful musician, song writer, and artist; was the author of three pantomimes, and the secretary and bard of the Æsculapian Club. Dr. Joseph Bell, born in 1837, died on Oct. 4th, 1911, was admitted a member in 1882, and was President in 1891. He did splendid work in connexion with many of the philanthropic institutions of the city, and held for many years the position of assessor to the University Court. For 23 years he was the capable editor of the *Edinburgh Medical Journal*. Dr. Andrew Smart was born in 1824 and died in March, 1911. The same year as he was admitted a member (1865) he discovered the cause of rinderpest, and was the first to demonstrate living organisms in living tissues. Dr. Claude Muirhead, born in 1836, died in 1910, was a distinguished physician who did valuable work in the Royal Infirmary, and was one of the greatest authorities on life assurance. Dr. Peter Maclaren, born in 1837, died in 1911, was admitted a member in 1866. He was an able practitioner and surgeon, and was much beloved on account of his upright honest disposition. All these had lived long beyond the allotted span, and while we lamented their demise their transition was natural. It was otherwise with Dr. Alexander Bruce, who, born in 1854, died when only 57 years of age. He was cut off in the full zenith of his powers. His death was a great loss to the Edinburgh Medical School and to science and medicine generally. He was a distinguished neurologist and much of his best work had been brought before this society. Thoroughness, painstaking accuracy, and great reliability were his chief characteristics. Dr. Byrom Bramwell alluded to the other deceased members in feeling terms.

The newly-elected President, Mr. J. M. COTTERILL, having taken the chair,

Dr. BYROM BRAMWELL (along with Mr. ALEXIS THOMSON) communicated a paper on "A Case of Tabes with severe Gastric Crises of many years' duration, in which Section of the Posterior Nerve-roots had produced Benefit." He said that the very persistent and severe gastric crises were completely relieved by division of these nerve roots. The patient was a man, aged 33 years, who had been under observation for a number of years and who had been shown at a meeting of the society. The man had been perfectly healthy until 1901, when he developed an ordinary Hunterian hard chancre. Ten months later he began to suffer from ataxic pain in the stomach with vomiting. These attacks became increasingly severe until the time of the operation. The presence of gastric crises within ten months of the primary sore and the early age of the patient (24) were very rare occurrences. It was suggested that he had been the subject of hereditary syphilis, but there was no ground for believing this. He possessed no stigmata of hereditary syphilis; his family history was good, both parents were alive, as were three brothers and two sisters, all in the best of health; no deaths had occurred in the family, and his mother had had no miscarriages. The first symptoms of tabes developed within ten months, and one year later his sight became dim, and he became completely blind five years ago. He had severe lightning pains in his legs, his bladder became affected, and the right knee showed Charcot's joint disease. There was comparatively little ataxia before the onset of blindness, but subsequently it became excessively marked. This succession was contrary to the statement of Benedickt that optic atrophy had a retarding influence on tabes. The gastric crises continued to recur at irregular intervals until March, 1911; he was never longer than nine weeks without an attack, however; obstinate sickness lasted for several days—18 on the last occasion—during which he became greatly emaciated and passed little or no urine. He suffered great pain and distress; many remedies were tried without effect and even morphia afforded little relief. Dr. Bramwell asked Mr. Thomson to divide the posterior roots of those nerves corresponding to the gastric area. The operation was performed on March 17th, 1911; the cerebro-spinal fluid escaped as if under pressure, and slight adhesions bound the cord to the

meninges and obscured the view of the posterior roots. The posterior nerve-roots corresponding to the seventh to tenth pairs were resected. The patient gradually recovered, though on account of his low vitality the wound was long in healing. He had absolutely recovered from the gastric crises and the lightning pains in his legs had not recurred; perhaps the operation had a psychical effect in curing the latter. Other cases which had been described had given equally satisfactory results. Dr. Bramwell thought that this was the first case which had been operated upon in Scotland. The general health of the patient had also greatly improved, and he asserted that he walked better.—Dr. GEORGE A. GIBSON, Dr. EDWIN BRAMWELL, Dr. H. M. CHURCH, and Dr. K. M. DOUGLAS took part in the discussion, and Dr. BRAMWELL replied.

The following office-bearers were elected for the session 1911–12:—President: Mr. J. M. Cotterill. Vice-Presidents: Mr. Charles W. Cathcart, Dr. John Playfair, and Dr. Alexander James. Members of Council: Dr. T. J. Thyne, Dr. Edwin Bramwell, Dr. R. J. Johnston, Dr. George Hunter, Dr. James Ritchie (secundus), Dr. Francis D. Boyd, Mr. J. W. Struthers, and Mr. George L. Chiene. Treasurer: Dr. J. W. Dowden. Secretaries: Mr. Alexander Miles and Dr. J. S. Fowler. Editor of Transactions: Dr. D. Chalmers Watson.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 3rd in the society's rooms, West London Hospital, Mr. W. McAdam Eccles, the President, being in the chair.—The following cases were shown: Dr. P. S. Abraham: Case of Bazin's Disease.—Dr. Seymour Taylor: (1) A case of Aortic Aneurysm; and (2) a case of Aortic Regurgitation.—Dr. E. A. Saunders: (1) A case of Diabetes in a child 3 years old; and (2) case of Rheumatic Nodules in a child of 4.—Mr. J. G. Pardoe, with Dr. Saunders: Costo-transversectomy for Tuberculous Abscess of Spine.—Mr. N. Bishop Harman: (1) A case of Bi-temporal Hemianopsia, probably pituitary growth, no acromegaly; (2) case of Right Homonymous Hemianopsia, probably due to a lesion of the occipital lobe; and (3) case of Monocular Ptosis with jaw-winking associated movement.—Dr. Frederick S. Palmer: Case of Cerebral Neoplasm with Jacksonian Epilepsy; trephining and result.—Dr. Palmer, with Mr. E. Laming Evans: A case of Pressure Paraplegia from Pott's Disease; laminectomy, followed by considerable improvement.—Mr. H. Tyrrell Gray: (1) Late Result of Arthrectomy of the Knee-joint for Tubercle; and (2) case of Perforating Injury of the Abdomen.—Dr. Harold Pritchard: Case of Splenic Anæmia.—Mr. R. B. Etherington-Smith: A case of Cirsoid Aneurysm of the Orbit.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Oct. 26th at the Edgar Allen Medico-Mechanical Institute, Dr. Ernest Knight, the President, being in the chair.—The Methods of Mechanical Treatment were demonstrated by Dr. R. G. Abercrombie, medical superintendent. The nature of the cases demonstrated were as follows: 1. Osteo-arthritis. The most favourable cases were those in which the acute phase had passed. The objects were to increase the mobility of the joints, improve the muscular strength, and correct deformities. The range of movement which could be performed without pain was ascertained, and this was gradually increased day by day. The results were improved if the treatment was combined with ionic medication. One case, a man, had been a helpless cripple. After three months' treatment he could dispense with his crutches and walk with a stick. His arms could now be freely raised, and the deformities had been ameliorated. His general health had greatly benefited. 2. Fibrous Ankylosis of the Hips. The range of movements had been much increased. 3. Rigidity of Fingers after Lacerated Wound involving the Tendons. Attention was drawn to the use of Martin's bandage in such cases. The bandage was applied round the wrist and over the fingers so as to flex them forcibly. Passive congestion was caused in the parts not pressed on by the bandage. Pain was not felt while the bandage was in position, but was felt after its removal. 4. A severe case of Neurasthenia in a man aged 52. This patient derived great benefit from regular and properly ordinated exercise. Special attention was paid to improving the respiratory powers and remedying constipation by strengthening the abdominal muscles. Vibrations were useful in alleviating the distressing cranial subjective symptoms. 5. Wrist-drop in a boy, due to fracture of the lower end of the humerus. After one week's treatment extension was much improved; this was brought about by what was known in Sweden as "eccentric movements." 6. Hemiplegia. The tendency to contractures might be to some extent obviated. 7. Limitation of Movement Following Dislocation of the Shoulder-joint. The function of the joints had been almost completely restored. 8. Three cases of Injury to the Back. One was a partial fracture of the spine, another of traumatic lordosis, and the third a case of "wricked back," with severe symptoms but no physical signs. All the cases showed great improvement after treatment, which consisted of mechanical and gymnastic treatment and massage. Attention was drawn to the treatment of hyperæsthesia by light stroking in the direction of the venous flow. Some cases of injury to the back with severe symptoms but no physical signs have proved intractable to mechanical treatment. 9. Limitation of Movement in the Ankle after Fracture. The mobility of the joint was almost fully restored.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Oct. 25th, Dr. F. H. Jacob, the President, being in the chair.—Dr. W. Aldren Turner (London) delivered the inaugural address of the society's session on Recent Views upon Neurasthenia, Hysteria, and Allied Neuroses. He referred in the first place to what had been designated "the partial passing of neurasthenia" during the past decade. The closer study of this malady by the aid of psychiatrical methods had permitted the elimination from it of several pseudo-neurasthenic states. The commonest among these were the recurring attacks of depression in adult life. These were, in the majority of cases, mild forms or "shadowy imitations" of recurrent melancholia (manic-depressive psychosis of Kraepelin). Others were the psycho-neuroses of puberty and adolescent life, some of which were cases of dementia præcox, but the majority were cases of psychasthenia. A further elimination should also be made of the "anxiety neurosis" of Freud as being a condition essentially of an acquired nature, and based solely upon a series of injuries and influences affecting the sexual life. The lecturer then went on to describe the essential features of true neurasthenia or "nervous exhaustion"; the relation to it of the symptoms produced by excessive physical effort, as in running, cycle racing, and mountaineering; and the symptoms and causation of hypochondriasis. He emphasised the necessity of the mind, or "psyche," being affected in true neurasthenia. The second part of the address was devoted to a summary of Freud's views upon the etiology of hysteria, the obsessions and morbid fears, with a description of the method of "psycho-analysis" and its value as a psycho-therapeutic agent. The general view was expressed that in psycho-analysis the physician had received a further aid towards the treatment of cases which had long resisted ordinary therapeutic methods. Many methods were now in the hands of physicians for the cure of hysteria and allied affections. Hypnotic suggestion was no doubt of value in a certain type of case, such as drug habits and sexual perversions; therapeutic conversation as practised by Dubois was also useful in mild and early cases of psycho-neuroses, and psycho-analysis would no doubt in the future prove of value in certain types of cases. As the method, however, was slow and often wearisome, inapplicable below a certain level of intelligence, and liable to place sexual matters in the causation of functional nervous disease upon a pinnacle which further investigation might not entirely endorse, it was unlikely to receive that general adoption which some of its supporters claimed for it.

DONATIONS AND BEQUESTS.—Mrs. Godfrey Walker, of Northbrook Park, Devon, has given £1000 to endow two cots in the Children's Ward of the Royal Devon and Exeter Hospital in memory of her late husband and sister.—The late Mr. C. B. Hare, of Clifton, has bequeathed £1000 to the Bristol General Hospital, £300 to the Bristol Royal Infirmary, and £100 to the Bristol Eye Hospital.

Reviews and Notices of Books.

Quinquennium of Medicine and Surgery, 1906–1910. Edited by J. W. BALLANTYNE, M.D. Edin., F.R.C.P. Edin. Edinburgh: William Green and Sons. 1911. Pp. 411. Price 10*s.* 6*d.* net.

ADVANCES in both theory and fact take place so rapidly nowadays in medicine and surgery that it is impossible for any one man to keep abreast of them all. Hence the need for the various year-books and digests, in which are collected and collated the various improvements, alterations, new theories, new or revived methods of treatment, and other matters that are constantly bringing about alterations which must be borne in mind by the medical profession.

The book now before us deals with a period of five years, and we congratulate the editor upon the manner in which he has carried out his work. In most cases he simply gives a digest of the original worker's opinions or researches on the matter in hand, but when he submits his own opinion it is always from much knowledge and with a due sense of responsibility. The collating and condensation of the various papers and reports have evidently been carried out with great care, and the book contains digests of very modern and little known subjects. For instance, we find a careful and full analysis of Freud's work in psycho-analysis—a subject of great importance, and one, we think we may say, but little known to the majority of medical men, for which reason attention has been directed to it in our columns on several recent occasions. To take another matter, not new, but one which is constantly in a state of flux—namely, immunity. Anyone referring to this book will find a very clear exposition of the various theories and problems connected with the subject which will go far to make a complicated problem clear. Other important subjects about which little is known are tuberose sclerosis, pancreatic infantilism, and the chloride-free treatment of nephritis. As a point in the history of medicine it is interesting to note that the first English court physician, John of Gaddesden, counselled his patients who were suffering from dropsy to avoid eating a quantity of salt, and he especially mentions a particular kind of bread as one to be avoided, "quia nimis est salsus." The date of John's death was 1361.

Dr. Ballantyne has produced a work that will undoubtedly be of great service to the busy practitioner, and although we believe that this volume is the first, we earnestly trust that it will not be the last, but that 1916 will see the publication of another.

The Wassermann Sero-Diagnosis of Syphilis in its Application to Psychiatry. By Dr. FELIX PLAUT, Scientific Assistant in the Psychiatric Clinic of Munich. Authorised translation by SMITH ELY JELLIFFE, M.D., Ph.D., Professor of Psychiatry, Fordham University, New York; and LOUIS CASAMAJOR, A.M., M.D., Assistant, New York Neurological Institute. New York: The Journal of Nervous and Mental Disease Publishing Company. 1911. Pp. 188. Price $2.00.

THIS book constitutes the fifth in the "Nervous and Mental Disease Monograph Series." It contains an examination of the Wassermann reaction as a factor in the diagnosis of mental disease, and is a critical, scientific, and useful contribution to the literature of the subject. Dr. Plaut is a pupil of Professor Wassermann, to whom he dedicates his book, and some of the work recorded in it has been carried out in collaboration with him.

The first chapter gives within short compass an admirably lucid and critical review of the development of the Wassermann reaction and of some of the various modifications to which it has been subjected. The difficulties introduced in its biological interpretation from the fact that complement fixation can be obtained with syphilitic serum by the agency of lipoids, such as lecithin, as well as with aqueous extract of syphilitic organs, are carefully indicated, and Dr. Plaut concludes that a completely satisfactory explanation of the nature of the reaction has not yet been found. He points out that Wassermann still affirms that extract of syphilitic organs is necessary for an absolutely trustworthy sero-diagnosis of syphilis, a view which, on the basis of some personal comparative trials of different methods, Dr. Plaut confirms. A chapter is devoted to a consideration of the clinical specificity of the method, and it is suggested that the sporadically occurring positive reactions in the so-called normal control material are due to syphilitics who know nothing about their infection.

The clinical investigations upon which the book is based comprise an examination of the blood, and in many instances of the cerebro-spinal fluid also, for the Wassermann reaction in cases of syphilis without complication in the nervous system, cases of general paralysis of the insane, of cerebral syphilis, of tabes with and without psychoses, and of feeble-mindedness upon a hereditary syphilitic foundation. It was found that none of the cases of syphilis without nervous involvement gave a positive reaction with the cerebro-spinal fluid, although a reaction might be obtained from the blood. In general paralysis 156 patients were tested for the reaction in the blood, and all were positive. The cerebro-spinal fluid was examined in 147 cases, with positive results in 139, doubtful in 2, and negative in 6. In tabes without psychic symptoms Dr. Plaut was able to investigate only 16 cases, and is therefore unable to generalise, but he found some cases which did not give a positive reaction in the blood, and in the cerebro-spinal fluid the reacting substances are not met with so frequently as in general paralysis. Some interesting observations are recorded on the influence of mercurial treatment upon the reaction. The results of comparative serological and cytological investigations of the cerebro-spinal fluid in the various conditions studied are given in the concluding chapter. A full bibliography and index complete a highly instructive and original monograph.

Lehrbuch der Therapie innerer Krankheiten. Für Aerzte und Studierende. I. Band. Edited by Dr. PAUL KRAUSE and Dr. CARL GARRÈ. Jena: Gustav Fischer. 1911. Pp. 758. Price 11.50 marks.

THIS volume deals in great detail with the principles upon which the various forms of therapeutic methods are founded. It is divided into 18 chapters, and several contributors take part in its production. The first chapter, by Dr. M. Matthes, of Marburg, deals with diet in disease. The heat and power-producing qualities of the various constituents of food matters are carefully discussed, and the influence on morbid processes of the organic and inorganic components is fully indicated. The use of various articles of diet in connexion with disease then receives attention, the advantages of meat, eggs, milk, cereals, and so on, being duly pointed out, as also are their contra-indications. The various methods of administering drugs are considered by Dr. R. Magnus, of Utrecht. In addition to the ordinary ways in which medicaments may be given the intramuscular and intravenous methods are described, as is also the injection of substances into the serous cavities.

Dr. J. Strasburger, of Bonn, writes on hydrotherapy and thermotherapy, and in an interesting manner gives a description of the many forms of baths that are employed. This chapter concludes with a complete list of the places in Germany where these measures are carried out. Climatic treatment of disease is considered by Dr. F. Frankenhäuser,

of Berlin, who indicates the various maladies which are likely to be favourably influenced by treatment at the German resorts. Subsequent chapters are devoted to a description of other therapeutic measures, such as compressed and rarefied air, inhalations, massage, gymnastics, mechanical orthopædics, electro-therapeutics, the use of the Roentgen rays, the employment of radium, the influence of suggestion and a brief survey of the value of sera and vaccines.

The whole volume forms interesting reading and contains a large amount of information.

American Practice of Surgery. Editors, JOSEPH D. BRYANT, M.D., LL.D., and ALBERT H. BUCK, M.D., of New York City. Complete in eight volumes. Profusely illustrated. Vol. VIII. New York: William Wood and Co. 1911. Pp. 1146. Price $7 per volume.

THE final volume of this important System of Surgery is worthy of those which have preceded it. In it are gathered together all the subjects hitherto untreated. It commences with intrathoracic surgery, excluding the surgery of the heart and œsophagus; this chapter has been written by Dr. Joseph Ransokoff and Dr. J. Louis Ransokoff, of Cincinnati, and it contains a good account of Sauerbruch's chamber. The skiagrams of intrathoracic conditions are very satisfactory, and though some of the descriptions of operations —for instance, thoracoplasty—are very brief, on the whole the subject is satisfactorily treated. The surgery of the spleen has been entrusted to Dr. A. Esslemont Garrow, of Montreal, who has fulfilled his task well. Dr. James Bell, of Montreal, has written the chapter on surgical diseases and wounds of the kidney and ureters. He describes their anatomy and physiology, and gives a short account of the diagnostic methods available in such cases. As to moveable kidney, Dr. Bell advocates operation for all pronounced cases, regardless of the cause, unless there is also a general enteroptosis.

Dr. George David Stewart, of New York City, has contributed the chapter on the surgery of the pancreas. He does not attach much value to the Cammidge reaction, and thinks that the test should always be controlled and confirmed by other and more trustworthy procedures. The same author has written on the surgery of the liver and gall-bladder. In opposition to the more generally received view, he does not consider that infection of the bile-ducts through the portal vein is very common. He discusses the question of cholecystectomy in place of cholecystostomy, but he does not pronounce a judgment.

Dr. A. Hugh Ferguson, of Chicago, has supplied the article on the surgery of the urinary bladder and prostate. He holds that the Bergenheim operation, or Peters's operation, or the extraperitoneal implantation of each ureter separately with a piece of bladder into the rectum, is the best surgical procedure for the treatment of ectopia vesicæ. For the removal of a hypertrophied prostate the author prefers the median perineal incision, and he advises that almost all cases should be explored through the perineum, and then if it be found that certain portions of the hypertrophied prostate cannot be removed by that route, the operation can be completed by the suprapubic incision. The surgery of the ovaries and Fallopian tubes has been written by Dr. Benjamin R. Schenck, of Detroit, Michigan, and the surgery of the uterus by Dr. John B. Murphy and Dr. Frank W. Lynch, of Chicago. These articles are excellent and fully abreast of the knowledge of the present day. Dr. Lewis S. McMurtry, of Louisville, Kentucky, has contributed the chapter on extrauterine pregnancy, as well as that on Cæsarean section and its substitutes.

A very important chapter is that dealing with the law in relation to the practice of surgery, and though it has to do mainly with the laws of the United States there is much that is applicable to other countries. The section dealing with the surgeon as a witness in a court of law is likely to prove of general utility. Dr. Christian R. Holmes, of Cincinnati, is responsible for the chapter on hospitals and hospital management, which gives a very readable account of a most important subject.

Major Charles Lynch, of the Medical Corps of the United States Army, has contributed the article on military surgery. Much of the material is necessarily based on the experience of the Russo-Japanese war. Surgeon-General Charles F. Stokes, of the United States Navy, has supplied the chapter on naval surgery, and it contains some good plans of the arrangements on board ship for the medical department. Illustrations showing the extensive wounds in present-day warfare at sea are given. Railroad surgery is of even more importance in Canada and in the United States than in this country, because of the greater length of line and the greater frequency of accidents; the subject has been entrusted to Dr. James Alexander Hutchinson, of Montreal, who has treated it ably.

In an appendix Dr. J. E. Sweet, of Philadelphia, has supplied a chapter on the relation of blood pressure to surgery, in which are discussed the various factors that influence blood pressure, especially in operations.

Das Roentgenverfahren in der Chirurgie. By Dr. ALBAN KOHLER, Wiesbaden. Berlin: H. Meusser. 1911. Pp. 79. Price M. 5.75.

THIS is an excellent short treatise on the use of the X rays in surgery; it is illustrated by a number of actual photographs of the radiographs, and though these have been very much reduced in size, the amount of detail to be seen is so great that nothing is lost. We do not remember having seen more perfect examples of photographic reproduction. There are many important details in the chapter on technique that will be valuable to even experienced radiologists, and special attention must be drawn to the sections on fractures and displacements and the diseases of bone. Except for recording the passage of a bismuth meal, the author does not think that instantaneous radiography has any special advantage in purely surgical work. Among some of the more novel contents of the work are to be noted the fact that the method has been used for the detection of alterations in the muscles and other soft tissues; there is also a useful suggestion for assisting the detection of gall-stones. This little book is sure to be of interest to all who are concerned in X ray work.

Sammlung Anatomischer und Physiologischer Vorträge und Aufsätze. Herausgegeben von Prof. Dr. E. GAUPP und Prof. Dr. W. TRENDELENBURG. Heft 15. (Zweiter Band, Heft 2.) *Blutkörperchen und Wanderzellen.* Von Prof. Dr. FRANZ WEIDENREICH in Strassburg. Jena: Gustav Fischer. 1911. Pp. 65. Price M. 1.50.

Mephistopheles said to Faust, "Blood is a juice of quite peculiar kind," a remark which finds wider application with every advance in our knowledge of this fluid. The author does not confine his remarks merely to the cells of the blood as they occur in the blood stream; on the contrary, he deals with such of these as wander out of the blood-vessels and occur in other fluids and tissues of the body in both vertebrates and invertebrates. The result is that we have a thoroughly reliable monograph on blood corpuscles and "wandering cells" by one who himself has devoted much study to this subject. After describing what is included under the terms blood and lymph cells, he considers their distribution and origin, and the phylogenetic derivation of the vascular system and its cells. To the red corpuscles, which occur also in some invertebrates, he applies the term

"pneumocytes." It is to be noted that all respiratory substances, however, are not coloured. There is a form of achroglobuline present in the blood of certain molluscs which acts as an oxygen carrier and is colourless. Colourless pneumocytes in invertebrates are next considered, and then the various forms of leucocytes in vertebrates. Rightly, we think, the author points out that the mere staining capacity of granules in certain of these cells has been over-estimated, more especially when so-called eosinophile or neutrophile granules are compared in the leucocytes of vertebrates and invertebrates. Some fish possess only non-granular leucocytes. It would almost seem as if certain blood cells do not become physiologically active until they undergo a morphological degeneration. Very full consideration is given to the red corpuscles and their lipoid membrane in animals and man. Finally, leucocytes—the most ubiquitous cells of the body—and the origin and regeneration of the blood cells are considered.

This is an excellent monograph, a careful *résumé* of the subject, and should prove useful to physiologists, zoologists, and pathologists. A list of the literature is appended.

Die Hernien und ihre Behandlung. (*Hernias and their Treatment.*) Von O. BORCHGREVINK, Oberarzt des Diakonenhospitals in Christiania. Mit 40 figuren im text. Jena: Gustav Fischer. 1911. Pp. 312. Price, paper, 5 marks; bound, 6 marks.

THIS is really the second edition, though it is the first which has appeared in German. The author tells us that one reason for his writing the book was the wish to provide for medical men in country districts where there is no possibility of calling in help from outside, detailed instruction concerning the performance of the operation for strangulated hernia. In a country so sparsely populated as Norway it is especially necessary that the country practitioners should be able to act in such emergencies. The book is written very clearly, and it should be useful to those who desire a full account of hernia and its treatment. Useful tables are given of the results of treatment in a large number of cases, and a scheme is provided for the examining and recording of a case of hernia. The illustrations are on the whole good.

Die Pathologie des Wachstums im Säuglingsalter (in ihrer Beziehung zu allgemein biologischen Problemen und in ihrer Bedeutung für die Klinik). Von Dr. ERNST SCHLOSS. Mit 49 Kurven in Text und auf 2 Tafeln. Berlin: S. Karger. 1911. Pp. 155. Price, paper, 5 marks.

THIS is an interesting and elaborate piece of work on the pathology of growth in the infant and its relations to main biological problems such as those of nutrition in general. The work was done largely in the Foundling Hospital of Berlin, in Rummelsburg, and it is so set forth that it is very difficult to give a short readable *résumé* of the author's results. Moreover, there are a considerable number of definitions to be attended to. The significance of feeding in relation to the pathology of growth is first dealt with, including the action of simple foodstuffs, such as carbohydrates, on the increase in weight, and here the author works in the problems of osmosis and the colloid chemical theory of the combination of water. Next he deals with the clinical phenomena of pathological growth, treating first of anomalies from the point of view of their time relations, i.e., at what period of growth occur accelerated, delayed, or arrested growth. Under the heading "dyskrasia," or the disturbances of correlative development, he includes rickets, Barlow's disease, myxœdema, acromegaly, and so on. As regeneration is intimately related to growth a chapter is devoted to regeneration, or, as the author calls it, "reparation." The third chapter treats of the general pathology of the phenomena of growth in the suckling, dealing more especially with the pathogenesis of these anomalies.

This is a work that should command serious study from those who devote their attention to the pathology of the diseases and anomalies incident to infant growth, and to these we cordially commend it, though to read and understand it requires very considerable patience and application, as well as a knowledge of what has been done on this subject, more especially in Germany.

LIBRARY TABLE.

La Maladie de Little: Étude Anatomique et Pathogénique. By Mme. LONG-LANDRY, Ancien Interne des Hôpitaux de Paris. Paris: H. Delarue. 1911. Pp. 147.—In view of the uncertainty that still prevails as to the exact nature and symptomatology of what is called on the continent Little's disease, a disease for which many synonymous terms exist, a *revue d'ensemble* is very welcome, particularly considering the fact that the results of the pathological examination of four cases provide excellent material on which to base conclusions. Madame Long-Landry shows that lesions differing in their localisation and nature may produce the syndrome, and that cerebral, cerebro-spinal, and spinal varieties may be distinguished. The pathogenic factors are of two sorts—infective agents operating in intra-uterine life and traumatisms at birth. The imperfections of voluntary movement which all cases show are the sequel to the lesions of the nerve centres at an early stage in their development, and represent an attempt at adaptation on the part of an injured nervous system. All congenital diplegias, whatever their anatomical basis, may be united under the term Little's disease. An excellent bibliography and well-reproduced drawings and photographs add to the serviceableness of this thesis.

Domestic Hygiene for Nurses. With so Much of Physics and Chemistry as are Necessary to the Reasonable Understanding Thereof. By FRED. J. SMITH, M.D. Oxon., F.R.C.P. Lond., Physician to the London Hospital, and Examiner in Elementary Hygiene to the Nursing Probationers. With 18 illustrations. London: J. and A. Churchill. 1911. Pp. 164. Price 2*s.* 6*d.* net.—This book has been written to explain the elements of hygiene, more especially from the point of view of probationer nurses undergoing their course of training in a general hospital. It differs from an ordinary text-book in that it embodies a sufficient elementary knowledge of the laws of heat, light, and chemistry, which helps to clothe with interest the subject of hygiene. The author writes also in a manner suitable to the needs of his particular audience. He starts by considering the nature of matter and its forms, and then consecutively considers the physics of heat, light, air, and water. The chemistry of hygiene is next discussed, and finally the theory and practice of domestic hygiene, based on physics and chemistry, are set forth in a clear and concise way. The book is well printed, the illustrations are carefully selected and well reproduced, and there is an ample index.

A Miscellany of Verse. By JOSEPH J. MOONEY. Birmingham: Cornish Bros., Limited. 1911. Pp. 80. Price 2*s.* 6*d.* net.—This is a little book of verses by a member of the medical profession which will not be without attraction to those who like to see something of the physician outside medicine. Several of the lyrical forms are represented, the rondel and the sonnet appealing especially to the author. There are metrical translations from German and Latin authors, among which last are to be found Catullus, Statius, Hadrian, and Ausonius. The lines of Ausonius on Lais's Mirror are gracefully rendered. The *Ne sit Ancillæ* of Horace appears in English dress, but one

is rather startled to find Xanthias Phoceus addressed with the Irish prefix "O'" (doubtless a printer's error); and Briseis and Atrides would have got us into trouble in the days of our youth. There are some mediæval Latin students' songs, and some hymns, both original and translated.

The Dinner Calendar: A Dinner for Every Day in the Year. Compiled by MAY LITTLE, First-class Diploma, late Staff Teacher of the National Society's Training School of Cookery, London. London: T. Werner Laurie. 12 sheets. Price 1*s.* net.—Each of these 12 sheets gives a separate menu for every day of the month, consisting of a soup, fish, joint, entrée game or poultry, with sauce and two vegetables, sweets, and cheese or a savoury. They are evidently arranged with a view of relieving housekeeping from the monotony and lack of appetising quality that are more often the result of bad management than of necessary economy. We can heartily commend these sheets to managing housewives with æsthetic tastes but limited means, provided they are gifted with a culinary capacity; for these are merely menus, not cookery receipts.

JOURNALS AND MAGAZINES.

Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, K.C.B., Professor ALEX. MACALISTER, Professor ARTHUR THOMSON, Professor ARTHUR KEITH, and Professor ARTHUR ROBINSON. Vol. XLVI. Third Series, Vol. VII., Part I. October, 1911. London: Charles Griffin and Co. Annual subscription 21*s.*, post free.—The current issue of the *Journal of Anatomy and Physiology* contains, among other contributions, some of the papers read before the Anatomical Society at its annual meeting held in Aberdeen last June. Foremost among these Aberdeen papers is the Presidential Address of Professor R. W. Reid, President of the society, entitled "Remarks on Fifteen Years of Anthropometric Work in the University of Aberdeen." Professor Reid deals with the schedule of data in use in the anatomical department at Aberdeen, discusses the methods of taking and recording the various measurements and observations, and sums up the comparative value of each item so obtained. No less than 824 students have been examined on the lines laid down in the schedule, and all the data concerning each one are recorded twice, once during the first year of medical study and again on the completion of the fifth year. The comparison of the two series of figures brings out many points of interest concerning the changes taking place in the body between the nineteenth and twenty-fourth years of life. The collection of this vast amount of anthropometric information about the physical type and the growth of the Aberdeen medical student is obviously an extremely useful work, and at the same time a very laborious one. We note that Professor Reid is a strong advocate for simplification and for uniformity of data collected; and it is apparent that by a wider use of some simplified schedule in schools throughout the country a mass of information of the utmost anthropological importance might be obtained. The schedules employed at Aberdeen are reproduced with the paper, and they would form an excellent basis for the foundation of a system capable of extremely useful extension. Professor A. M. Paterson, in a short paper on the Subscapularis Muscle, describes the normal form of the muscle and its variations brought about by reduction or multiplication of its septal divisions. Professor Arthur Keith and Mr. Francis H. S. Knowles give a description of teeth of Palæolithic man from Jersey. These teeth were found, along with bones of the woolly rhinoceros and implements assigned to the Mousterien period, in a cave situated in the cliff at St. Brelade's Bay on the south coast of Jersey. Nine teeth were first discovered, and their description occupies the bulk of the paper; subsequently four more of the same set were found and their characters are discussed in an additional note. From a comparison of the features of these Jersey teeth with those of the well-known Heidelberg mandible and the Gibraltar cranium, the authors conclude that their former owner—Homo breladensis—was "an early representative of the Neanderthal race." Two papers by Professor C. J. Patten deal with some anomalies of the cranial bones in a young orang-outang and a chimpanzee. The remnants of the retractor bulbi muscle in man are described and very clearly figured by Mr. S. E. Whitnall, who follows the evolutionary history of the muscle and instances the very few cases in which its human occurrence has been recorded. Dr. F. Wood Jones deals with some markings on the cervical vertebræ which are caused by contact with cervical nerve-trunks and serve to distinguish the various members of the cervical series of vertebræ from one another. A paper by Dr. J. Cameron is entitled "Further Researches on the Rods and Cones of Vertebrate Retinæ." Dr. Sydney J. Cole, in a paper entitled "Remarks on Some Points in the Fissuration of the Cerebrum," deals with three Chinese brains recently acquired by the Museum of the Royal College of Surgeons of England. Charts and descriptions of the convolutions and fissures of these brains are given, and the author, in his concluding remarks, discusses the nature of the arcuate and lunate sulci. Professor A. C. Geddes has a very useful practical article on the Technical Difficulties of Wax-plate Reconstruction. The fact that many workers in reconstruction processes have not attempted to solve—or have not even experienced—some of these difficulties, does not make the difficulties any less real, but certainly implies that among the present flood of reconstruction literature there must be much of which the conclusions are probably based on the study of very distorted material. Professor Geddes has done good service by indicating the devices employed in the department under his charge for overcoming several sources of error which render uncontrolled work of such very doubtful value. Dr. W. L. H. Duckworth contributes a Report on a Skull from British East Africa, and also an article on the Natural Repair of Fractures as seen in the Skeletons of Anthropoid Apes. Dr. D. G. Reid describes a case of Multiple Heart Anomalies. The most striking departures from the normal are that four presumably congenital perforations existed on the interauricular septum, and that the pulmonary valve had four cusps. The specimen has the distinction that it came from a man who had reached his seventy-second year. Mr. A. B. Appleton, in a paper entitled "A Case of Abnormal Distribution of the Nervus Musculo-Cutaneus, gives a full description of a dissection in which an absent radial nerve was replaced, not by the ulnar, but by the musculo-cutaneus. A good figure of the anomaly is given.

The Yellow Fever Bulletin. Nos. 3, 4, and 5 (for July, August, and September, 1911).—These numbers maintain the reputation of this new journal. A special feature in each of the three numbers is an original article by the editor, Dr. Harold Seidelin, the subjects of which he treats being (1) some differential leucocyte counts in yellow fever; (2) the diagnosis of yellow fever cases; and (3) the post-mortem diagnosis of yellow fever; in each of these he gives his readers the benefit of his own ripe and varied practical experience of the disease. In addition to these original articles each number contains one or more editorials on points of interest in connexion with yellow fever, such as quarantine measures, the microscopic examination of blood and tissues from yellow fever cases, and yellow fever in West Africa. There are also each month reviews of recently published books, pamphlets, or papers relating to the disease, and each number contains also a bibliography

This bulletin appears to us to be fulfilling a very useful function, and in our opinion it cannot fail to prove of service to all those who in their professional capacity are likely to be brought into relation with actual yellow fever or with suspected cases.

The Philippine Journal of Science. Vol. VI., No. 3, June, 1911.—This number is of more than usual interest at the present moment since it contains three articles dealing with the still vexed question of the etiology of beri-beri. The first of the three is a Study of the Influence of Rice Diet and of Inanition on the Production of Multiple Neuritis of Fowls and the Bearing thereof on the Etiology of Beri-beri, and is the joint work of Major Weston P. Chamberlain, Major Horace D. Bloombergh, and Captain Edwin D. Kilbourne of the Medical Corps of the United States Army, members of the Army Board for the study of tropical diseases as they exist in the Philippine Islands. The paper is illustrated by four plates and five charts. The authors found experimentally that fowls developed multiple neuritis when fed exclusively on "polished" rice; and fowls kept entirely without food of any kind, save water, also developed polyneuritis in some cases. The signs, symptoms, and nerve appearances are identical in neuritis produced by inanition and in that caused by an exclusive dietary of polished rice. In neuritis-producing rice and in beri-beri-producing dietaries both phosphorus and potassium are markedly reduced in amount. As an indicator of the beri-beri producing power of a given rice the reduction in the potassium content is probably as reliable as the reduction in the phosphorus content. In the second of these articles Dr. Victor G. Heiser, Director of Health in the Philippine Islands, gives his practical experiences with beri-beri and unpolished rice; he furnishes also an account of the means proposed to be taken by the Legislature to secure that only the unpolished variety shall be used when rice is the staple article of diet. The third article is by Major Chamberlain and Captain Edward B. Vedder, of the Medical Corps of the United States Army, entitled, "A Contribution to the Etiology of Beri-beri," giving details of a series of experiments on fowls, repeating in part the work of Fraser and Stanton, which showed that 85 per cent. of the phosphorus in rice polishings is negligible in the prevention of polyneuritis gallinarum. They conclude that this malady in fowls is not prevented by adding to the diet of polished rice any of the following substances—viz.: potassium phosphate or potassium citrate, carbonate or chloride, or magnesium phosphate, phytin, phosphoric acid, or phosphoric acid with potassium chloride. The neuritis-preventing substance in rice-polishings is soluble in cold water and in cold alcohol, and an extract made in this way was found, on analysis, to contain the following percentages, viz.:—total solids, 1·34; ash, 0·03; phosphorus pentoxide, 0·00165; nitrogen, 0·0406; and sucrose, 0·88. Polyneuritis gallinarum is not, in the opinion of these investigators, caused by lack of phosphorus compounds in the rice. The neuritis-preventing substance in rice-polishings is capable of dialysis through a parchment membrane, and this excludes all colloids from consideration. The authors realise that their conclusions are based on a small series of experiments, but further researches are being made to confirm the above observations and also to determine the effect on fowls of the remaining untried substances contained in the extract mentioned above, including the sucrose.

CORRECTION.—Mr. T. A. Welton, whose work, entitled "England's Recent Progress," was reviewed in THE LANCET of Oct. 21st, 1911, points out that in our review the word "married" on p. 1140, line 19 from the top, does not accord with the argument in the context. The author has put his finger on a slip in our review which we regret.

New Inventions.

ELECTRICAL OSMOSIS FOR DENTAL ANÆSTHESIA.

Dr. A. B. Tugman, dental surgeon to the Lisbon Medical College, and dentist to the British and Colonial Hospital and School of Tropical Medicine, Lisbon, has devised an apparatus for the anæsthetisation of the tissues of the gum and alveolus without the employment of strong solutions of cocaine, and we have had an opportunity of inspecting it. Cataphoresis—that is, the introduction of a drug by means of an electric current—has hardly, we believe, been employed hitherto for the anæsthetisation of the gum, and Dr. Tugman has modified the method of cataphoresis as used in other parts of the body in order to obtain a more localised effect of the drug and to



Showing the negative pole for applying to the sides of the head, and the syringe employed.

be able to use a current of harmless voltage. The negative pole is not applied to the back or hand, but it is placed on the side of the head over the position of the Gasserian ganglion. The positive pole is then attached to a dental syringe filled with the anæsthetic solution employed. This solution contains 1 per cent. of beta eucaine with adrenalin and some antiseptics; the needle of the syringe is inserted where required and the solution is injected, while at the same time the current passes, carrying into the tissues the anæsthetic. Dr. Tugman claims that the anæsthetic is carried much deeper than would otherwise be the case, and that the anæsthetic effect is much more complete, so that the operation is completely painless. The method is well based, but the question of its practical utility can only be answered by an extended trial. The apparatus is manufactured by the Dental Manufacturing Company, Limited, Alston House, Newman-street, London, W.

IN regard to the notice of the report, issued by Mr. E. Merck, which appeared in our issue last week, we are informed that the firm has received a large number of applications for copies, but as these are not yet ready, some delay in sending them out is bound to occur. Mr. Merck asks us to mention to our readers that their applications will be attended to with as little delay as possible.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 11, 1911.

The National Insurance Bill.

WE have published recently many communications which show the strong feeling of resentment that exists in the medical profession against the payment of their services upon any form of capitation fee instead of upon the principle of work done. The existence of a difference of opinion between members of the medical profession upon this vital point has been fully realised in these columns from the day that the Bill was first made public; it was one of the main things which prompted the articles that appeared in our columns week after week during the summer urging that there should be a delay in the proceedings for passing the Bill until unanimity upon this very vital point had been arrived at. This view was assisted powerfully by the liberal-minded and important letter which appeared in THE LANCET of June 17th from Sir ALFRED PEARCE GOULD, the message of that letter being to urge that the medical profession, while it had a chance, and while it was being assured on all sides that the Government only desired to come to a reasonable understanding, should declare once and for all that it would have nothing to do with contract practice. No move, however, was made by the medical profession at the time of sufficient importance to make an impression on the current of events—for our own part we were constrained to believe that the medica profession did not share our apprehensions. Despite the numerous modifications which the measure has undergone in Committee, and despite the apparent concessions to medical feeling which have been made by the Chancellor in response to the energetic work of the British Medical Association, the position is unchanged, save that the sands of time have largely run out. The difference of opinion still exists, but it has now become very late for medical men to consider whether they can take over the medical responsibility of the National Insurance Bill on the principle of payment for services done, supposing that there is, as we have been assured by many of our correspondents, a preponderance of feeling in favour of this principle.

No one appears able to say how far the British Medical Association, which is credited by many of our correspondents with being definitely committed to assist a system of capitation payment, has taken this line, either in so many words or so many deeds, for the circumstances of the negotiations between the Association and the Government have been complicated and protracted, as in all the circumstances they were bound to be. It was certainly understood at the beginning of these negotiations that the National Insurance Bill, as far as medical service was concerned, was founded upon the principle of capitation payment. We know that the Chancellor had the capitation principle in his mind, and it was consequently a reasonable deduction that when the British Medical Association, in the course of the *pourparlers*, did not specifically object to this principle, it had acquiesced in it. On the other hand, it would seem that the Local Health Committees are at liberty to make any arrangements they like with regard to the remuneration of the medical men working under the scheme, while in the six minimum requirements formulated by the British Medical Association there is no mention of contract practice or *per capita* payment. It is only stated that the remuneration is to be adequate and in accordance with the wishes of the majority of the profession in each locality. That the Association is not actually committed to any course of action in regard to the payment of the medical profession working under the scheme is borne out by the words of Mr. SMITH WHITAKER, medical secretary of the Association, at Edinburgh last week. Referring to the question of payment by capitation or for attendance, he said that it was open for the authorities under the Bill, if they thought proper, to establish a universal system of payment for attendance, but he looked forward to the Local Health Committees taking the advice of the Local Medical Committees upon the terms of employment of medical men. It is impossible not to see now that the medical profession is in an extremely uncertain position.

We are still of the opinion, expressed more than four months ago in these columns, that if the medical profession had carried opposition to the Bill to the point of insisting that there is no necessity whatever for the perpetuation of the contract system of medical attendance, a settlement of the difficulties might have been found; but even in June it seemed to us that time was lacking to enable the matter to be dealt with in a properly broad manner, and now the passage of the Bill with its medical provisions in a dangerously uncertain condition seems nigh upon us. We published recently a letter from Dr. H. B. LUARD which attracted the attention of many readers, and to this letter we affixed a note which, while pointing out for the fiftieth time the harm that had already been done to professional and scientific work by the contract system, alluded to the presumed acquiescence of the majority of the medical profession in that system. We are now assured that the majority of the medical profession are opposed to the contract system, while it is apparently not admitted that negotiations with the Chancellor have been carried on with any recognition that there must be a vast extension of this. It seems, therefore, likely that when the Local Health Committees begin their onerous duties there will be every opportunity for a series of fights between them and the medical profession. The drastic alterations made by the Chancellor in the constitution of these Committees has reduced the medical representation upon them to a ridiculous point, and under the new formation of these bodies medical benefits may be administered without regard to professional requirements.

The International Eugenic Congress.

IN our last issue we announced the fact that the First International Eugenic Congress is to be held in London in July, 1912, under the presidency of Major LEONARD DARWIN. The list of vice-presidents contains the names of men distinguished in the most varied fields of intellectual activity at home and abroad, while it is right and appropriate that the first International Conference on Eugenics should take place in England and that its president should be one who is a son of CHARLES DARWIN and a cousin of FRANCIS GALTON. The Congress will be held at the University of London, its organisation is in the hands of a strong committee of the Eugenics Education Society, and the object of the promoters is primarily to make more widely known the results of the investigations of those factors which are influential in producing racial results, either of improvement or of decay. In as far as certain information can be obtained on this matter it will become possible to discuss to what extent existing knowledge warrants legislative action; and thirdly, when agreement in any particulars is reached it will be a practical measure to organise the coöperation of existing societies and workers, for example, by the formation of an international committee. By expressing our sympathy and agreement with such a programme we are recording the views of all medical men.

In trying to form a just estimate of what is meant by eugenics and to what such study may lead, it is necessary to brush aside much that has been written by facile pens and uttered by sentimental mouths. The forced mating of men and women; the wholesale castration of those unfit to procreate; the segregation of what may be termed generically immoral persons—all these things are debated as though each of them, or some blend of them, might form a receipt for the production of a perfectly healthy race. Such debates have not been useless, because they have interested large masses of the public whose ideas in this way have been stimulated and clarified; but, alas, in their course much nonsense has been allowed to pass into currency. Eugenics is defined by its responsible exponents as "the study of agencies under social control that may improve or impair the racial qualities of future generations, either physically or mentally." This definition, which is accepted by the promoters of the forthcoming Congress, commits no student of the science to any drastic scheme of race-culture based upon the views of extremists. It implies that the immediate aim of eugenics is the gathering together of facts and the diffusion of knowledge; the evil must be laid bare and its consequences impressed upon the public mind before any scheme of constructive reform is translated into action. The resources of science must be employed upon the problem of racial decay, but biology and mathematics will avail little unless a campaign of popular instruction is organised, so that when the advisability of any public step is declared the people may be ready to support the movement. The medical profession, sooner than any other body of citizens perhaps, has realised that the tendency of civilised society, as it is now organised, protects the unfit at the expense of the fit. A process of unnatural selection threatening the very future of the human race has not actually set in, but our readers know well that in some ways the very perfection of modern medical and surgical practice has contributed to the perpetuation of inferior stock. This is no reproach to medicine, but it certainly implies an obligation upon it to bear a full share in investigating the sources of danger, and in applying whatever remedy is feasible to any mischief that is proven. Apart, therefore, from the great scientific interest of the subjects under discussion, the International Eugenic Congress deserves the most cordial support from medical men, since they, above all others, are alive to the need for coöperation between men of science and the public. In the words of the preliminary notice of the Congress: "At present the most urgent need is for *more knowledge*."

Cancer Research.

THE appearance of the Fourth Scientific Report of the Imperial Cancer Research Fund will be welcomed by all those who have at heart the discovery of the laws of malignant growth and the formation of an effective treatment founded thereon which shall remove from among us a veritable scourge of man. Laymen are as anxious as medical men to find the way of escape, but, appreciating the terrors of the disease more than the obscurities of its origin, they are naturally impatient that no panacea has yet been found. Every issue of the annual report of the Cancer Research Fund, however, has recorded some further steps in the difficult journey of cancer research, and in this volume are to be found many facts bearing directly on the subject of malignant disease which may have an important bearing on its etiology or therapy. The valuable introduction by the Director of the Laboratories, Dr. E. F. BASHFORD, summarises the knowledge which has been gained through the work carried out under the Fund; and all who read it will agree that in many places we have now exact information where before there was much of conjecture, and that the directions in which search should be made for facts to solve some of those problems which still remain are growing more easy of appreciation. It is only natural that those who fail to understand the difficulties of the problem should chafe a little at the failure to discover "a cure," but those who are able to appreciate the thoroughness with which the work already accomplished has been done will acknowledge that real advances have been made. At any rate, we know much more than we did formerly; biologists and bacteriologists, medical men and public, must have patience, and the desired goal will be reached. And perhaps at the last success may come suddenly.

In some ways the most valuable feature of this report deals with the results of operative treatment upon mice. At the present time no surer method of treatment than operation exists—indeed, no other method of treatment comes at all near it in value—so that it is of the greatest interest to know what has been the outcome of operative treatment for undoubted malignant disease carried on among a group of carefully observed animals. There are certain difficulties in operating for malignant

tumours in mice. In the mouse the mammary gland is not a closely aggregrated mass of tissue as in the human being; it is spread out over a large surface of the body, and therefore it is practically impossible to remove the whole gland as in the human subject. Further, as the tumour is relatively large compared with the size of the mouse, and there is a difficulty in covering the wound, it is necessary when removing the affected tissues to keep close to the tumour. Recurrence consequently must occur frequently, being due doubtless in the main to incomplete operations, but none the less suggestive information can be gathered from the recorded results. The great majority of the recurrences appeared within eight weeks, and therefore when mice have died within that time without recurrence the cases have been disregarded. In two-thirds of the cases in which recurrence was noted it took place before the end of the sixth week, and only isolated cases occurred after the tenth week; it is an open question whether these late recurrences were not really newly developing tumours. In 23 unoperated cases the average duration of life has been about six weeks after the tumour has come under observation. On the other hand, of 141 cases operated on, the length of observation has averaged 15 weeks. Too much stress must not be laid upon these figures, as preservation of life has not been the main consideration. Yet they show clearly the advantages of operation in prolonging the life of the animal. A mouse seldom lives more than one hundred weeks in all, so that on an average nine weeks have been added to its life, representing an increase of nearly one-tenth of the whole span of life. This is a substantial prolongation, and affords useful evidence of the value of operation even in cases in which recurrence sets in. We have here a remarkable justification of the undisputed course that should be pursued in most forms of malignant disease—viz., that as complete a removal of the disease as is possible should be practised immediately after the establishment of the diagnosis.

The influence of heredity in the production of malignant disease is a second interesting matter in connexion with which the report furnishes material for discussion. It has only lately been possible to submit to experimental investigation the alleged facts in support of, or contradictory to, the theory that cancer is a hereditary disease. In man the length of life and the uncontrollable conditions of human mating limit greatly the facilities for collecting accurate statistics, so that the opportunities afforded by such short-lived animals as mice should prove of value. Breeding experiments with cancerous mice have been in progress in the laboratory of the Imperial Cancer Research Fund for the last five years, with the object of collecting data to determine whether an enhanced liability to cancer is transmitted from parent to offspring. There are many possibilities of error in an investigation of this nature, for it is important not to assume that an animal is of non-cancerous ancestry merely because its ancestry is not known. As malignant disease is far more common in female mice than in males, statistical studies of any value can only be made on figures obtained from observations on female mice. Two groups were made; into one were placed mice whose mother, one or both grandmothers, or all three, had been cancerous and mice whose mother and grandmothers had not suffered from malignant disease. The numbers were large enough to reduce accidental errors to small proportions, and as a result of these observations the conclusion is drawn that female mice in the ancestry of which cancer of the mammary gland has occurred not farther back than the grandmother are more liable to develop the disease spontaneously in this organ than those in whose ancestry cancer is more remote. It must be confessed that the difference is not great, but so far as these statistics go it exists. The increased liability is probably of the nature of a predisposition of one particular tissue or organ to undergo cancerous transformation, and from a clue of this sort wide-ranging truths may become evident.

Annotations.

"Ne quid nimis."

RECENT INVESTIGATIONS INTO THE ETIOLOGY OF ENDEMIC GOITRE AND CRETINISM.

THERE are few diseases which can compare with endemic goitre and cretinism as regards the number and variety of the theories put forward at one or another time to account for their origin. Many authorities at the present time hold that these two maladies are due to one and the same cause, goitre being a milder manifestation of the poison which in greater intensity gives rise to cretinism. Most of the hypotheses advanced in the past have inculpated some constituent of drinking water as the source of the mischief, and hardness of the water as the cause of goitre and cretinism has kept a foremost place for a long series of years. Nothing definite, however, could be proved, and the most that could with confidence be affirmed was that goitre (and cretinism) must be originated by "something" in the drinking water which took up the poison from the layers of the soil through which it passed. As far back as 1877 Klebs suggested that cretinism might be an infectious disease derived from the soil, and later Ewald expressed the opinion that cretinism and its "near relation" goitre might have to be reckoned among the infectious ailments, the source being some organic "miasma," in the soil of endemic localities, and conveyed to human beings by the drinking water. Of recent years the hard-water theory has had less support than formerly, opinion having turned in the direction of a specific microbe as the cause of goitre. But there are still some authorities who uphold the hard-water theory, and one of the most prominent supporters of it at the present time is Dr. Répin, of the Pasteur Institute, Paris, who has this year published in the *Revue d'Hygiène* (Nos. 4 and 5, 1911) an able and interesting article on the subject. He insists that we cannot put aside the theory, as lime and magnesia hold a conspicuous place among the chemical constituents of goitrigenous water. He quotes also the opinion of some well-known physiologists that the thyroid gland controls the metabolism of calcium, and he suggests that it is possible that this organ acts "by modifying the concentration of the calcium-ion and the sodium-ion." Some experts, such as Professor Wilms of Basle, assert that the *materies morbi* is not a "miasma," but an organic soluble substance which can pass through a Berkefeld filter. A large amount of original investigation of goitre has been done in recent years by Captain R. McCarrison, I.M.S., Agency Surgeon at Gilgit in the North-West of the State of Kashmir, who has availed himself of the opportunities afforded by a prolonged

sojourn in a goitriferous region to make a study of the disease. Since 1906 he has published papers, reporting his progress, in THE LANCET and in other medical journals, as well as in the Proceedings of the Royal Society. In the *Indian Medical Gazette* of July last he contributes a *résumé* of his researches on goitre in Gilgit, and in the *Annals of Tropical Medicine and Parasitology*, Vol. V., No. 2, August, 1911, he supplies a communication on the transmission of goitre from man to animals. One of the main obstacles to advancement of the etiology of goitre in the past was the lack of precise knowledge as to the functions of the thyroid gland. Captain McCarrison believes that one of its chief functions is to protect the body from the many toxic substances which find their way into the blood-stream from the intestinal tract, the thyroid undergoing hypertrophy in certain circumstances to meet the demands made upon it. He regards goitre as an infectious disease, the seat of which is in the alimentary canal, the enlargement of the thyroid being the dominant symptom. This enlargement begins as a hyperæmia or simple hypertrophy due to increased functional activity of the organ brought about by the presence of toxic substances in the blood-stream. Goitre he regards as a disease associated with contaminated water-supplies, the toxic agent being in the soil from which it is washed by the rainfall into unprotected wells or streams, or blown with dust into uncovered tanks or other sources of drinking water. The disease may also be induced by habitual consumption of raw vegetables grown in infected soil. The specific agent can be killed by boiling the water, or it can be removed by passing the water through a Berkefeld filter. Captain McCarrison produced enlargement of the thyroid in himself and a number of other persons by daily consuming some of the residue taken from the filter; but when the residue was boiled it failed to have any effect upon other persons to whom it was administered. As has been said, he believes that the specific organism is located in the intestines, and the administration of intestinal antiseptics, he says, has cured incipient goitres, as also have thyroid extract and the bacillus bulgaricus. Experiments were carried out at Gilgit to transmit the disease from man to animals: 12 young, non-pregnant goats brought from a healthy district were supplied with water purposely contaminated by sufferers from goitre. At the time Captain McCarrison made his preliminary report 5 of the goats had developed enlarged thyroid, while 12 goats kept under precisely similar conditions, save that their drinking water was pure, remained unaffected. We believe that a prize of 1500 francs was founded in the Academy of Medicine, Paris, some years ago by the late Dr. St. Lager, to be awarded to the investigator who succeeded in producing enlargement of the thyroid gland in animals "by the administration of substances extracted from goitrigenous water, or from the soil of goitriferous districts," conditionally upon successful repetition of the results by a committee of experts appointed by the Academy of Medicine. We believe that this prize has never been awarded, but it appears to us not unlikely that Captain McCarrison may soon be in a position, if he wishes, to qualify as a candidate for the prize. In Captain McCarrison's opinion, contamination of sources of water-supply in goitriferous districts is of far greater importance in the causation of goitre than the nature of the geological strata through which the water passes. It has to be admitted that the specific organism has not yet been isolated and identified, but the evidence collected in Gilgit and elsewhere seems to point to the existence of such a microbe. A series of investigations into endemic cretinism in Styria have lately been made by Dr. Adolf Kutschera of Innsbruck, an eminent member of the Austrian Sanitary Service. His report was published in a supplement to the *Oesterreichisches Sanitätswesen* in February of the present year. He regards goitre and cretinism as due to a "filth infection," both maladies occurring most frequently in dirty and insanitary houses. He believes that the infection attaches itself to the interiors of these houses, and particularly to clothing and bedding. Cretinism, in Dr. Kutschera's opinion, is spread largely by personal contact, the danger being particularly great when an adult cretin lives in close relation with young persons, and especially infants. Even domestic animals may, he says, in this way contract the disease. He relates an instance where two young puppies lived with a family in a dirty house; one animal was accustomed to sleep on the bed occupied by a cretin; this animal became affected, and Dr. Kutschera in his published report gives photographs of this cretinous puppy. The other puppy which slept elsewhere remained normal. The danger of allowing cretins to live in the overcrowded cottages of Styrian peasants is pointed out, and the compulsory notification with subsequent segregation of all cretins in special institutions is strongly urged. This course, we fear, is hardly likely to be adopted owing to its cost. In 1906 (for which year the figures are available) there were 17,500 cretins in Austria, only 391 of whom were being treated in institutions, so that to provide suitable accommodation for more than 17,000 others would entail a considerable outlay. It is perhaps too soon to say that the true etiology of endemic goitre and cretinism has been established, but it may at least be asserted that considerable advances have recently been made, and that with a continuation of the investigations now in hand we may hope to see before long a final solution of what has hitherto been a most difficult and puzzling problem.

TIN ROT.

CERTAIN metallic elements have their sicknesses, but perhaps the tin plague is the most remarkable. If tin catches cold it will decay, it will lose its lustre, and finally crumble to a grey powder. The change is not a chemical one, for the grey powder is still tin, and it can be brought back by careful warming to its original healthy condition. Apparently, when the tin is very pure it is more susceptible to cold and consequent decay. In fact, it may be made proof against the disease by alloying it with other metals. The disease is a source of considerable annoyance and disappointment to the collectors of coins who possess valuable tin specimens in their cabinets. This curious failing of tin may possibly have led to the use of the word "tin" as a term of reproach, as in such expressions as "a tin-pot institution," or "a tin soldier." Even tin buttons have been known to crumble in this way, and organ-pipes made of tin have been found to decay after a severe winter. Tin rot, to keep up the analogy of disease, is even infectious, for decaying tin in contact with healthy lustrous tin soon spoils it and reduces it to its own unhealthy state. If tin is to be protected effectually against the ravages of cold it should be kept above 18° C. The best remedy appears to be, however, to alloy it with another metal, notably lead. There are many mysterious things about the inanimate, and the illness of certain metallic elements forms one of them. The energetic colloidal form of platinum can be "poisoned" or rendered inactive by prussic acid or corrosive sublimate; mercury gets "sick" in contact with other metals; glass gets "fatigued" under electric stress, so that it will no longer transmit certain rays until it has had a few days' rest; silver "spits" just as it changes from the molten to the solid state. In certain instances the "illnesses" referred to have been a serious drawback to the use of metals in industrial and domestic applications,

but fortunately the disease usually yields to treatment, based upon the diagnosis of the metallurgical chemist.

EXPERIMENTAL MEASLES IN THE MONKEY.

IN an annotation published in THE LANCET of Sept. 2nd under the above heading we referred to some observations carried out by Dr. John F. Anderson and Dr. Joseph Goldberger demonstrating the communicability of measles to monkeys by inoculation of defibrinated blood withdrawn from patients shortly after the appearance of the eruption. We have now received reprints of some further communications which are worthy of notice. In the first [1] the observers deal with the period of infectivity of the blood in measles. They have now made inoculations with the blood of six human cases taken at varying times from the onset of the disease, and they are of opinion that these results consistently indicate that the period of infectivity of the blood begins at least just before the first appearance of the exanthem, and that it continues for about 24 hours afterwards. After 24 hours the infectivity of the blood is very generally reduced and it becomes progressively less after that time. They regard these observations as explanatory of the negative results of most previous workers and of the variable effects obtained by Josias in 1898. In a second communication [2] they record some experiments which appear to demonstrate the presence of the virus of measles in the mixed buccal and nasal secretions of patients suffering from the disease. By inoculation into monkeys reactions were obtained when the secretions were collected at the time of the first appearance of the eruption and again 48 hours later. The third pamphlet [3] deals with the nature of the virus of measles. As a result of numerous experiments Dr. Goldberger and Dr. Anderson conclude that the virus in the blood of measles cases may resist desiccation for 25½ hours, that it can pass through a Berkefeld filter, that it loses its infective properties after being heated for 15 minutes at 55° C., while it may possibly retain some infective properties after 24 hours at 15° C. It appears to resist freezing for 25 hours.

"SPONGE EDUCTION."

IN the *London Hospital Gazette* for July Dr. E. Ward has described an ingenious method, which seems to have originated in America, of treating certain cases of laceration of the finger in which a bare and protruding bone, or extensive stripping of the skin with denudation of the deeper parts, seems to render amputation necessary, so that the raw surface may be covered by a flap. If amputation is not done and the finger is dressed in the usual way, either with or without preliminary treatment by baths, the ultimate result is unsatisfactory, for a stump is left which is ugly, useless, and often painful, and a secondary amputation is generally necessary. The method now described, which is termed "sponge eduction," offers an alternative which makes it possible in most cases to save the full length of the stump; frequently even to lengthen the stump, so that the finger when healed will be longer than when lacerated and ragged. The bare stump is covered with a piece of sponge ½ to ¾ in. thick and cut to fit accurately the raw surface. The sponge becomes glued to the wound, and blood-vessels and granulations grow into it from the finger end. After a few days the sponge is pulled gently away from the finger and its attachment to the granulations is thereby loosened; any little hæmorrhage is absorbed by the sponge, and the granulations left behind lengthen and grow into it again. After a shorter interval the sponge is pulled further away, and this treatment is repeated until quite a thick pad grows up following the sponge and burying the raw surface or protruding bone. When the granulations are judged to be sufficient the sponge is removed and the wound dressed, first with fomentations, later with ointment or dry dressing. The granulations are rapidly covered by skin. Sponge eduction may also be used to help to re-form the pad over a terminal phalanx when torn away. In one case the patient was able to play the piano with the pad so formed. For sponge eduction a flat Turkish sponge kept dry, but soaked in 1 in 40 carbolic solution for a short time before the operation, is used. The piece of sponge is applied after hæmorrhage has ceased or nearly ceased, and after the stump has been rendered as aseptic as possible. Outside the sponge cyanide gauze may be applied or jaconet, as the granulations grow more rapidly if kept moist. If there is difficulty in maintaining the sponge in position splints may be used. Dressing is first done on the third day, and then on every other day. The sponge is kept aseptic by dipping it in weak carbolic solution and squeezing it dry at each dressing. In an ideal case the secretions from the granulating surface are sucked up by the sponge and the wound remains fairly dry. Sometimes matting of the layer of the sponge near the finger prevents this draining, and pus, pent up by adhesion of the sponge to the edges of the wound, is found. The matted part of the sponge may be cut away and the sponge re-applied or a new piece of sponge may be applied. If this fails a satisfactory growth of granulations may still occur in the moist discharge under the matted sponge. The method cannot be applied straight away in the case of a dirty, lacerated wound, but can be applied after the stump is sufficiently cleansed by baths. As a rule, the stumps left after healing are painless. Dr. Ward suggests other possibilities for this method. It can be applied to any wound in which exuberant granulations are needed. A cavity in bone after scraping out a tuberculous focus may be filled by granulations so "educed." It may be applied to fill the cavity left after mastoid operations. Ulcers of the leg adherent to bone may be scraped and granulations educed. The scar when covered with skin and epithelium will no longer be adherent to the bone.

PREHISTORIC SOCIETY OF EAST ANGLIA.

THIS society was founded in 1908, and passed its first two years of existence under the fostering care of Dr. W. Allen Sturge as president, whose presidential address at the foundation meeting is included in the Proceedings. The Proceedings for 1908–09 [1] contain two revolutionary papers, one by Mr. J. Reid Moir, on the Flint Implements of Sub-Crag Man, and one by Dr. Sturge, on the Chronology of the Stone Age. Mr. Moir describes some stone implements found by him near Ipswich, which he classes as "prepalæoliths," that is to say, as representing a stage of culture midway between the eoliths proper and the river drift palæoliths. The report of a special committee on these implements bears out his contention in the main. The finding of these definitely well-worked flints, which are far in advance of the Kentian eoliths in their true stratigraphical position below crag, proves, he asserts, that since their makers lived the Newbournian, Butleyan, Norwich, and Weybournian Crags, the Chillesford Crag and Sand, the Cromer Beds, and the Glacial Series have all been laid down, thus giving to man an antiquity in these islands never before realised. Dr. Sturge, by a lengthy and closely reasoned study of Icklingham, in Suffolk, probably one of the richest places in the world for human flint work of the Neolithic age, is led to the conclusion that since Neolithic

[1] Journal of the American Medical Association, July 8th, 1911, pp. 113–114.
[2] Ibid., August 5th, 1911, pp. 476–478.
[3] Ibid., Sept. 16th, 1911, pp. 971–972.

[1] Proceedings of the Prehistoric Society of East Anglia for 1908–09 and 1909–10, vol. i., part 1. London: H. K. Lewis, 1911. Pp. 121. Price 3*s*. 6*d*. (postage 3*d*.).

man came to Britain there has been an ice age—not continuous, but divided up into subperiods of glaciation, separated from one another by periods during which ice was absent, and that this alternation recurred several times, five at least, and probably six. He gives weighty reasons for inferring that the periods of recurrent glaciation came to an end some scores of thousands of years ago, and that they were separated from one another by lengths of time which have to be measured by a unit of 10,000, rather than of 1000, years. The conclusion of the whole matter is that Neolithic man goes back to some period between 200,000 and 300,000 years ago, and it would seem that we have not even then reached the beginning of the period. Drift man was flourishing from 1,000,000 years ago to about 700,000 years. Between the end of the Drift and the beginning of the Neolithic we have the great "Cave" periods, which would thus seem to have occupied anything from 200,000 to 400,000 years. Behind Drift men are vast ages of which we are only beginning to get the first glimpses. But it seems evident, says Dr. Sturge, that in spite of the general opinion man was already on the earth in early Pliocene times, and it will not be a matter for surprise if proofs are ultimately brought forward that the genus homo goes back even further than that. The Proceedings close with a paper by Lieutenant-Colonel W. Underwood on Animistic Forms in Certain Flints, showing Human Work.

TRANSIENT APHASIA AND PARALYSES IN STATES OF HIGH BLOOD PRESSURE AND ARTERIO-SCLEROSIS.

IN the *Canadian Medical Association Journal* for October Sir William Osler has discussed a condition which, though not uncommon, has received little attention from medical writers—transient aphasia and paralyses in states of high blood pressure and arterio-sclerosis. The subject was brought before the Association of American Physicians in 1891 by Dr. George Peabody, who seems to have been the first to offer a reasonable explanation of its pathology. In one of his cases, a man, aged 56 years, with well-marked arterio-sclerosis, had an attack of transient hemiplegia without loss of consciousness. Then in the course of ten days he had four or five attacks of aphasia with incomplete right hemiplegia. He died in a severe attack in which he had complete right hemiplegia with unconsciousness. Extensive arterio-sclerosis was found in the cerebral vessels, but there were no local lesions, no œdematous areas, and no foci of hæmorrhage or softening. Dr. Peabody suggested that in addition to the narrowing from arterio-sclerosis there is spasmodic contraction of the middle cerebral artery or its branches which is sufficient to cut off the blood-supply of the parts to which it is distributed; that this occurred several times, causing temporary ischæmia of important brain centres; and that in the final attack it lasted long enough to be fatal, but that it was not complete enough or of sufficiently long duration to cause softening. He urged that as spasm can be seen in the retinal vessels in cases of transient loss of vision the same occurred in local vascular areas of the brain. Dr. Peabody's important and original paper received recognition only in Sir William Osler's text-book, when the first edition was published in 1892. Since then Sir William Osler has seen a score or more cases which he divides into three categories: 1. Healthy individuals with high blood pressure, but without signs of arterial disease. In one case an active man, aged 43 years, who worked hard and was given to dissipation, returned to his hotel, rang the bell, and found that he could not speak. He was perfectly conscious and much disturbed, especially when he found he could not write. He was a little dazed and could not tell the time. He became emotional and a medical man who was summoned found him crying and still unable to speak. In a few hours he could say a few words, but incoherently. On the next day he could talk, but not quite freely. Within three or four days he completely recovered. The blood pressure was 212 millimetres. The radial and temporal arteries could be rolled under the fingers with the blood flowing, but when emptied were not palpable. There was no evidence of enlargement of the heart; the second aortic sound was ringing. 2. In the second category, which includes the majority of the cases, there is well-marked arterio-sclerosis. The cerebral attacks come on without warning, sometimes as the signal symptom. 3. In the third category there is advanced arterio-sclerosis with cerebral changes, manifested by progressive mental and muscular weakness. All possible types of transient seizures, including convulsions, may occur. The symptoms of these transient attacks are extraordinarily varied, but tend in individual cases to repeat themselves. Transient aphasia is one of the most common. Hemianopia may be present. Sensory disturbances rarely occur alone, but one patient had day-long attacks of numbness of the face and right hand with loss of the finer movements of the fingers. Paræsthesiæ may exist with aphasia. Motor paralysis is the most common symptom and may take the form of hemiplegia, or only the face and hand or arm may be involved. The paralysis is rarely complete. In one case brief paraplegia occurred. Confusion of thought often occurs, and emotional disturbances, which are very natural under the circumstances, are common.

THE EXPORT OF CHINESE PORK TO ENGLAND.[1]

WHEN it became known last year that Chinese pork was being imported into London some public anxiety was manifested, as it was declared by people who had lived in the East that in China the pig was a public scavenger, and that Chinese pork would be sure to spread disease—parasitic, tuberculous, and other—in those who ate it. Advantage was taken accordingly by the Local Government Board of Dr. Reginald Farrar's presence in the East this spring in connexion with the International Commission on Plague to have the matter investigated. He was instructed to inquire into the export of Chinese pork, and with this object in view has travelled through the Yangtse Valley, Manchuria, and Siberia, and after careful examination he has drawn up a most reassuring report. The export of Chinese pork is very considerable and is growing. One firm at Hankow shipped last year a weekly average of 30 tons of pork (some 600 pigs). The figures are, in a sense, satisfactory, for it is obvious that a trade of this magnitude must be managed throughout on a large scale, its requirements being too great to be supplied casually from the stray pigs wandering about the streets and lanes of towns. As a matter of fact, it appears that these stray pigs are not exported, but are consumed locally. Those for export are of better breeds and are grown on farms under conditions quite as good as those we know in England. They are generally fed on rice, but the well-reputed Yun-nan pigs in the south also get maize, and in Manchuria they have soya-bean or bean curd too. In Siberia they are given bran and oats boiled with butter-milk. As the outcome of his inquiries Dr. Farrar tells us that the Chinese pig is conspicuously free from disease—trichinosis is unknown in the south, cysticercus cellulosæ and tubercle are very rare. Inspection of carcasses is carried out everywhere

[1] Report to the Local Government Board by Dr. Reginald A. Farrar on Inquiries in China and Siberia Respecting Pork and Bacon Exported to England. [Food Reports No. 16.] Pp. 15. Price 4d. Stationery Office: Wymans, London, &c.

and by experts. The most complete inspection is reported from Siberia, where a pig is not killed if its temperature (taken in the rectum) is notably above or below normal. After slaughter the carcass and "pluck" are inspected, the glands being cut into, and the muscular tissue is microscopically examined for trichina, which is sometimes though rarely found in the north. It is probably important to notice that the highest prevalence of tubercle is reported from that district whose head inspector prides himself that no carcass he has passed has ever yet been rejected in England. Inspection again in England is very thorough, and in accordance with the report of the Royal Commission on Tuberculosis the smallest evidence of tubercle suffices to condemn the whole carcass. The necessity for this drastic procedure does not seem to obtain in China, so there is need for careful inspection in the home ports, but if it has once passed our inspectors there is no need for further prejudice against it. In an interesting "aside" Dr. Farrar tells us that the Hunanese pig is taught, by a bamboo, to keep the board floor of his sty dry and clean, and soon learns to leave all his excreta in one corner of the pen. Might not some such discipline be attempted with our house dogs in cities? Are they more silly than pigs? Could they not be taught to respect footpaths and side walks, or have we not yet treated our pets intelligently for a sufficient space of time? The complicated characters of Chinese writing are ideographs, and the character that suggests to a Chinaman the idea of "home" is, Dr. Farrar tells us, an outline picture of a pig under a roof. This suggests that the pig became domesticated there countless ages ago. Dr. Farrar is to be congratulated on his interesting work.

VARICOSE VEINS AND A SAPHENO-FEMORAL ANASTOMOSIS.

THE number of operations which have recently been devised for the treatment of varicose veins shows how unsatisfactory the present operative treatment of this condition is. Even total extirpation of varicose veins is sometimes followed by relapse. Trendelenburg's operation is unsatisfactory for the same reason. Elephantiasis has so often followed Wenzel's circular division of the veins that his operation has already been permanently shelved; and the spiral method of dividing the veins as advocated by Rindfleisch has not yet emerged from its experimental stage. E. Hesse and W. Schaak have recently (in the *Archiv für Klinische Chirurgie*) published their observations on the treatment of varicose veins by a sapheno-femoral anastomosis as advocated by Delbet in 1906. This operation was evolved from the observation that the stagnation of blood in the saphenous area is due to the total or partial absence of valves in the upper part of the saphenous and femoral veins. Assuming that the femoral vein is well supplied with valves immediately below its juncture with the saphenous vein, it was argued that normal circulation would be re-established if the juncture of the saphenous with the femoral vein were made at a lower level by an "end-to-side" anastomosis. By this operation a segment of vein with efficient valves would be inserted between the large abdominal and femoral veins on the one hand, and the veins of the saphenous area on the other. The question naturally arose, What is the exact valvular distribution in this segment of vein? The writers therefore examined 100 dead bodies in order to answer this question, and their findings may thus be summarised: 1. The femoral vein possesses usually one, and occasionally two, pairs of valves above its juncture with the saphenous vein, but in 23 per cent. there are no such valves present. 2. Below this point the femoral vein has at least two pairs of valves; usually there are more, and there is an interval of 3 to 4 centimetres between each pair. Occasionally the highest pair is as much as 7 to 10 centimetres below the opening of the saphenous vein. 3. The saphenous vein usually has a pair of valves close to its opening, and there are usually several pairs of valves lower down. 4. There may be several accessory saphenous veins in addition to the main vessel. Finally, the writers conclude that the anastomosis to be effective must be made at least 10 centimetres below the original juncture of the saphenous with the femoral vein. The operation is performed without previous emptying of the veins. A 12 to 15 centimetre long incision is made over the femoral vessels in Scarpa's triangle, and a considerable length of the saphenous vein is loosened from the surrounding structures so that there shall be no tension on this vessel after the anastomosis has been effected. All its branches and the accessory saphenous veins having been ligatured the saphenous vein is tied close to its opening. It is now clamped and divided obliquely. After the femoral vein has been separated from its companion artery for a distance of 5 to 7 centimetres, it is compressed by clamps between which an opening is made in it corresponding in size to the circumference of the saphenous vein. The saphenous vein is now implanted into this opening by an "end-to-side" anastomosis, the same procedure being adopted as in an intestinal "end-to-side" anastomosis. When the last suture has been tied the upper of the two clamps compressing the femoral vein is first removed, then the lower clamp, and finally the clamp compressing the saphenous vein is removed. If hæmorrhage occurs it is stopped either by pressure or by additional sutures. The sartorius and adductor muscles are drawn together over the anastomosis and united by a couple of sutures. The bandages are retained for two to three weeks, and the patient is usually kept in bed two to four weeks more. This operation has been successfully performed by Delbet 25 times and by the writers 23 times, but one of their patients died from an acute infection 26 days after the operation. No doubt this is a somewhat heroic operation which requires considerable technical skill and involves risks of sepsis and embolism from air or thrombi; but the troubles which may arise from varicose veins often require drastic measures. The operation leads to the disappearance of varicose ulcers. The dilatation also of the veins ceases and the troublesome subjective conditions from which the patient has suffered also disappear. The most suitable cases are those in which the patients are otherwise healthy, the varicosity of their veins being due to valvular incompetence only. The operation is obviously impracticable where there is thrombosis of the saphenous vein.

MEDICAL EDUCATION IN GERMANY.

IN another part of this issue we print in full a most interesting and important Memorandum on Medical Education submitted to the Royal Commission on University Education in London by Professor Friedrich von Müller, of Munich. Professor von Müller makes a strong point of the fact that since the Middle Ages the German medical student has always been a member of a university, and that medical education in Germany, like all other branches of university training, is founded on the principle of absolute freedom of learning. He shows how the German system depends to a considerable degree upon the recognition by the State of its duties in the control and support of medical education. Prussia, for instance, contributes in maintenance and salaries the sum of £95 per annum towards the education of each of its 5365 medical students, and this is regarded as money spent by the community upon the prevention of disease. Professor von

Müller describes the relations between the State, the hospitals, and the medical schools in Germany, and with reference to national insurance against sickness he prophesies that if the present British scheme passes into law we shall be compelled to build new hospitals for those insured persons who cannot afford proper treatment at home. Describing in detail the curriculum of the German medical student, he draws an interesting contrast between the methods of clinical instruction in England and in his own country. Although every German medical student is a university man, each on qualifying does not obtain a university degree, which is strictly reserved as an academic distinction. The final examination for the licence to practise is conducted under the control of the Empire. The teacher is usually the examiner, and the successful candidate has to devote a further year to supervised hospital work before he is allowed to practise. The author is particularly instructive in his remarks on the fundamental difference which should exist between the licence and the degree; on the necessity for reforming methods of instruction rather than methods of examination; on the essential qualifications of the teacher; and on the importance of throwing open all professorships, clinical as well as scientific, to all comers without favour. He concludes with a powerful argument for adequate and even generous expenditure upon medical education, so that present plans for reform may be broad enough to allow for future expansion to meet the increasing demands of science. Professor von Müller's Memorandum deserves careful attention. His views will not all be accepted, but even those which are most opposed to English ideas are interesting and suggestive, and in no way detract from the value of his evidence or the force of many of his contentions.

THE DEATH OF SIR SAMUEL WILKS.

WE regret to announce the death on the morning of Nov. 8th, in his eighty-eighth year, of Sir Samuel Wilks, Bart., M.D., F.R.S., senior consulting physician to Guy's Hospital and late Physician-extraordinary to the Queen. Sir Samuel Wilks was the *doyen* of the Royal College of Physicians of London, of which he became a Fellow 55 years ago, and of which he was President from 1896 to 1898. We shall publish a full obituary notice in our next issue.

Dr. Harvey W. Wiley, head of the Bureau of Chemistry in the United States Department of Agriculture, has been invited by the council of the Pure Food and Health Society of Great Britain to preside at the forthcoming congress of the society, to be held in March next. To Dr. Wiley is mainly due the passage, and still more the successful enforcement, of the United States Pure Food and Drugs Law. Naturally, he has aroused considerable enmity through his activity, but the good sense of the American people at large has sustained him, and he has recently emerged victorious from a legal onslaught by those who have resented interference with their "legitimate business."

Dr. F. W. Mott will introduce a discussion on the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System at a meeting of the Medical Society of London, on Monday next, at 8.30 P.M. The following have promised to take part in the discussion: Sir David Ferrier, F.R.S., Sir Victor Horsley, F.R.S., Dr. G. H. Savage, Dr. Risien Russell, Dr. T. B. Hyslop, Major H. C. French, R.A.M.C., Dr. Wilfred Harris, Dr. E. Farquhar Buzzard, and Mr. Alexander Fleming. The discussion will be continued on Monday, Nov. 20th, at 8.30 P.M.

AN extraordinary general meeting of the governors of Epsom College will be held at the office, 37, Soho-square, London, W., on Wednesday next, Nov. 15th, at 4 o'clock, when it will be proposed that alterations be made in the by-laws of the College. Governors wishing for information as to these alterations can obtain full particulars on application to the secretary at the office of the College.

WE regret to record the death from pneumonia on Nov. 1st of Dr. John Alfred Coutts, physician to the East London Hospital for Children, and well known as an authority on pædiatrics.

THE Nobel Prize for Chemistry has been awarded this year by the Swedish Academy of Science to Madame Marie Curie. The Nobel Prize for Physics has been awarded to Professor Wilhelm Wien, of Würzburg.

MEMORANDUM ON MEDICAL EDUCATION

SUBMITTED TO THE

ROYAL COMMISSION ON UNIVERSITY EDUCATION IN LONDON.

BY FRIEDRICH VON MÜLLER, M.D., LL.D.,
PROFESSOR OF CLINICAL MEDICINE AT THE UNIVERSITY OF MUNICH.

IT is impossible for me to attempt to give you advice with regard to the reform of medical education in London. I really know too little about the English medical schools of to-day, because it is many years since I visited the London hospitals, and during the last 20 years not only the science of medicine, but also the English medical schools, have made important progress.

The difference between English and German medical education is founded on their historical development, and we understand it only by the study of their history. Historical development is one of the most important factors in culture, and we never realise its importance so clearly as in the case of those younger countries where no historical development exists. But the burden of a noble past may sometimes become a hindrance to salutary reform which appears indeed like sacrilege.

Medicine and the University.

In England the instruction of the apprentices of medicine was always entrusted to the profession and the hospitals. The training was purely professional and practical as in the case of the trades. This system gave to English medicine its strength because it developed in the young beginner the faculty of strict observation, which is one of the great prerogatives of English medicine. In Germany since the Middle Ages medicine has always formed part of the university curriculum. Instruction in medicine was in former times almost entirely theoretical and historical, founded on the Latin classical literature and in closest connexion with philosophy, and even with theology. The darkest periods of decay in German medicine were those in which philosophical speculation and theological mysticism obtained a preponderant influence over medical problems.

But, on the other hand, this connexion between medical education and the University has proved beneficial because it admitted of a broader basis, a closer community with other sciences, and because it gave, and still gives, to the physician his social and intellectual position among the learned men of the nation. This is the reason why we shall never give up University education for the medical practitioner. The student who wishes to enter the medical faculty must have come through the same schools, and passed the same examinations in Latin and Greek, or in English, French, and Mathematics, as the students who intend to become lawyers, philologists, clergymen, or natural scientists. The preliminary conditions of admission to the university are the same for all students.

Freedom of the German Student.

The German medical student lives during his whole university career among the other students of the university. He has his friends, his sports, his duels among them, and therefore he is for the rest of his life connected

with the representatives of the other scientific vocations. University education in Germany is founded upon the principle of absolute freedom of learning, and this is just as true of the medical faculty as of any other. The student is not bound to follow a prescribed course of study. He is allowed to go his own way and to select his teachers and lectures himself, and nobody cares whether he is present at every lecture or whether he is idle. Only a few lectures, laboratory work, and clinics are obligatory. Too much tutelage and prescription are of no good in the education of the adult. This system of absolute liberty is of great importance for the teacher because he is always sure that his pupils come spontaneously to his lectures and not by compulsion.

The student is not bound to one university alone, he is free to wander to others, and the majority pursue the course of their studies in more than one university, like the wandering students of past centuries. We approve of this because it widens the intellectual horizon and induces a mental attitude of educated criticism. This system of absolute liberty has its dangers. Many weak and unprincipled characters are ruined by the total absence of control and neglect their studies. But the strong are allowed to develop their faculties in accordance with their own ideals. During his first and second year the medical student attends lectures and does laboratory work in physics, chemistry, botany, and zoology in the philosophical faculty, and he has the opportunity of widening his views by listening to lectures on philosophical or historical subjects. His teachers and laboratories are the same as for the students of the natural sciences, and this is right, because there is no such thing as special medical physics or chemistry, but the physician requires a broad knowledge of the general sciences of physics and chemistry.

The State and the Medical Student.

Another difference between the English and German institutions arises from the very different conceptions which obtain of the obligations of the State Government. In England and America social progress is to a great extent dependent on private initiative, and the creative impulse of independent and devoted individuals has always led to the greatest benefits for the community. In Germany and France the citizen is more accustomed to be guided by the Government, and he commits the important questions of the general welfare to the care of the State. Our view is that it is the interest of the community to obtain an adequate supply of the best medical attendants. We believe that neither the profession nor the hospitals have as great an interest as the community in the education of the young physician. Therefore it is the duty of the State Government, as the representative of the community, to care for the best possible education of the young medical generation and to provide the money for this purpose. We think this conclusion is logical. If so the State Government has also the duty of selecting the best teachers and of paying them adequately, so that they may be able to devote their whole time, or at least the greater part of it, to fulfilling their obligations as teachers. This principle applies to the clinical teacher as well as to others, for he is one of the most important in the medical faculty. It is not proper that the clinical professor should be burdened with great obligations as a teacher and at the same time compelled to support himself by private practice.

The salary of university professors in Germany is not bad. It amounts for an ordinary professorship to £200—£500 a year, and permits him to maintain a good social position. Besides the ordinary professors, who hold the principal chairs, there are extraordinary professors and junior teachers, who instruct in the auxiliary or less important subjects of medicine. They receive a salary of £100—£250 a year. The number of ordinary professors in every medical faculty is from 10 to 17. The number of the adjunct professors varies from 6 to 32. But this salary paid by the State does not form the whole income of the university professor. The student pays for every lecture or clinic a certain small sum, on the average 10*s.* to £2 for the half-year. A portion of this money is taken by the university; but the greater part goes to the professor, and this "*Collegiengeld*" forms a more or less considerable part of his income. This system is of some importance because the teacher's income depends to a great extent on the number of his students. He has therefore an interest in making his lectures as attractive as possible and in spending his time and energy for this purpose. Moreover, the State provides and maintains the buildings necessary for medical instruction and the equipment of the laboratories.

State Subsidies to Medical Education.

Every university has its large buildings for anatomy, physiology, and biological chemistry, for pathology, pharmacology, and hygiene. To keep pace with the extension of science the number and size of these institutions is constantly growing and demands enormous expenditure. I take, for example, Bavaria. It has 7,000,000 inhabitants, approximately the same as Greater London. Bavaria has three universities, and therefore three fully equipped medical faculties. The sum paid by the State for the salaries of the teachers of medicine in these three universities amounts to £19,700, or from £5000 to £8000 a year for each university. This does not include the salaries of the large number of assistants or the pensions of retired professors and the widows of deceased professors. Within the last ten years the University of Munich has got a new building for anatomy at a cost of £125,000, a new psychiatric clinic costing £100,000, a great ophthalmological clinic costing £125,000, and a new building for out-patients costing £125,000. The maintenance of these university institutions and laboratories of course involves a large annual expenditure. The sum paid for the maintenance of the different institutions for medical education, including the clinics in the three Bavarian universities, amounts to £80,000. The State Government of Bavaria was kind enough to give me these statistics and to give me permission to bring them before this Royal Commission. The other Confederate States of Germany have similar expenses for their medical faculties: Baden has two universities; Würtemberg, Saxony, Mecklenburg, Thuringia, Alsace, have each one. Prussia with its ten universities has of course much greater expenses than the other States of Germany.

At my request the State Government of Prussia has given me particulars of its expenditure on medical education. I feel greatly obliged indeed to the Prussian Ministry for Public Instruction for this information, and I am glad to be permitted to hand it over to your lordship. We learn from this evidence that Prussia spends on its ten universities for salaries for the medical teachers £116,000, for the maintenance of the medical institutes and clinics £413,200—a total of £530,000 a year. The number of students of medicine at the ten universities is 5365. Therefore the Prussian State contributes towards the education of every student of medicine £95 a year. For the building and fitting out of new medical institutes and clinics Prussia has expended within the last 25 years £2,573,400, or £102,936 a year. Every medical faculty of the 20 German universities has a medical, surgical and obstetrical, psychiatric, and ophthalmological clinic. Most of them have a clinic for dermatology and venereal diseases, for pædiatry and otology. Some of the greater ones have also clinics for orthopædics and throat diseases. Berlin and Munich have two parallel clinics, because one alone would not be sufficient for the great number of students of medicine, which in Munich exceeds 2000. In addition to the clinics there are large out-patient departments in special buildings and with their own staff of physicians and teachers. I have here a picture of the new building for out-patients in Munich erected in recent years. It contains out-patient departments for internal medicine, surgery, pædiatrics, gynæcology, otiatrics, throat diseases, dermatology, and orthopædics. The capital cost of the buildings and equipment exceeded £125,000, and its yearly maintenance costs £10,000. You see that Germany not only spends great sums for the army and navy, I say for the prevention of war, but also much money for medical purposes, and therefore for the prevention of disease.

Hospitals and Medical Schools.

The connexion between the clinical hospitals and the medical faculties is not of the same type in all universities. In some universities, such as Leipsic and Munich, the hospitals belong to the city; they are municipal, and by agreement the municipality opens its hospital entirely or partly to medical instruction. The clinical teachers are the physicians-in-chief of the city hospital, and are appointed by the city government and the university together. In Berlin the War Office of the kingdom is in possession of the Charité Hospital. The Charité was built by King Frederic

Wilhelm I. for the instruction of the surgeons of the army. In 1810 the University of Berlin was founded, and the general clinical teaching was transferred to the Charité. In some older universities the country hospitals came into connexion with the university. But with the expansion of clinical teaching it became evident that some of the older hospitals were not sufficient for the new requirements, and some municipal governments and other hospital administrations were at one time unwilling to offer increasing facilities to the medical faculties. Some of the municipalities were shortsighted enough to refuse altogether to admit students to their wards, because they feared that the patients would suffer at their inexperienced hands (and this not entirely without reason, because the patients really do suffer from too much examination).

For this reason the university—that is, the State—found itself more and more obliged to build its own university hospitals. Most of them have been built in the last 20 years, and are constructed on modern principles. It is necessary that the clinical hospitals should contain a sufficient number of beds, that they may be able to admit a sufficient selection of interesting and instructive cases, and also to cover the whole field of medicine. I think a medical clinic should have at least 120 to 150 beds. The Munich clinical hospitals have more than 1200 beds, the Leipsic clinical hospitals 1360 beds, the Charité at Berlin more than 1800 beds. But who shall pay for all these patients? The university again? No. The State pays only a comparatively small part for the admission of some specially interesting cases. The great majority of the cases are paid for by the insurance fund and by the Poor-law administration.

National Insurance and the Hospitals.

It will be well known to the Royal Commission that in Germany every workman and workwoman and all domestic servants are compulsorily insured against disease. In case of illness or accident they have the right to free treatment and admission to a hospital, and the insurance fund is obliged to pay to the hospital for every patient admitted a certain sum, averaging 3*s*. a day. This sum is almost sufficient to cover the expenses of the hospital, so that they are able to maintain their budget by the contributions from the insurance fund. The duty of caring for the destitute poor falls on the Poor-law commission of the parish, or on the municipality, and so they too are paid for. The hospital patients, therefore, are not admitted by charity, and our hospital work is therefore not so much charity work as in England. Most of our patients have a *right* to be admitted, and they cannot be discharged till they are cured, or till their time is over. This is the reason why our patients are not all willing to be examined by the students or to be made the subjects of demonstration in the theatre. The sum paid for insurance of the working-classes amounts in Germany to nearly £18,000,000 a year. Should we not characterise it as expenses paid for the prevention of social war?

England has now initiated new social laws for the insurance of the working-classes. I am sure you will soon be compelled to erect great new hospitals for those insured patients who cannot afford proper treatment at home. And it may be useful to bring those hospitals into connexion with the university teaching of medicine.

I now wish to draw your attention to some points of the existing medical education in Germany. The student enters the university at the age of 18 or 19 years. He first begins, as I told you, with physics, chemistry, biology, and other natural sciences in the classrooms and laboratories of the philosophical faculty. At the same time he receives instruction in anatomy and dissects in the anatomical institute of the medical faculty. In the second year and the first half of the third year he attends lectures in normal histology and embryology. The history of ontogenetic and phylogenetic development is proving year by year more important for the conception of pathological processes, for the anatomy of the brain, and other problems. It is therefore absolutely necessary to teach this science to the medical students. Lectures in physiology and laboratory work in experimental biology and biological chemistry complete the course of the preliminary studies. After he has passed his first examination in these subjects the student, in the second half of his third year, enters upon his professional studies through the door of general pathology and pathological anatomy in the dissecting room and microscopic laboratories of the pathological institute. At the same time he attends lectures on pharmacology, which is developing more and more into experimental pathology. In the hospital wards he takes practical instruction in the physical examination of patients, in propædeutics of surgery and midwifery, and in clinical chemistry and microscopy. He is then prepared to enter the clinic.

Clinical Teaching in England and Germany.

Our method of clinical teaching differs in one important point from yours. In English medical schools the young student is immediately brought in contact with the patient. Under strict control of the house physician he has to write the record of his patient and to follow the course of his case every day. From practical experience of a relatively small number of patients he learns how to examine and to treat them. In Germany, and especially in the larger universities, the clinical teacher shows to all his students in the theatre every day one or two selected cases which are specially adapted to illustrate the conception of the disease. The patient is examined before the whole class; the teacher explains the symptoms and discusses the general pathological questions which are connected with the case. So the student sees a great variety of diseases, and we try to give him a complete picture of the single case. Only when he has first acquired some general knowledge do we bring him into closer contact with the patient under control of the assistants. For every single patient shows such complicated possibilities that the beginner cannot understand the whole significance of the case until he has acquired a certain fund of knowledge. When the student in his fourth year has finished his hospital work in internal medicine, surgery, and midwifery, he goes to the out-patient department. Here he learns to deal with all the difficulties of his future professional life. The out-patient department should be for the advanced student the direct introduction to his practical work.

In England the student begins with the out-patient department and then enters the clinical wards. In Germany we go the reverse way. We believe it is more difficult and requires greater experience to deal with out-patients and find out quickly the essential points than to work under direction in the wards of a hospital where the cases are far better prepared and more thoroughly examined by the assistant and the head physician. During his last year the student has to attend the ophthalmological, psychiatrical, pædiatrical, and dermatological clinics, otiatrics, throat diseases, and other specialties. Lectures and laboratory work in bacteriology and hygiene and dissections of pathological cases form the conclusion.

The Final Examination and After.

After the end of his fifth year the student is allowed to go up for his final examination. But many of the students spend another half year before they do so. This examination gives the licence to practise. While the universities are under the management of the particular States, the examination is conducted under the control of the Empire, and the passing of it confers the right to practise in all parts of the Empire. The State Government controls the examination and appoints the examiners. It can appoint medical practitioners to be examiners, but as a rule the teachers—that is, the university professors—examine, and this rule has proved satisfactory. We do not find any disadvantages in this system. For the teacher it has the great advantage that he is able to find out whether his instruction has been successful, and whether his lectures were well understood by his pupils. For the student it is agreeable that he is sure not to find great discrepancies between his studies and his examinations. It is not at all obligatory that the student should pass this examination at the university at which he has studied.

After the State examination the successful candidate is not immediately permitted to enter upon his practice. He is compelled to devote a year entirely to practical hospital work under control of the hospital physicians. For this purpose not only the University hospitals but all the hospitals of Germany are open, and an average of 1200 young physicians are distributed among a large number of hospitals. In this way the more theoretical introduction of our German medical instruction is compensated by the practical work of the final year. Some of the larger city hospitals in Frankfort, Cologne, Düsseldorf, and Hamburg have established schools for post-graduates, which have been successful.

Within the last ten years the curriculum of the medical student has been extended by one half-year of university instruction and by the practical year, so that the student comes to earn his living one and a half years later than before. One could believe that this extension would keep back a great number of young men from the medical career, and would have diminished the number of medical students. Just the reverse took place. The number of medical students increased considerably. A study of so great interest like medicine, which shows such splendid scientific progress, will always attract the spirits of enthusiastic youth.

Examination is a very important thing, because it is a necessary control, not only for the students, but also for the teachers. But we should not forget that the examinations are not the principal object. They may be so in China. The range and scope of study are far more important, and it is not the province of the university to prepare for examinations but for the future life and vocation. Reform must begin with the instruction and not with the examinations. It is easy to conceive that reform often meets with more resistance from the teachers than from the students, and that it takes a much longer time and is more difficult to reform a corporation of teachers than to accustom the young generation to a reformed system.

We must distinguish sharply between the State examination, which gives the licence to practise, and the academical degree. The degree of M.D. can be conferred by the medical faculty in all German universities upon nearly the same conditions. While the State examination is especially practical and has to furnish evidence that the candidate is mature for practice, the degree of M.D. ought to indicate that the man has contributed his part to scientific work. The degree should be a scientific qualification. It is not a more rigorous second examination superimposed on the State examination which gives the degree, but the candidate must present a piece of scientific work: some experimental investigations or some clinical observations with consideration of the pertinent literature. This paper or dissertation must be approved by the faculty and must be printed.

The Qualifications of the Professor.

We have now got some idea of the course of medical study. Finally, I wish to say a few words about the teachers. Since the teachers of anatomy, biological chemistry, pathology, pharmacology, hygiene, and so on, are university professors, it is clear that their selection follows the same lines as in the case of the university professors in general. This means that in the case of a vacancy the best man available should be chosen. Only those who are actively engaged in scientific research and play their part in the promotion of science are capable of being university teachers. Since the clinical hospitals are well established institutions of the university, and because the clinical teachers are fully acknowledged university professors, they must be selected from the scientists and not from among the successful practitioners. Clinical medicine is as truly scientific as physiology, but it is not so much a science in itself, it is more an *application* of all available sciences to the relief of suffering humanity and the prevention of disease. The clinical professors, therefore, should have a wide scientific foundation apart from practical medicine, it may be in pathology (anatomical or experimental) or in physiology (physical or chemical); the clinical teacher must be fit not only to conduct the work of his wards but also the work of his laboratories. But above all he must be a good physician, because he has to instruct the young generation in practical medicine. If he should not be thoroughly acquainted with the practice of medicine there would soon arise a discrepancy between the university teachers and professional medicine—such a disagreement as we find between scientific jurisprudence and the practice of law, and which we all deplore. For such discrepancies the student has a keen sense. The professor of clinical medicine has to consider his professorial work as his principal duty, as every other university professor does. He has to devote the main portion of his day to his hospital wards, to his teaching, and his laboratory. It is not a recommendation for a clinical professor if he has a large private practice. On the contrary, it is a pity, and it is not fair if he wastes too much of his time in consultations instead of devoting it to his university work. The limit of his private consulting practice must be left to his own conscientiousness. Should he not be permitted to have private practice at all? I think this goes too far. The clinical teacher should be in constant touch not only with the progress of science, but also with general professional life, and the practitioners too. If he should be confined entirely to his laboratory and hospital he would be liable to make mistakes and come to wrong conclusions.

The clinical professor must have his staff of well-educated assistants. The conduct of a modern medical clinic needs to-day at least one assistant thoroughly experienced in biological chemistry, one in the experimental physical methods of biology, including the investigation of the heart and the X ray work, and one in bacteriology and serology, so that he may be able to work out the Wassermann test and difficult serological diagnoses. It is an excellent plan that one assistant have charge of all questions of the blood and pathological histological examinations, and one of the diseases of the nervous system. The assistants should not be changed every year, because it takes a long time to train and develop an assistant thoroughly, and because it is obvious that an older and highly accomplished assistant is of much greater value to the clinic than a junior man. The future clinical directors will be selected from the number of the old and thoroughly trained clinical assistants. The clinical assistant knows that his future career as a professor of medicine depends mainly on his scientific work, and this gives him a great compulsion to devote himself to scientific investigation. But a school of assistants of a high degree of excellence can only flourish under the conduct of a thoroughly scientific clinical director.

If the conception of the position of the clinical teacher I have placed before you is accepted, it is obvious that he must be in charge of his wards and laboratories throughout the whole year. Under this condition alone can he conduct the work of his wards and control his assistants and his nurses with a strong hand. If the chief physician changes place every three months, or if there are too many of them in one hospital, so that every one has only a small number of beds, then not the clinical professor but the house physician or the head nurse will be the real governor, to the detriment of the hospital. The selection of a university professor for a vacant chair should not be restricted to the junior members of the same school. And this rule applies, not only to the selection of the theoretical professors, but also and especially to the clinical positions. The selection must be made from a wide field, from all universities, not only of the same country, but of the same language.

Inbreeding is the worst thing in the development of the race, and a law which is so general in nature, and whose bad effects are so carefully avoided in all realms of nature, cannot be without importance for the regeneration of a university. Fresh blood and competition with the other best centres is the chief consideration for the welfare of the universities and hospitals.

The Cost and Aim of Reform.

Is it really necessary to incur such great expenses as we have spoken of in every medical school? Would it not be possible to conduct the school for the common practitioner in the old well-established manner? No. The general medical practitioner has always and everywhere to deal with the highest good, with the health of his fellow-creatures, and he must become more and more, even in the remotest village, the promoter of public health, and therefore he must be an educated man. In his responsible vocation he must have some ideal which elevates him above the daily sorrows and disappointments of life. And he will find his refuge in his science. Only a good scientific education will enable him to follow the progress of medicine with critical understanding. Without a good scientific training he would sink into mere routine.

In all questions which are connected with educational problems we must be aware that we have to care for the future—for the next generation. A plan of reform which is only intended to meet the wants of the present day is wrong from the beginning. All our plans for reform must be broad enough to allow further expansion and accommodation to the necessities of advancement in science.

EXMOUTH MEDICAL CHARITIES.—As a result of a recent carnival held at Exmouth the sum of £100 has been divided amongst different local medical charities.

MEDICINE IN THE ENCYCLOPÆDIA BRITANNICA.

VIII.[1]—VIVISECTION.—WITCHCRAFT.—WERWOLF.

Vivisection.

THE article upon the important subject of Vivisection has been entrusted to Mr. Stephen Paget. The article is not controversial; it is simply a catena of facts; and ought, we think, to convince every clear-headed person that results of great value, both to men and beasts, have been arrived at from experimental research in connexion with living animals. Of course, there are persons who object to any and every form of experimentation upon living animals, but the vast majority of reasonable persons, with more or less reluctance, allow that in certain cases and hedged about with proper restrictions experimentation upon such animals is justifiable. Mr. Paget's article will be of value to all such who are called upon to give an account for their attitude.

Mr. Paget commences by an account of the methods of modern vivisection as employed in this country, and shows with absolute certainty that the outcry against physiology and physiologists which we are so familiar with is based upon ignorance. Part II. is a careful and lengthy *résumé* of the scientific results obtained through animal experimentation in this country and abroad. The results are grouped under two heads: (A) Physiology; and (B) Pathology, Bacteriology, and Therapeutics. For the intelligent layman, who will naturally form by far the greater part of the readers of the Encyclopædia, Mr. Paget's informing contribution will be found both interesting and educational.

Witchcraft.

The article upon Witchcraft in Vol. XXVIII. of the Encyclopædia is from the pen of Mr. N. W. Thomas, Government anthropologist to Southern Nigeria, who has also in part supplied the article upon a closely related subject—namely, Werwolf.

The belief in witchcraft is one of the most curious and saddening phases of human thought, and in its origin goes back to primitive times. Mr. Thomas reminds his readers of a matter too generally forgotten—namely, that "the modern European conception of the witch is perhaps the result of the fusion of several originally discrete ideas." The more recent conceptions of a witch are that she is a woman who has made a compact with the devil, under which she is dowered with the power of preparing love potions and of causing storms or blasting crops, of causing sickness and death, of bringing about sterility, difficult labour, or impotence, and generally of working evil in various ways. She can also turn herself into the form of an animal, generally a hare or a cat. All these functions did not become fused in one person until comparatively late in the world's history, and the early witches, such as the witch of Endor, and Canidia, as described by Horace, possessed powers not claimed unless exceptionally by the modern witch of raising the spirits of the dead—

"ut inde
Manes elicerent, animas responsa daturas."

On the other hand, the power of raising the spirits of the dead was the common property of the sorcerer, and continued even in this country as late as the middle of the seventeenth century, a notable example of one who is alleged to have possessed the power being Edward Kelley.

In classical and post-classical times Thessalian witches were considered the most expert, and many of our readers will remember the accounts given of their doings by Apuleius in his novel Metamorphosis, commonly called the Golden Ass.

In mediæval and later times sexual matters played a large part in witchcraft, and hence arose the belief in witches' Sabbaths, in the concubitus daemonum and in incubi and succubi, for a grave discussion of which we may refer the curious to a treatise entitled "Dæmonialitas," by Louis Marie Sinistrari of Ameno, written late in the seventeenth or early in the eighteenth century. Mr. Thomas considers that witches did really believe in their alleged powers, and that suggestion and possibly telepathy played a great part in the results obtained. Some of them were probably insane. No one we think will deny that in a credulous and superstitious age the power of suggestion might have great effect. If a witch, a woman honestly believed to be possessed of supernatural powers, impressed upon someone the idea that he would waste away, it is quite probable that he would begin to do so, particularly if he had in the first case consulted her in the character of a sick man; his resisting powers being further lowered he would be very likely to be carried off by some intercurrent disease. Such an occurrence is still not unknown among primitive savage peoples, and as regards sexual matters the influence of the mind upon the question of impotence or the reverse is known to every psychologist. From these facts and from the dread which they inspired it was an easy descent to the credulities and cruelties which disgraced Europe in the sixteenth and seventeenth centuries, and how we are near to such horrors even now, where education has not made much advance, is shown by the fact that so late as 1895 an unfortunate woman was burned alive as a witch in a remote district of Ireland by her ignorant neighbours. That such insanity of mind could exist in the nineteenth century is all the more astonishing when we reflect that so long ago as 1584 one man—namely, Reginald Scot, had the courage and insight to write his "Discovery of Witchcraft, Proving the Common opinions of Witches contracting with Divels, Spirits, or Familiars; and their power to kill, torment, and consume the bodies of men, women, and children, or other creatures by diseases or otherwise; their flying in the Air, &c. To be but imaginary Erronious conceptions and novelties. ....."

Werwolf.

The article found under the above title is somewhat incomplete and must be studied in connexion with that upon lycanthropy. That men and women had the power to turn themselves into animals is a commonplace of folk-lore, but though witches were commonly credited with the power of becoming cats or hares it is rare to find a woman as a werwolf or other destructive beast—e.g., a tiger or leopard. Women werwolves are, however, profoundly feared in Armenia. The origin of the belief in werwolves is obscure, but in many cases it was intensified or supported by the acts of Sadistic maniacs, who themselves believed that they committed their acts under the form of a wolf. In countries where the wolf is not such a pest as he formerly was in Europe, other animals take his place, such as the leopard in Africa or the tiger in India. The literal meaning of the word werwolf is simply man wolf, but in practice it came to be applied as meaning a man wolf with a lust for destruction and not simply a human being transformed into a wolf by sorcery such as the victims of Circe.

There is one passage in the Encyclopædia article about which we think that doubt is allowable. The authors, Mr. N. W. Thomas and the late Mr. J. F. M'Clennan, say quite correctly that all werwolves were not viciously disposed towards mankind. But they then go on to give as examples the wolves mentioned by Baronius who in 617 tore to pieces some heretical friars, and also the wolf which guarded the head of St. Edmund the Martyr, King of England. Is there any authority for supposing that these wolves were transformed men and not simply animals acting under the guidance of God in the same way that the lion slew the false prophet or the bears devoured the rude school children as related in the Scriptures (compare the wolf which repented at the preaching of St. Francis and lived a gentle life)? Friendly animals are of course a well-known feature of folk-lore, and all saints, both Christian and others, are reported to have had, and most probably did have, a remarkable influence over animals. As a whole the two articles (Lycanthropy and Werwolf) are of much interest, and if the sexuo-psychological side of the question has been but just mentioned, this is only what is to be expected in a treatise intended for the general reader.

[1] Articles I., II., III., IV., V., VI., and VII. were published in THE LANCET of Feb. 25th (p. 530), March 4th (p. 609), 11th (p. 692), and 25th (p. 828), April 1st (p. 897) and 15th (p. 1026), and Oct. 7th (p. 1035), 1911, respectively.

THE Aberdeen University Club, London, will hold its annual dinner on Wednesday, Nov. 15th, at 7 P.M., in the Trocadéro Restaurant, Piccadilly-circus, London, W., with Dr. Albert Westland in the chair.

MEDICINE AND THE LAW.

Medical Men and the Midwives Act.

THE death of a woman at Leicester led recently to an inquest at which a medical man's conduct was made the subject of an expression of unfavourable opinion by the jury owing to circumstances arising mainly out of the operation of the Midwives Act, for which he was in no way responsible. The deceased woman had apparently engaged for her approaching confinement a midwife 68 years of age, and it must here be pointed out that all practising midwives were allowed to be registered under the Midwives Act when it first came into force, subject to their bearing "a good character." Two months before she expected her confinement the deceased was taken ill with hæmorrhage and severe pains and her neighbours summoned the midwife, who, however, pronounced the symptoms to be of no importance and not due to the near approach of confinement. The neighbours, however, as the woman continued ill, sent for a medical man who happened to be temporarily occupying the practice of a deceased practitioner on behalf of the executors. He arrived, and on learning the nature of the case, according to the story of the neighbours mentioned, pointed out that it was one for which his fee would be a guinea, and said that if that sum was not forthcoming application should be made to the parish medical officer. According to the medical man himself he had no information to lead him to suppose that the patient was in a serious condition, and he would not have hesitated to attend her had he thought that his assistance was urgently required. He was aware that a midwife had had to do with the case he was under the impression that another medical man was also concerned in it, and he had not been sent for under the midwife's advice, in which case he would have been entitled to a notice from her as to the reasons for which he was wanted. It may be also pointed out here that a medical man attending on such an occasion as that described, without the prescribed particulars as proof of the midwife having advised that he should be sent for, would very possibly find a difficulty in obtaining his fee from the guardians, even if they were willing to pay such fees where the regulations of the Central Midwives Board had been complied with. In the case in question two other medical men afterwards attended, but the patient died after the birth of a stillborn child, and the question of whether her decease was in any way due to the delay consequent upon the refusal of the first medical practitioner, was prominently before the jury. The coroner, in summing up, dealt with the conduct of the midwife, who clearly failed to recognise the nature of the case and to deal with it in accordance with the rules imposed upon her, and he also referred to the position of the medical man, acknowledging that there is no obligation upon the medical profession to practise without remuneration. He appears, however, to have laid the evidence before the jury as offering two alternatives. That either the medical man knew the grave condition of the deceased, in which case his refusal to assist her without a fee being first paid would be inhuman, or that he failed to realise the gravity of her condition, which the neighbours had appreciated already and which another medical man recognised later, and that in that case he was guilty of a grave error of judgment. This, it seems to us, was to impale unfairly the medical man upon one horn or other of a dilemma. As a matter of fact, he made no examination of the woman, and had no reason whatever to believe that the case was one of imminent danger.

Trials for Infanticide.

In THE LANCET of Oct. 28th, p. 1223, reference was made to some observations of Mr. Justice Scrutton upon the sympathy extended by juries to prisoners in cases of alleged infanticide. Since then, before Mr. Justice Ridley at the recent Derbyshire assizes, two women, a mother and daughter, have been tried for murder and convicted of concealment of birth in a case which shows the difficulty of establishing the commission of the capital offence, owing to the usual circumstances of delivery upon such occasions, and apart from the sentiment of pity which may conduce to acquittal. The story told by the mother in the witness-box was to the effect that her daughter returned from service without her condition being suspected by her parent, and was afterwards found by her unconscious upon the concrete floor of the kitchen with a newly-born child lying under her dead. There was an apparently contradictory statement by the same witness to a medical witness that the child had lived about ten minutes, which she explained as based upon what her daughter had said on recovering consciousness. The daughter also had told the police that the child had received no injury at birth and was never suckled. That the body had been secretly disposed of was not disputed. The medical evidence was of importance, as there were two fractures of the child's skull, and Dr. R. G. Chase, called for the prosecution, cited authorities to show that by experiment it had been found that in one case only out of 30 a double fracture was obtained by dropping the bodies of stillborn infants from a height of 30 inches upon a hard floor. This evidence obviously was not sufficient to establish the impossibility of accident in the case before the jury, although it undoubtedly pointed to the probability that the death of the child had been due to criminal violence. In these circumstances the possibility of the skull having been fractured through the child falling to the ground in the process of self-delivery was naturally dwelt upon by counsel for the defence, and in the result, as has been stated above, both prisoners were acquitted of murder and convicted of concealment of birth only. Mr. Justice Ridley, however, passed a sentence upon each of them of 18 months' hard labour, observing that he was not disposed to believe anything that they had said in the witness-box. He told them that the child's body bore the evidence of very serious injuries, and that they must remain suspected of having brought them about. Either these people are innocent or guilty of murder. The jury acquitted them, but the judge has taken the unusual step of placing them for ever under the stain of the greater crime.

The Case of Miss Holder.

At the recent Devon assizes held at Exeter Miss M. M. Holder, 20 years of age, was convicted of stealing a number of articles the property of Mr. C. O. Baines and his wife, and on being convicted was sentenced to 18 months' imprisonment with hard labour. The admitted facts and the nature of the defence have attracted considerable attention to the case, and both were of unusual character. To put them briefly, Miss Holder committed the offence by going to the house of Mr. and Mrs. Baines while they were out and the house was empty, but with the knowledge of Mrs. Baines and with a latchkey supplied by her. She had already borrowed a cardboard box which was in the house in order to send away a hat in it, and she was seen to leave the house on the occasion in question carrying this box, which appeared to be heavy. She tried to send it away by parcels post, but it was beyond the prescribed weight for that purpose, so she left it at the railway station, where it was taken possession of by the police and found to contain besides a coat belonging to the accused sundry articles, stated to be of silver or silver-plated, including a kettle, coffee-pot, teapot, sugar-basin, cream-jug, jam-dish, and butter-dish. The defendant went into the witness box and told a story which had been already suggested in the cross-examination of the prosecutor, but which was entirely uncorroborated, of amatory advances made to her on frequent occasions by Mr. Baines; and she frankly suggested that out of revenge for her threats to inform his wife of the misconduct she thus alleged, he had had the teapot and other articles placed in the cardboard box, and also that rings belonging to Mrs. Baines which were found in a box at her home by the police in company with the prosecutor, were at that time put there by him. She accounted for not having attached importance to the weight of the cardboard box when she took it from the house, and when she was proved to have obtained an errand boy to take it to the railway station, by saying that she was then unwell and believed that on that account it seemed heavier than it really was. The jury in convicting the prisoner recommended her to mercy on the ground that they could find no motive for the thefts, and it may be mentioned that she is stated to be the adopted child of a lady of some means, and to have been driven to the court in a carriage and pair—at any rate, no suggestion of any pecuniary need was made. After the verdict a medical man was called who gave evidence to the effect that,

in his opinion, the prisoner was subject to hysteria, and in passing sentence the Lord Chief Justice, after saying to the prisoner, "You made atrocious charges against an honest man and a friend," is reported as having used these words, "You were not, perhaps, in your right mind at the time of the thefts, but undoubtedly you stole the goods." Presumably the attention of the Home Office will be called to his utterance and to the salient features of a crime, the futility of which and the hopelessness of it escaping detection, coupled with the nature of the defence raised, would seem to justify the suggestion that it was committed by a person not in her "right mind." No doubt the defence was insisted upon and excluded any other, but the passing of a sentence of hard labour upon a prisoner who, according to the expressed view of the judge sentencing her, may not have been in her right mind, even if it be followed by other measures to meet the case, hardly seems desirable or consistent with justice. The convict's line of defence makes it impossible for her to expect much public sympathy, but medical men will view the matter otherwise.

A Medical Man and the Justifiable Use of Force.

According to the evidence given at the Brentford police court recently Mr. George Phillips, a medical man practising in West Ealing, had occasion to remonstrate with the husband of a female patient in the course of last year on the ground that his conduct had caused injury to her health. This was resented by the husband to such an extent that many months afterwards he summoned the medical man to his house by telephone, and having got him there barred his exit and tried to insist upon retractation of what had been said and an apology. Mr. Phillips refused to tender either, and after being called abusive names by his captor had to seek an exit by throwing the angry husband on to a couch, on account of which forcible proceeding he was summoned for assault. The Bench, however, after hearing the prosecutor's evidence, at once said that the only question was whether the defendant used such force as was necessary to enable him to leave the house, and being of the opinion that that was all he had done dismissed the case. It is extremely rare, we are glad to say, that we have to record such resentment against a medical man for speaking his mind.

Old Age Pensions and Starvation.

At an inquest held by Mr. Troutbeck at the Battersea Coroner's Court recently an account was given of the life of an aged couple which illustrates an undoubted danger which follows in some cases upon the granting of old age pensions, where the recipient is unable to supplement them through the goodwill of relatives or by other means. The deceased was a woman receiving an old age pension and living with her husband, who will not attain the age entitling him to a pension until next June. The two shared a single room, for which they paid 3*s.* weekly rent, and their income consisted of the 5*s.* pension of the wife, supplemented by such casual additions as the aged husband could earn by window cleaning, gardening, and other casual employment of a precarious nature. They had, in fact, 1*s.* per week each for food, and the pension which they shared, coupled, no doubt, with the prospect of the husband becoming entitled to one in the near future, kept them both out of the workhouse and the old woman from the infirmary. She had been unable to do anything for herself for 12 months, and her husband, with the aid of their landlady, had attended to her wants as best he might. Dr. L. Freyberger, giving the result of the post-mortem examination which he had made, deposed that death was due to heart failure, accelerated by acute inflammation of the lungs and want of food. He also stated that the husband, who was quite unfit to give his wife the attention necessary in her condition, was suffering from senile decay. The struggle of the poor to keep out of the workhouse must always evoke a measure of sympathy, and the rates are saved through their endurance of semi-starvation. At the same time the 5*s.* paid by the State can hardly be said to be well expended upon those persons whom it tempts to prolong a miserable existence in squalid and insanitary homes without any possibility of being able to provide for themselves reasonably decent maintenance.

THE BOARD OF EDUCATION AND MEDICAL INSPECTION AND TREATMENT OF LONDON SCHOOL CHILDREN.

THE receipt of an important letter from the Board of Education declining to sanction proposed extensions of the present scheme for the medical treatment of London school children was reported to the Education Committee of the London County Council on Nov. 8th. In July the Council decided to invite the Board's approval of agreements with 10 hospitals and 13 committees of local medical practitioners.[1] In 10 cases the proposed agreements with committees of medical practitioners were in respect of new centres to be established.

The Board of Education in its letter said that the proposed establishment of these centres constituted a very large extension of the Council's scheme of treatment, and while the Board fully appreciated the desire to make further and continuous progress towards the provision of a complete scheme it appeared doubtful whether the Council would be wise in committing itself at this juncture to such an extensive development of this single type of remedial agency. The reorganisation of the Council's arrangements for the administration of medical inspection and treatment was a matter of the first importance to the school medical service of London. Though the Board did not suggest that all extension of the London treatment scheme should be postponed pending the reorganisation, it appeared desirable that until the new organisation had been established and the responsible officer (who it was understood would combine the offices of county medical officer of health and school medical officer) had had time to consider and advise the Council on the matter, any extensions of the work should be confined to rather narrow limits, and so far as they were immediately necessary should be undertaken only on a provisional basis.

The Board was not satisfied that the establishment of a large number of treatment centres, conducted under conditions similar to those existing at the Norwood and Wandsworth centres, was in all respects desirable. The Board recognised that much valuable work had been done there, but it had regarded the existing organisation of those centres as tentative and experimental, and doubted whether at the present time it was wise to occupy so much ground in all parts of London by this particular form of agency, the establishment of which might prejudice the development of other agencies more appropriate to the circumstances, and better fitted to serve as a basis of a complete and permanent system. Indeed, the Board held that the constitution of these centres must be modified in several important respects if they were to form an integral part of the London system of coördinated inspection and treatment; and it was almost essential that in introducing the modifications required, the Council should have the advice and assistance of the chief medical officer who would be appointed shortly.

The Board would be very reluctant to refuse or even to delay provisional sanction to any well-considered extension of the Council's scheme of treatment which would be put into operation at once and be used for the immediate relief of children whose defects had been ascertained but who could not now obtain treatment because the existing means at the disposal of the Council were inadequate. But from the information before it and after considerable inquiry the Board was not satisfied that the existing conditions in respect of medical inspection and medical treatment in London were such as to justify the particular form of development on such an extensive scale as the Council proposed for immediate adoption, and therefore some postponement was preferable. It seemed hardly possible for such establishment to be effected within the next three months as the Council suggested. Not one of the new centres, except that at Deptford, was in fact as yet in existence; nor had any definite arrangements yet been formulated in regard to the acquisition of premises, the appointment of the medical staff, or the precise control and management of the new medical treatment centres. It would appear, therefore, that the postponement of the adoption of these extensions for a few months, pending the intended reorganisation of the Council's administrative

[1] THE LANCET, July 22nd, 1911, p. 246.

arrangements which was to take effect in less than three months from the end of October (the date of the Board's letter), would not involve the loss of any immediate benefits to the children, but would be more likely to result in the ultimate adoption of a scheme more closely coördinated with the Council's system of medical inspection, more definitely under the supervision of the authority, and more directly fitted to the needs of the area as a whole. The ultimate gain to the children resulting from the establishment of such a scheme would far outweigh any disadvantages which might arise from temporary postponement. In these circumstances, it appeared very desirable that the matter should be further considered by the Council, and the Board had decided therefore that it would not be justified at this stage in sanctioning the proposed large extension of the scheme.

The Board intimated that it would be prepared to sanction the proposed arrangements with the committee of the Deptford Children's Health Centre, and the continuance until Dec. 31st, 1912, of the arrangements for the medical treatment of children at the nine hospitals and three treatment centres (Norwood, Wandsworth, and Woolwich), in respect of which sanction had already been given for the year ending Dec. 31st, 1911. This sanction covered the proposed modifications and extensions of the arrangements with certain of these institutions, and was subject to the Council furnishing the Board before the end of this calendar year with a statement to the effect that the committees of each of the hospitals and treatment centres concerned had consented to the continuance and extension or modification of the existing agreements. The Board would also require to receive from the Council not later than Oct. 31st, 1912, a full report by the Council's school medical officer on the working of the arrangements now sanctioned.

The Children's Care Subcommittee, in reply to this letter, urged that as the scheme under discussion was submitted in response to the expressed wishes of the Board, it could not be intended that the Council should defer the question of any further provision for medical treatment until it had considered the matter in relation to the reorganisation of the general medical work of the Council. The subcommittee read the letter of the Board of Education as implying that, while the Council's proposals as a whole could not be agreed to, the Board would be willing to consider individual proposals of an urgent nature on their merits.

The Education Committee decided, without discussion, to write to the Board inquiring whether individual proposals for providing treatment might be submitted pending the reorganisation of the Council's medical service.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 8061 births and 4182 deaths were registered during the week ending Nov. 4th. The annual rate of mortality in these towns, which had steadily decreased from 21·2 to 13·3 in the ten preceding weeks, slightly rose to 13·5 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these towns averaged 14·3, or 0·1 per 1000 above that recorded in London during the same period. The death-rates in the 77 towns last week ranged from 4·5 in Devonport, 6·4 in King's Norton, and 6·8 in Hornsey and in Dewsbury, to 19·3 in Middlesbrough, 20·5 in Great Yarmouth, 20·6 in West Bromwich, and 20·8 in Bootle. The 4182 deaths from all causes in the 77 towns were 54 in excess of the number returned in the previous week, and included 301 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 334 in the ten preceding weeks. Of these 301 deaths, 128 resulted from infantile diarrhœa, 56 from diphtheria, 36 from measles, 35 from enteric fever, 30 from scarlet fever, and 16 from whooping-cough, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·0 per 1000, against 1·3 and 1·1 in the two previous weeks. The deaths of infants under 2 years of age attributed to diarrhœa, which had continuously decreased from 2714 to 164 in the ten preceding weeks, further declined to 128 last week, and caused the highest annual death-rates of 1·6 in Birkenhead and in West Hartlepool, 1·7 in Walsall, 2·0 in Stockton-on-Tees, and 2·9 in Warrington. The deaths referred to diphtheria, which had been 44, 60, and 46 in the three preceding weeks, rose to 56 last week; 21 deaths were recorded in London and its suburban districts, 4 in Leeds, and 3 in Preston. The fatal cases of measles, which had increased from 19 to 48 in the five preceding weeks, declined last week to 36, and included 12 in London, 4 in Nottingham, and 3 in Burnley. The deaths attributed to enteric fever, which had been 39, 48, and 28 in the three previous weeks, rose last week to 35, and included 10 in London and its suburban districts, 4 in Hull, and 2 each in Liverpool, Bradford, Leeds, and Newcastle-on-Tyne. The deaths referred to scarlet fever, which had averaged 14 in the four preceding weeks, rose last week to 30, and of these 3 were registered in London, 3 in Stoke-on-Trent, and 2 each in Birmingham, Coventry, Nottingham, Liverpool, Leeds, and Sheffield. The fatal cases of whooping-cough, which had been 35, 25, and 30 in the three preceding weeks, declined last week to 16, and was the lowest number recorded in any week of the current year; 3 deaths were recorded in London, 2 in Great Yarmouth, and 2 in Liverpool. The number of scarlet fever patients in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 2180 in the nine preceding weeks, had further advanced to 2189 on Saturday last; 269 new cases of this disease were admitted to these hospitals during the week, against 355, 344, and 297 in the three previous weeks. These hospitals also contained on Saturday last 1178 cases of diphtheria, 161 of whooping-cough, 146 of enteric fever, and 85 of measles, but not one of small-pox. The 1140 deaths from all causes in London last week were 8 in excess of the number in the previous week, and included 170 which were referred to diseases of the respiratory system, against 210, 218, and 210 in the three preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 150 and 158 in the two preceding weeks, declined to 144 last week, and 355 inquest cases were registered. The causes of 24, or 0·6 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Sheffield, Leeds, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, Portsmouth, and in 52 other smaller towns. The 24 uncertified causes of death during the week under notice included 5 in Liverpool and 2 each in Birmingham, Bootle, and Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 793 births and 538 deaths were registered during the week ending Nov. 4th. The annual rate of mortality in these towns, which had been 15·7 and 16·7 per 1000 in the two preceding weeks, declined to 16·4 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·0 per 1000, and was 1·7 per 1000 above the mean death-rate during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 9·3 and 13·2 in Paisley and Greenock to 18·0 in Dundee and 18·3 in Glasgow. The deaths from all causes in the eight towns were 10 fewer than the number in the previous week, and included 47 which were referred to the principal epidemic diseases, against 47 and 52 in the two preceding weeks; of these 47 deaths, 15 resulted from measles, 12 from diarrhœal diseases, 11 from diphtheria, 5 from whooping-cough, and 4 from scarlet fever, but not one from small-pox or from enteric fever. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·4 per 1000, and was 0·4 per 1000 above the mean death-rate from the same diseases in the 77 large English towns. The deaths attributed to measles, which had steadily risen from 1 to 12 in the five preceding weeks, further increased to 15 last week, and comprised 8 in Glasgow, 6 in Aberdeen, and 1 in Leith. The deaths referred to diarrhœal diseases, which had been 41, 20, and 19 in the three previous weeks, further declined last week to 12, all but one of which were of infants under two years of age; 5

deaths were recorded in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 11 fatal cases of diphtheria were 2 in excess of the average in the four preceding weeks, and included 6 deaths in Glasgow. The 5 deaths referred to whooping-cough corresponded to the average in the four previous weeks, and comprised 4 deaths in Glasgow and 1 in Perth. The 4 deaths referred to scarlet fever were 3 fewer than the number in each of the two preceding weeks, and included 2 in Glasgow. The deaths referred to diseases of the respiratory system, which had been 80, 78, and 111 in the three preceding weeks, rose again last week to 116, and were 32 in excess of the number in the corresponding week of last year. Of the 538 deaths from all causes in the Scotch towns last week, 158, or 29 per cent., were recorded in public institutions, and 19 deaths were attributed to different forms of violence. The causes of 18, or 3·3 per cent., of the deaths in the eight towns last week were not specified or not certified; in the 77 large English towns the proportion of uncertified causes did not exceed 0·6 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 568 births and 378 deaths were registered during the week ending Nov. 4th. The annual rate of mortality in these towns, which had declined from 19·6 to 17·1 in the four preceding weeks, was again equal to 17·1 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·1 per 1000; in the 77 English towns the mean annual death-rate during the same period did not exceed 14·3 per 1000, while in the eight Scotch towns it was equal to 16 0. The annual death-rate last week was equal to 20·4 in Dublin (against 13·1 in London), 15·1 in Belfast, 22·5 in Cork, 19·2 in Londonderry, 17·7 in Limerick, and 19 0 in Waterford; while in the 16 smallest of these Irish towns the annual death-rate did not exceed 11·0 per 1000. The 378 deaths from all causes were 1 in excess of the number in the preceding week, and included 40 which were referred to the principal epidemic diseases, against numbers decreasing from 134 to 47 in the seven preceding weeks; of these 40 deaths, 24 resulted from diarrhœal diseases, 6 from measles, 4 from enteric fever, 4 from scarlet fever, 1 from whooping-cough, and 1 from diphtheria, but not one from small-pox. These 40 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·8 per 1000; in the 77 English towns the mean death-rate from these diseases did not exceed 1·0 per 1000, while in the eight Scotch towns it was equal to 1·4. The deaths attributed to diarrhœal diseases, which had steadily decreased from 121 to 27 in the seven preceding weeks, further declined to 24 last week, and included 21 of infants under two years of age; 15 deaths were recorded in Dublin, 3 in Cork, 2 in Belfast, and 2 in Waterford. The 6 deaths from measles were equal to the number in the previous week; 4 deaths were registered in Dublin and 2 in Cork. Of the 4 deaths referred to enteric fever, which were equal to the average in the five preceding weeks, 3 occurred in Dublin and 1 in Belfast. The 4 fatal cases of scarlet fever were 2 in excess of the number in the previous week, and comprised 2 in Dublin and 2 in Belfast. The fatal case of whooping-cough was returned in Dublin, and that of diphtheria in Waterford. The deaths referred to diseases of the respiratory system, which had been 66 and 57 in the two preceding weeks, rose to 77 last week. Of the 378 deaths from all causes in the Irish towns last week, 122, or 32 per cent., were recorded in public institutions, and 7 deaths were attributed to different forms of violence. The causes of 25, or 6·6 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 0·6 per cent. in the 77 large English towns, and was equal to 3·3 per cent. in the eight Scotch towns.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Mr. Alfred Miller has been elected Registrar of the Royal College of Surgeons in Ireland in the room of Mr. G. F. Blake, retired.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Staff-Surgeon: W. L. Martin to the *President*, additional, for temporary service in Medical Department, Admiralty. Surgeons: E. M. Browne to be lent to Shotley Training Establishment; J. H. McDowall to the *Pelorus*, for voyage out, and to the *Perseus*, on recommissioning; and P. F. Minett to the *Lord Nelson*.

ARMY MEDICAL SERVICE.

Colonel Robert H. Forman is placed on retired pay (dated Nov. 2nd, 1911). Lieutenant-Colonel Alexander F. Russell, C.M.G., from the Royal Army Medical Corps, to be Colonel, vice R. H. Forman (dated Nov. 2nd, 1911).

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Thomas W. O'H. Hamilton, C.M.G., retires on retired pay (dated Nov. 4th, 1911). Major Charles A. Young to be Lieutenant-Colonel, vice A. F. Russell, C.M.G. (dated Nov. 2nd, 1911).

Colonel H. J. R. Moberly, principal medical officer of the Bangalore and Southern Brigades, has been struck off the strength of the Indian establishment with effect from Oct. 29th. Lieutenant-Colonel S. Westcott, C.M.G., commanding the station hospital at Chakrata, has been detailed as Senior Medical Officer on board the troopship s.s. *Dongola*, which left Bombay for Southampton on Oct. 26th. Lieutenant-Colonel M. J. Sexton has been placed under orders to proceed to South Africa for a tour of service during the ensuing trooping season. Lieutenant-Colonel T. Daly has been selected to command the Station Hospital at Peshawar. Lieutenant-Colonel H. H. Brown, from Murree, Second (Rawal Pindi) Division, has been detailed for a tour of duty at Aden, in succession to Lieutenant-Colonel R. L. R. Macleod, returning to England on the troopship s.s. *Plassy* on Nov. 9th from Bombay. Lieutenant-Colonel R. H. Penton has been appointed to command the Station Hospital at Poona. Lieutenant-Colonel R. Kirkpatrick has been transferred from Devonport to Egypt. Lieutenant-Colonel W. A. Morris, in charge of the military hospital at Cawnpore, has been detailed for duty at Allahabad. Major G. W. Tate, recruiting medical officer at Dublin, has been appointed Medical Inspector of Recruits to the Irish Command, in succession to Lieutenant-Colonel M. L. Hearn, who has proceeded to Ceylon as Senior Medical Officer. Major B. J. Inniss, from Gravesend Military Hospital, has been posted to Belfast to take over the charge of the Military Hospital at that station with effect from Dec. 1st next. Major W. E. P. V. Marriott, on return from Gibraltar, has been ordered to Ireland, and on arrival will be posted to the Dublin District. Major H. S. Roch, Adjutant of the Royal Army Medical Corps School of Instruction at Leeds, has been selected for appointment as Clinical Pathologist, South African Command. H.E. the Commander-in-Chief has sanctioned one year's extension of Indian tour of service to Major F. Smith, D.S.O., specialist sanitary officer, Second (Rawal Pindi) Division. Major E. M. Hassard has been selected to command the Station Hospital at Lahore Cantonments. Major W. P. Gwynn, from Quetta, has been appointed for duty as Medical Embarkation Officer at Karachi during the ensuing trooping season. Major W. A. Woodside has been detailed for a tour of service in India, and on arrival will be appointed to the Seventh (Meerut) Division of the Northern Army. Major F. J. W. Porter, D.S.O., on the closing of Lodmoor Camp, has joined at Cosham for duty. Captain E. P. Lauder, from Aldershot, has taken up duty at Cork. Captain H. H. J. Fawcett has been appointed Adjutant of the Home Counties Division, Royal Army Medical Corps School of Instruction, in succession to Captain F. M. Parry, who has completed his three years' tenure of the appointment. Captain B. A. Craig, Captain W. J. E. Bell, and Captain H. M. J. Perry, on termination of their tour of foreign service at Hong-Kong, have been directed to return home. Captain A. Dawson has been appointed Specialist in the Prevention of Disease and placed in charge of the Enteric Fever Convalescent Depôt at Wellington, Madras Presidency. Captain R. B. Black, from the Royal Army Medical College, has taken up duty with the Egyptian army with the local rank of Bimbashi. Captain A. J. Williamson,

specialist in advanced operative surgery at the Royal Herbert Hospital, Woolwich, has been placed under orders by the War Office for a tour of service in the Straits Settlements. Captain C. W. E. S. Fawcett, commanding the station hospital at Thayetmyo, Burma, has been detailed for duty on the troopship s.s. *Dongola*, which left Bombay on Oct. 26th. Captain L. L. G. Thorpe, from West Down, has joined for duty at the Royal Victoria Hospital, Netley. Captain T. S. Dudding has been appointed Company Officer at Colchester, in succession to Captain F. M. H. Ommanney. Captain W. S. Crosthwait, on the closure of Moore Park Camp, has been posted to Fermoy. Captain F. Forrest, at present serving at Bangalore, has been granted eight months' general leave of absence home from India with effect from Dec. 1st. Captain C. R. Sylvester-Bradley has been appointed Adjutant to the Royal Army Medical Corps School of Instruction at Cosham. Approval has been given by the Secretary of State for War for the employment of Lieutenant C. Robb, at present serving at the Curragh, with the Public Health Department of the Government of Egypt. Lieutenant G. H. Stack has taken up duty in the London District. Lieutenant R. C. Priest, in medical charge of the headquarters staff and families at Colchester, has been granted one month's leave of absence prior to embarkation for a tour of service in India. Lieutenant E. C. Lambkin, from the Guards Depôt at Caterham, has joined for duty at the Military Hospital, Hong-Kong. Lieutenant F. W. M. Cunningham, from Donard Camp, has taken up duty at the Curragh.

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions of officers of the Indian Medical Service:—

Captain to be Major (dated July 27th, 1911): Michael Harris Thornely.

Lieutenants to be Captains (dated August 1st, 1911): Archibald Campbell Munro, Ram Nath Chopra, Alfred Geddes Tresidder, Gordon Gray Jolly, Alister Argyll Campbell McNeill, Robert Long Gamlen, Abdus Sattar Khan, George Frederick Graham, Maneck Dhunjishaw Wadia, Taylor David Murison, Sohrab Shapoorji Vazifdar, John Joseph Harper Nelson, Edward Selby Phipson, Fleet Floyd Strother Smith, Arthur Jessop Symes, and Thomas Crawford Boyd.

The King has also approved of the retirement of Lieutenant-Colonel John Lawrence Van Geyzel (dated July 9th, 1911).

Lieutenant-Colonel M. A. T. Collie has been appointed to officiate as Surgeon to the Gokuldas Tejpal Native General Hospital, Bombay, during the absence on leave of Lieutenant-Colonel J. C. Hojel. Lieutenant-Colonel J. K. Close has taken up duty as Civil Surgeon at Allahabad. Lieutenant-Colonel G. H. Baker has been appointed a Civil Surgeon of the First Class, in succession to Lieutenant-Colonel J. F. MacLaren, retired. Lieutenant-Colonel J. M. Cadell, civil surgeon of Ghazipur, has been granted privilege leave, combined with furlough, for a total period of one year and four months. Major J. M. Woolley, senior medical officer at Fort Blair, has been appointed an Assistant Superintendent of the Settlement by the Government of India. Major G. Hutcheson, civil surgeon of Aligarh, has been placed in medical charge of the Bulandshahr district. Major J. Penny, Bengal Presidency, has been granted three months' extension of his leave by the Right Honourable the Secretary of State for India. The services of Captain T. S. B. Williams have been placed at the disposal of the Foreign Department of the Government of India. Captain J. Morison has taken up duty as Assistant to the Director of the Bombay Bacteriological Laboratory during the absence on leave of Captain J. Cunningham. Captain H. S. Hutchinson has been appointed to officiate as civil surgeon at Karachi during the absence on special duty of Lieutenant-Colonel B. B. Grayfoot. The services of Captain W. Tarr have been permanently placed at the disposal of the Chief Commissioner of the Central Provinces. Captain A. J. H. Russell has been selected for appointment by H.E. the Commander-in-Chief in India to the Substantive Medical Charge of the 18th King George's Own Lancers at Meerut, in succession to Captain A. S. M. Peebles, transferred to the civil department. Captain F. W. Cragg has joined the King Institute, Guindy, as Assistant Director. Captain J. M. A. MacMillan, on completion of special duty at Pachmarhi, has been appointed Civil Surgeon to the Hoshangabad district. Captain E. W. Browne, at present doing duty at the General Hospital, Madras, has been granted 15 months' combined and study leave. Captain W. A. Justice has taken up duty as Officiating Sanitary Commissioner of Madras Presidency. Captain W. F. Byrne has been appointed Special Plague Medical Officer in the Pegu District. Captain J. D. Graham has taken up duty in the United Provinces of Oudh and Rohilkhand.

TERRITORIAL FORCE.

The undermentioned officers of the Royal Army Medical Corps are appointed Staff Officers to Administrative Medical Officers of Territorial Divisions: Major Gerald T. Rawnsley (dated March 1st, 1911), Major William D. Erskine (dated March 1st, 1911), Lieutenant-Colonel James Will (dated April 1st, 1911), Major Charles A. Young (dated April 1st, 1911), and Captain Dermot O. Hyde (dated April 1st, 1911).

PROMOTION IN THE NAVAL MEDICAL DEPARTMENT.

It was a very common complaint against all "Services" that their rule for promotion was "seniority tempered by selection," with the accent rather on the "seniority," and that consequently many officers who attained to the senior ranks had indeed had creditable and even distinguished services to their credit, but had now lost touch with the modern achievements of their sciences and had no longer the old eagerness. The Admiralty, having evidently taken this complaint to heart, recently declared its intention for the future to promote medical officers to the senior ranks by selection, for ability and merit, with no word about seniority. The first subsequent promotion it has now made by advancing Deputy Surgeon-General W. W. Pryn, and this choice will commend itself, as this officer has held very important offices, and is besides known to the profession generally for the capable papers he has contributed to the annual reports on the health of the navy. His promotion from thirtieth on the list should give to junior officers the encouragement and incentive they have often complained to us they lacked. A somewhat similar advancement of juniors to the new rank of superintending sister in the Naval Nursing Service has provoked a complaint to the *Naval and Military Record* of Oct. 18th, an expression of natural disappointment on behalf of those passed over. Such hardships are, we fear, inevitable in all progress, but we trust that promotion by selection, thus boldly introduced, will lead all ranks to throw themselves more hopefully into the discharge of their duties, with a resulting greater efficiency within the medical service, and consequent higher appreciation from brother officers and the profession at large.

THE OFFICERS' TRAINING CORPS.

The Army Council announces that in future candidates for employment with medical units of the Officers' Training Corps will be appointed to commissions in the Territorial Royal Army Medical Corps, supernumerary for service with the Officers' Training Corps. In the case of undergraduate officers who are not qualified as practitioners under the Medical Act, they will be appointed "on probation" until they have obtained the necessary diploma.

ACCELERATED PROMOTION IN THE INDIAN MEDICAL SERVICE.

The Secretary of State for India has recently decided that if an Indian Medical Service officer was unable to obtain study leave, and was thereby prevented from qualifying for accelerated promotion to the rank of major, he might qualify at any time up to the end of his sixteenth year of service. In that case his promotion would be antedated. This concession has now been extended with retrospective effect to all majors whose commissions are dated July 29th, 1893, or later, and who have undergone qualifying courses before the end of their sixteenth year.

HONORARY PHYSICIAN AND HONORARY SURGEON TO HIS MAJESTY THE KING.

It has been decided that future appointments of honorary physician and honorary surgeon to His Majesty the King shall be held by medical officers on the Active List, and that such appointment shall be relinquished on retirement from the service. This rule has hitherto only been applicable to those officers of the Royal Army Medical Corps appointed in or after the year 1906, but it has now been extended to the Indian Medical Service. According to the Royal Warrant, six of the most meritorious officers of the Royal Army Medical Corps and six of the Indian Medical Service are

selected for appointment as honorary physicians, and six others of each service respectively selected for appointment as honorary surgeons to the King. Any officer so appointed who is under the rank of colonel may be promoted to the brevet rank of colonel.

FAIR PLAY FOR TERRITORIALS.

In our issue of April 22nd last we invited attention to a pamphlet with the above title, issued by Lieutenant-Colonel J. J. de Zouche Marshall, in which he described his proposals for invigorating and expanding the Territorial Force by a system of payment according to scale, in proportion to the pay of the Regular Army. Officers and men would be paid so much per hour for every hour spent in actual drill and instruction. This amount, calculated at one-twelfth of the pay of the regular forces (who are presumed to be paid for 12 hours' work per day), would work out at 3*d.* for a private, 5*d.* for a sergeant, 1*s.* 2*d.* for a captain, and so on. Lieutenant-Colonel Marshall has now brought out a second edition of this pamphlet,[1] in which he has expanded his argument with additional illustrations, together with some rather irrelevant matter. It appears to have been objected that the pay above mentioned was not high enough to attract men of the working classes, who receive even as day labourers 7*d.* an hour. Lieutenant-Colonel Marshall replies to this by showing that the working day of the regular soldier is really but an eight-hour day, and therefore that the pay works out at 5*d.*, instead of 3*d.*, an hour; and so on for the other ranks in proportion. It might also be admitted that the work of the soldier is neither so arduous nor so continuous as that of the class of labourers generally with whom comparison is made. However that may be, Lieutenant-Colonel Marshall still considers that 3*d.* an hour for a private, and proportional sums for other ranks, would attract the men that are needed. As justification for the increased cost he maintains that for an additional half month's army pay and allowances the nation would obtain 11 months' steady progressive training. The total cost he estimates at £249,828, which would secure 48 one-hour drills by a force of 312,422 officers and men. Lieutenant-Colonel Marshall has withdrawn from the National Service League, and devotes several pages of his second edition to a criticism of its methods. Into this question we cannot follow him, but we again commend his proposals to Territorial officers, and especially to those of medical units. Experience only can show whether the success he has himself obtained in his own corps can be repeated by others; but the plan seems to be exceedingly well worked out, and to be fully deserving of a thorough trial. All practical details are given in the pamphlet already referred to.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

In the November issue of this journal Captain P. S. Lelean criticises the use of quinine as a malarial prophylactic. He does not suggest that quinine prophylaxis, if properly safeguarded, has no value in any circumstances, but he considers it essential that a protest should be made against the view that in the wholesale administration of prophylactic quinine we have a simple and royal road to malaria prevention warranting the withdrawal or omission of all other measures. Interesting papers are The Work of Divisional Medical Units in the Field, by Colonel T. P. Woodhouse, and Pathology and Clinical Medicine, by Major W. S. Harrison, who points out that it is impossible to practise medicine properly without having constant recourse to the help of the pathological laboratory. A note which is worthy of attention is contributed by Major F. J. W. Porter, D.S.O., on the Aseptic Treatment of Burns and Scalds. Being dissatisfied with oily applications in such cases, Major Porter devised a method of cleaning the affected surface under an anæsthetic, afterwards applying sterile gauze, with very satisfactory results.

[1] Fair Play for Territorials. By Lieutenant-Colonel J. J. de Z. Marshall, V.D., R.A.M.C. (T.F.). Second edition. Gale and Polden, Aldershot; Clowes, Cockspur-street; Forster Groom, Charing Cross; or from the author, The Porch, Esher. Price 1*s.*

BRISTOL MEDICAL MEN *v.* BATH MEDICAL MEN AT GOLF.—The return match between representatives of the medical profession in Bristol and Bath took place on Oct. 25th at Sham Castle Club, Bath. An enjoyable game resulted in favour of the former team by 6½ points to 5½

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—In your last issue a writer says that he has never seen any letter showing why a system of payment for work done is impracticable. May I be allowed to point out two good reasons why it is improbable that any system other than payment *per capita* will ever be adopted generally?

1. In payment by the State for work done the present check on too frequent visiting would be abolished; on the contrary, the evil would be enormously stimulated. The patient, knowing that no doctor's bill would have to be met later by him, would encourage the medical man to come as often as possible, as such a cheery companion would greatly relieve not only his mental stress but also lighten the dull tedium of an illness.
2. There would be no reason why Hodge should not receive as much attention as Lady Vere de Vere, and, if given, that attention would have to be paid for; any doctor, therefore, who happened to find his banking account in an unhealthy condition could easily improve its tone by judiciously devoting a little extra care and attention to Hodge. And Hodge would not object were the State footing the Bill.

With such powerful inducements acting on both patient and doctor any funds available for payment for medical services would soon be exhausted, and it would be extremely difficult to provide any system of checking that would meet the difficulty.

There is one matter that seems to have escaped attention by any writer hitherto—viz., that if this Bill proves the blessing we all hope it will, it may eventually come about that the profession would actually be much worse off under a system of payment for work done than it would be under the contract system, owing to the race becoming so much healthier.

I thoroughly agree with Dr. B. Hall that if the capitation fee granted be adequate, medical practitioners will gain largely under the Bill. The evils attendant on contract practice can easily be removed in the manner I have previously pointed out.

I am, Sir, yours faithfully,

J. P. WALKER, M.D. Durh., D.P.H.,
Assistant County Medical Officer for Hampshire.

Winchester, Nov. 4th, 1911.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Oct. 28th the following sentence appears in an excellent letter from Dr. H. B. Luard: "This *per capita* system is fundamentally immoral, dishonest, and demoralising to both doctor *and patient*." Truer words have never been written since the foundation of the world. Now, Sir, I am delighted to hear that you deplore the extension of the contract system, and I note you say that, were it not for the fact that a majority of the profession has given adherence to the principle, you would even now consider it not too late to urge on your readers the danger of contract practice. Well, I do not know what is the proper definition of contract practice, but certainly a majority has not approved of payment by capitation; on the contrary, though there is a difference of opinion there is a distinct majority in favour of payment for work done. This being so, I implore you, even at the eleventh hour, to do all you can to help us in the matter. Nothing will tend more to raise and elevate the tone of the profession.

We want a lead. To say payment for work done is impossible is absurd. Only this morning a patient of mine said he felt certain that were a house-to-house canvass made and the opinion of the people to be insured ascertained they would be overwhelmingly in favour of paying the doctor for what he did—of course, because it would mean better attention and better work done, and this is what Mr. Lloyd George professes to desire, but he refuses to face the financial difficulty. It ought to be our business to force his hand and

to compel him to give us fair treatment—that is, payment for worth done. Much of the friction which is otherwise bound to occur between the profession and the Health Committees, embittering our lives and adding enormously to the difficulty of our work, could be thus avoided. We could at once agree, for example, to the £160 income limit.

I may say that this division of the British Medical Association (South Suffolk) has voted in favour of payment for work done.

I am, Sir, yours faithfully,

T. CUMING ASKIN.

Alderton, Woodbridge, Suffolk, Nov. 5th, 1911.

*** It has escaped Dr. Askin's attention that we have regularly deplored the extension of contract practice proposed under the Bill.—ED. L.

To the Editor of THE LANCET.

SIR,—An opportunity, which may never occur again, now presents itself to the medical profession—namely, the boycotting of all contract practice. It is inquisitorial and *infra dig.* My success in practice, some 40 years ago, dated from the day that I, as a provincial practitioner, and regardless of consequences, threw up all contract work.

I am, Sir, yours faithfully,

E. P. PHILPOTS, M.D. Aberd.

Constitutional Club, Northumberland-avenue, W.C., Nov. 3rd, 1911.

To the Editor of THE LANCET.

SIR,—I have been instructed by the Rossendale Medical Society to forward you the following resolution passed unanimously at a full meeting of the society on Nov. 1st:—

That this meeting of the Rossendale Medical Society reaffirms its absolute adherence to the six points of the policy propounded and placed before the profession by the British Medical Association, and pledges itself to use every means in its power to secure the enforcement of that policy.

I am, Sir, yours faithfully,

E. W. FALCONER, Hon. Sec.

Stacksteads, Bacup, Nov. 2nd, 1911.

To the Editor of THE LANCET.

SIR,—In the last issue of THE LANCET Dr. B. Hall sets forth very clearly his views in favour of payment *per capita* as opposed to payment per attendance. I do not think that contract practice such as obtains in public institutions, asylums, and the like can be brought into the comparison, as the conditions of service in these are so different. For instance, in his example of an asylum the inmates are all sick persons under treatment (mental, of course). If the medical officer were to be paid by capitation fee the "*capita*" would be the total number of persons in the area allotted to that asylum. Practically his only argument against the principle of payment by attendance is that it would necessitate an enormous amount of tiresome clerical work. All Government work means much clerical work, and under any system copious records will have to be kept. Doubtless under the payment by attendance system the clerical work will be more, but surely this would be preferable to the adoption of a system which enables a patient at no increased cost to himself or anyone (except the doctor) to call out a doctor at any time for any trivial matter. Dr. Hall must remember one thing—that under present conditions his contract patients pay nothing or pay voluntarily. Under the Bill they are compelled to pay, and therefore will naturally want their money's worth. Under the capitation system an insured person can have as much medicine and treatment as he likes without extra cost to the fund. Under the other system he will feel that he is drawing on the common fund which is in great part subscribed by his fellow workers, and therefore there will be some tendency for him to avoid unnecessary calls for attendance and medicine. I maintain that the payment-by-attendance system alone has the necessary basis of firmness, and that the profession should stand firm for that principle.

I am, Sir, yours faithfully,

Wisbech, Nov. 7th, 1911. M. TYLOR.

To the Editor of THE LANCET.

SIR,—You were good enough to print a letter from me in THE LANCET of Oct. 28th. Though hesitating to trespass further on your space I should like to reply to Mr. Benthall's remark in your issue of Nov. 4th, when he says that my estimate would mean an annual payment to the medical profession of over £15,000,000, and that he would "much like to know how it is proposed that such a sum could be raised." Exactly; that is just the point—the money cannot be raised. And because we cannot be properly paid Mr. Benthall's simple solution of the problem is that we should be content to take some grossly inadequate sum. Now when we find people doing business on these lines we rightly suspect the quality of their goods, and I for one cannot imagine how anyone but a lunatic could expect a doctor to give him attendance and medicine for a year for the price of a pair of gloves or a dozen collars. All would welcome a real solution of the problem of good medical attendance for everyone, but a scheme condemned by the profession upon which its working depends can only end in failure.

I am, Sir, yours faithfully,

London, S.W., Nov. 6th, 1911. EDWIN SMITH.

To the Editor of THE LANCET.

SIR,—Few medical men are fond of dispensing, neither is it, strictly speaking, their work; nevertheless, I think that the only conditions upon which medical men should allow the dispensing of medicines to be taken out of their hands under a National Insurance Bill are:—

1. That pharmacists are penalised for unqualified practice—e.g., counter prescribing; the unskilful or any tinkering with minor surgical wounds, beyond first-aid in case of emergency only; and the giving of any sort of advice or treatment for symptoms which patients in their ignorance are apt to describe to them upon entering their shops, &c.

2. That those pharmacists who undertake dispensing under the National Insurance Bill shall be prohibited from selling any patent medicines (this to include any proprietary medicine which does not bear legibly printed upon its label its exact composition) or abortifacients of any sort which are now asked for over the counter and sold as "female pills," "diachylon," "hiera picra," &c.

3. That the pharmacists under the Bill shall not be allowed to repeat any prescription without a written order from the medical man instructing him to do so.

I am, Sir, yours faithfully,

Birmingham, Nov. 5th, 1911. ERNEST C. HADLEY.

LEISHMANIA AND MOSQUITOES.

To the Editor of THE LANCET.

SIR,—My attention has been called to the interesting note by Professor Franchini on the development of leishmania donovani in anopheles. Professor Franchini infected his mosquitoes by causing them to feed upon artificial cultures of the organism. He found that the various forms persisted in the gut of the mosquitoes and ultimately terminated in the production of certain small forms of the parasite.

In my reports upon oriental sore in Bagdad, which have appeared in the "Report of the Advisory Committee for Tropical Disease Research Fund" (February, 1911), the *Journal of Tropical Medicine and Hygiene* (April 1st, 1911), and the *Journal of Parasitology* (October, 1911), I have given an account of experiments conducted with leishmania and mosquitoes. I found that stegomyia fasciata would feed readily upon the non-ulcerating form of oriental sore, and that in so doing it took into its gut numbers of leishmania tropica. In the intestine of the mosquitoes the parasites underwent a development into flagellate and other forms which have been described and figured in my report in the last number of the *Journal of Parasitology*. In view of my findings the results of Professor Franchini are very interesting. I have pointed out that the leishmania tropica undergoes a similar development in the gut of the bed bug of Bagdad, and owing to the fact that for reasons of distribution the bed bug cannot possibly be the natural intermediate host of the leishmania of oriental sore in Bagdad, I have been driven to the conclusion that the parasite of oriental sore develops in the intestine of the bed bug in just the same way as in artificial cultures in various blood-containing media. In connexion with Patton's discovery of the development of leishmania donovani in the bed bug, Mesnil has made the same suggestion, so that such a development does not necessarily mean that the insect in question is the natural host of the parasite. It is highly

probable that the parasites of the group leishmania will develop to a certain extent in the intestines of many insects, provided that they find there a suitable pabulum rich in blood. The development I have described of leishmania tropica in stegomyia fasciata, and that of leishmania donovani in anopheles by Professor Franchini, may be of this nature, and only, so to speak, accidental, owing to the rich nutrient fluid taken up with the parasites by these blood-sucking flies. I failed to infect myself with oriental sore by means of the bites of stegomyia fasciata previously fed on oriental sore, so I have no evidence that the development in the mosquito is a natural one. Conclusions can only be drawn when we know, not only that the leishmania develops into flagellates and other forms in any insect's gut, but that this insect also is able to transmit the infection to healthy animals as a result of transmission experiments.

I am, Sir, yours faithfully,

C. M. WENYON,

Protozoologist to the London School of Tropical Medicine.

Nov. 6th, 1911.

THE ELECTION OF DIRECT REPRESENTATIVES TO THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—I shall be greatly obliged if you will grant me the courtesy of your columns to express my thanks to the registered medical practitioners of Scotland for the great honour they have done me in re-electing me, without a contest, their representative on the General Medical Council.

I am, Sir, yours faithfully,

Nov. 7th, 1911. NORMAN WALKER.

To the Editor of THE LANCET.

SIR,—On Tuesday, Nov. 7th, a voting paper was posted to every registered medical practitioner with a registered address in England or Wales. Any practitioner who has not received a voting paper, *whether he wishes to take part in the election or not*, should immediately communicate with this office in order to make sure that his address is correctly registered and to prevent any risk of his name being taken off the Register under the following Section of the Medical Act:—

XIV. It shall be the duty of the Registrars to keep their respective Registers correct in accordance with the provisions of this Act, and the Orders and Regulations of the General Council, and to erase the names of all registered persons who shall have died, and shall from time to time make the necessary alterations in the addresses or qualifications of the persons registered under this Act; and to enable the respective Registrars duly to fulfil the duties imposed upon them it shall be lawful for the Registrar to write a letter to any registered person, addressed to him according to his address on the Register, to inquire whether he has ceased to practise or has changed his residence, and if no answer shall be returned to such letter within the period of six months from the sending of the letter it shall be lawful to erase the name of such person from the Register; provided always that the same may be restored by direction of the General Council should they think fit to make an order to that effect.

The importance of keeping open a channel of communication with this office cannot be too strongly insisted upon. All communications should be addressed to the acting registrar and not to any individual by name.

I am, Sir, yours faithfully,

NORMAN C. KING,

Acting Registrar, General Council of Medical Education and Registration of the United Kingdom.

299, Oxford-street, London, W., Nov. 4th, 1911.

THE LUNACY COMMISSION.

To the Editor of THE LANCET.

SIR,—I was very glad to see the sensible leader in your impression of Oct. 28th on the Lunacy Commission. Year after year I spoke and moved on this subject in the House of Commons, advocating the abolition of the perfectly useless legal commissioners and a large strengthening of the medical element, basing my arguments on the analogy of Scotland, where the Lunacy Board works well and commands public support. But, as usual, nothing was done. We are a long-suffering people, and our rulers are slow to move.

I am, Sir, yours faithfully,

Nov. 5th, 1911. ROBERT FARQUHARSON, P.C., M.D. Edin.

THE STRIKE AND THE DEATH-RATE IN LIVERPOOL.

To the Editor of THE LANCET.

SIR,—Professor Benjamin Moore, of the Liverpool University, in the lay press as well as in THE LANCET of Nov. 4th, endeavours to prove that the recent great strikes in Liverpool did not increase the death-rate, especially that due to epidemic diarrhœa among children. He concludes by indicating that a general strike of medical men may become a necessity and that we ought to have some meed of sympathy for men striking to obtain a living wage.

Surely it is quite obvious that persons who do not obtain a living wage cannot be expected to live wholesome lives. To talk of progress in sanitation while maintaining that widespread insufficiency of food, coupled with occasional absolute starvation, is a righteous state of affairs would be but a cruel manifestation of heartless hypocrisy. It is, on the contrary, from the ranks of the medical profession, and especially of sanitary reformers, that the best arguments have been produced setting forth the necessity, from every point of view, of sufficient food, of wholesome and appropriate food, combined with good housing and warm clothes. To enable everyone to earn enough to live a healthy life is an ideal all must approve. The real point at issue is whether the strike and all the suffering it entailed, such as the interruption of the sanitary services, of visits paid by lady inspectors to the poorest houses where children had recently been born, and the special work of the scavengers in the worst slums, did have any effect on the death-rate. But Professor Moore only takes into consideration the question of garbage, and maintains that its presence "in the streets has no effect on the epidemic." In a letter addressed to the *Liverpool Daily Post and Mercury* of Oct. 24th Professor Moore makes the following statement:—

It has long been a moot point amongst sanitarians and bacteriologists as to whether epidemic diarrhœa can be carried by ordinary garbage or whether it is carried by some direct agency from the dejecta of one afflicted individual to the food of another.

This was precisely the point raised, for after stating that though household refuse accumulated in the better parts of the town no harm resulted, I pointed out that in the slums, on the contrary, "adults sometimes do not take the trouble to go to the closets, and children habitually do all they need in the open air." This, then, is not ordinary garbage, but dejecta that may come from the afflicted and spread infection to the food of others. And it is because this very special danger is created daily in these localities that they are washed out with the fire-hose once or twice in the 24 hours. To stop so essentially necessary a service is to act in antagonism to the claim for a living wage. When the poor relief medical staff at Amiens went on strike, they did not let the patients die. They continued to attend to the sick but refused to be paid.[1] If the labour movement in Liverpool had been better organised it would, as a matter of policy as well as of humanity, have insisted on carrying out the indispensable sanitary services. Professor Moore, however, seems to think that these sanitary services are not much use in Liverpool because there was also a heavy epidemic in Dublin during August and September. But unless widespread and recent improvements have taken place in Dublin the very same cause of infection exists there as that which the special slum scavenger service removes from Liverpool, except when prevented by the strikes. In Dublin the grievance is even worse, for there are a large number of tenement houses, some close to College Green and the fashionable centres, where the street door remains ajar all night. The consequence is that strangers enter these houses, and the hall passage and stairs are often polluted with human dejecta. But at Liverpool hopes were entertained that the exceptional prevalence of infantile diarrhœa and other diseases would decrease in response to especially energetic sanitary measures. A particularly hot summer occurred when the efficacy of these precautions might have been tested, but now it is difficult to say how far the increased death-rate was due to the high temperature or to the disorganisation of the sanitary services. Other years have shown that epidemic diarrhœa is steadily diminishing, but the great heat of this summer would have been a supreme test. We might have better appreciated the good done by

[1] THE LANCET, March 7th, 1908, p. 747.

the spending of vast sums to provide dwellings for the poor, to utilise Liverpool's abundant water-supply in washing the streets, courts, alleys, passages, &c., to clear away the ashpits, to prevent garbage and refuse accumulating, to provide a large trained staff of female inspectors, and to instruct verbally and by placards and leaflets how infants must be fed and nursed. Much has also been done to provide "humanised" milk for infants and hospital accommodation for cases of infantile diarrhœa. By this improved municipal cleanliness and assistance in housing and feeding the poor, zymotic diseases in general have been steadily declining. The city is cleaner, the parents are better instructed, the houses of the poor are more frequently visited, infant mortality is no longer so frequent, and the population is better armed to resist the effect of excessive heat and dryness. Surely these are all good measures, not only in regard to the preservation of public health, but also from the economic and social reform point of view. But Professor Moore says in the *Liverpool Mercury* of Oct. 19th last that "there is not a shred of proof that the preventive efforts in the last two or three years possess any causal relationship with the decrease previous to this summer, or that the strike was connected with this summer's increase."

Thus, in the vain effort to show that the strike did no harm to public health we are invited to believe that sanitary measures can do no good. In reply I would submit that this is not the sort of advocacy which will strengthen the hands of those who claim for all the right to a living wage. On the contrary, as the poorer sections of the community improve their position and acquire increasing political power, they and their advocates should show an ever-increasing appreciation of the interests of the community as a whole, which sanitary science defends in the most practical and beneficent manner.

I am, Sir, yours faithfully,

THE LANCET SPECIAL SANITARY COMMISSIONER.

Nov. 6th, 1911.

OLD AND NEW VIEWS ON THE TREATMENT OF CONSUMPTION.

To the Editor of THE LANCET.

SIR,—I venture to suggest that Dr. C. Theodore Williams's Harveian Oration, published in THE LANCET of Oct. 21st, presents certain features which ought not to pass unchallenged, more especially as Dr. Williams is a recognised authority on consumption, and as one of the points on which I dare to differ from him is of vital importance to the treatment of consumption in England.

Dr. Williams writes of acute cases of phthisis that they "all pass through an early stage to a fatal issue." Further on he writes: "It is true in some of these cases the disintegrating process comes to a standstill and fibrosis sets in—the disease is incapable of cure." In other words, they all die early; but some don't! Probably every sanatorium doctor with a few years' experience has seen one or more of these patients with acute disease recover health and return to a full day's work. No doubt these are cases of arrested, not cured, disease; but, after all, more cannot be said for any other form of phthisis, however early the patient may have come under proper treatment, and however vigorous and fit for work he may have become.

It is surely an old and almost discarded rather than a new and accepted view that mountain climates have a remarkable effect on phthisis. Doubtless certain patients do better in high altitudes than in the lowlands, but the reverse is also frequently the case even when there is no cardiac complication. The number of recent observations which go to show that there is no such thing as a specific climate for phthisis is great, and I will confine myself to the more recent. Dr. Kaurin has published in the July number of *Medicinsk Revue* this year a comparison of the results obtained at 11 different Scandinavian and Finnish sanatoriums, the height of which above the sea varied from 11 to 470 metres. There was a striking similarity in the percentage of cases which each sanatorium discharged improved, but the best results were obtained at Vejlefjord sanatorium, which is only 25 metres above the sea, and where only 13 per cent. of the patients were in the first stage of the disease. Dr. Ost has collected the reports from eight Swiss sanatoriums, 907 to 1860 metres above the sea, and the total percentage of cases discharged improved is lower than that at Vejlefjord sanatorium. When the leper hospital at Reknes on the west coast of Norway was converted into a sanatorium in 1897 much hostile criticism was provoked because of the climate, which is changeable and windy, and because the sanatorium is only a few feet above the sea. Experience has shown, however, that the results obtained at this sanatorium are quite up to the average of high, inland sanatoriums.

Dr. Williams writes: "Of all my statistics of consumptive patients, the high altitude cases yielded the most favourable results, and, what is most important, showed the fewest relapses." Quite so; but it is usually only those who are rich enough and well enough to travel afar who ever reach the high altitudes, while the less fortunate cases remain in England. A comparison, therefore, between the rich and relatively strong patients who recover in Switzerland with the poor patients whose disease has been recognised late and treated at home is open to criticism. Last year I worked in a private sanatorium in the south of England where a restless spirit existed among some of the patients because their London doctors had taught them that their present treatment was but preliminary to a complete cure in Switzerland, to which they should travel as soon as they were strong enough. I hold no brief for English sanatoriums, but it strikes me that the "high altitude" teaching is unfair on them and on many patients who either spend money beyond their means in travelling abroad, or remain at home under the impression that their chances of recovery are relatively small. It is superfluous to point out how detrimental to the growth of working-class sanatoriums in England this "high altitude" teaching is.

Dr. Williams completely ignores the modern surgical treatment of phthisis. Doubtless he has seen fit to exclude from his oration all new methods of insignificant or ephemeral value, but surely these terms are inapplicable to the works of Forlanini, Murphy, Brauer, Saugman, and Freund during the last two decades? The treatment of phthisis by artificial pneumothorax, for example, is now adopted in suitable cases in the leading continental sanatoriums as a matter of routine, and it is considered as orthodox as the surgical treatment of appendicitis. In one large continental sanatorium one third of the patients have simultaneously undergone this treatment which has arrested many cases of severe disease.

I am, Sir, yours faithfully,

Gorleston-on-Sea, Oct. 30th, 1911. CLAUDE LILLINGSTON.

THE RELATION OF THE ORGANIC PHOSPHORUS CONTENT OF VARIOUS DIETS TO DISEASES OF NUTRITION, PARTICULARLY BERI-BERI.

To the Editor of THE LANCET.

SIR,—With reference to Professor B. Moore's letter in THE LANCET of Oct. 28th, the annotation in THE LANCET of Oct. 14th emphasised the importance of phosphorus. The work carried out in the Institute for Medical Research had shown that deficiency of phosphorus was not the cause of beri-beri; I considered it necessary to direct attention to this point, and thus prevent further work being expended in unprofitable research. As regards Professor Moore's statement that the active substance is probably a glucoside I might direct his attention to the fact that the protective fluid employed by us did not yield more glucose after than before inversion; the estimations were made gravimetrically by one of our chemists.

I am, Sir, yours faithfully,

H. FRASER,
Director, Institute for Medical Research,
Kuala Lumpur, F.M.S.

Nov. 2nd, 1911.

FEES TO SHIP SURGEONS.

To the Editor of THE LANCET.

SIR,—I am very pleased to see by THE LANCET of Nov. 4th that the Peninsular and Oriental Steamship Company has fallen into line as to allowing ship surgeons to charge reasonable fees for treatment of first- and second-class passengers. It is now about six years since I put my proposal to the above effect before one of

the managers of the White Star Line, and to this line is due all the credit of crystallising my suggestion into actual shape. Since then the Cunard, American, Dominion, Leyland, Allen, C.P.R., and Booth Lines have agreed. In London the Orient Line has followed. It would be a great help if the present and past surgeons of the Pacific Steam Navigation Company petitioned the manager of that line to agree. May I just suggest that a few surgeons are helping to ruin my proposal by objecting to submit their bills to the captain of the ship. I quite agree to the right of the companies to do so. Perhaps it would give better results if each ship's surgeon and intending surgeon bought a copy of Styrap's "Medico-Chirurgical Tariffs" (H. K. Lewis. London. 2*s.* 6*d.*) and be guided by the scale of fees under class 1 and 2 for first- and second-class fees. Otherwise the steamship companies may do so. If the above rearrangement has been and will be the means of adding a few thousands to a badly paid branch of medical practice I shall be glad.

Just one more point; although I meet, now and then, ship surgeons I am glad to say that not one of them has ever said "Thank you" for the work I have done for them. I have always contended that the person who invented the word "gratitude" in relation to medicals should have been shot!

I am, Sir, yours faithfully,

Liverpool, Nov. 5th, 1911. R. R. RENTOUL.

*** Medical men probably have not recognised in Dr. Rentoul the originator of the reform movement.—ED. L.

TRANSMISSION OF DISEASE BY MEANS OF BOOKS.

To the Editor of THE LANCET.

SIR,—I am preparing a paper upon "Books a Source of Disease," to be read before the next International Congress of Hygiene, and in order to obtain data respectfully request the readers of this note to send me an account of any cases the source of which has been traced to books or papers, or where the evidence seemed to make books or papers the offender. I would also further request information where illness or even death has been caused by the poisons used in book-making.

All the information possible is wanted to present as complete a paper as possible. As in the case of insects which we now know to be "carriers of disease," it is first necessary to collect the scattered evidence in order to show that there is real danger in books; and this will compel better care to be taken of libraries and books and improve the health of mankind. I am, Sir, yours faithfully,

WM. R. REINICK,
Chief of the Free Library of Philadelphia.

1709, Wallace-street, Philadelphia, Pa., Oct. 26th, 1911.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, THE MEDICAL DEFENCE UNION, AND THE ACTIONS OF PARTNERS OR ASSISTANTS OF THEIR MEMBERS.

To the Editor of THE LANCET.

SIR,—Owing to certain misunderstandings which have arisen from time to time as to the scope of the work of the London and Counties Medical Protection Society and of the Medical Defence Union in respect of members in actions brought, or sought to be brought, for alleged negligence, we are directed by our respective councils to state officially that membership being purely personal no action arising solely out of any act of a partner, assistant, or locum tenens can be taken up unless the partner, assistant, or locum tenens is also a member of either the Medical Defence Union or the London and Counties Medical Protection Society. It is hoped that a time will soon come when all registered practitioners, whether principals or assistants, will secure the advantages pertaining to membership of one or other of these societies as a matter of course as soon as they become qualified. We are, Sir, yours faithfully,

HUGH WOODS, M.D.,
Gen. Sec. London and Counties Medical Protection Society, Ltd.
A. GEORGE BATEMAN, M.B.,
Nov. 6th, 1911. Gen. Sec. Medical Defence Union, Ltd.

TORSION OF THE FUNIS AS A CAUSE OF DEATH OF THE FŒTUS.

To the Editor of THE LANCET.

SIR,—In reference to Mr. H. A. Lediard's article in THE LANCET of Oct. 28th on Torsion of the Funis as a Cause of Death of Twins, I might mention a case which was under me about ten months ago. It was also a case of twins, but born at full term. The first to be born was a female, weight 6¼ lb., and a vertex presentation; then the second child, a male of about six months' development, was born as a breech presentation in the membranes almost immediately after; then finally the placenta of the first child came. The cord of the dead fœtus was twisted at the umbilicus and was here little larger than the lead of a pencil. It resembled very closely the twist in the cord of the smaller fœtus shown in Mr. Lediard's photograph. The fœtus did not show advanced decomposition. The skin was peeling and the scalp was loose, but there was no discolouration. I do not see how the appearance of the cord could have been consistent with the twist having occurred after the death of the fœtus, and I looked upon the former as the cause and the latter the effect. The living twin was quite healthy and weighed 8 lb. 12 oz. when a month old. The woman's next youngest child, aged 2 years, was a fat, rosy, very healthy-looking child, and there was no history of miscarriages.

I am, Sir, yours faithfully,

IDA C. TENGELY.

The Union Hospital, Bradford, Nov. 6th, 1911.

THE RECENT MILITARY TRAINING ON SALISBURY PLAIN.

(FROM A SPECIAL CORRESPONDENT.)

DURING the past summer and autumn months a large number of troops—regulars, special reservists, territorials, and yeomanry—were concentrated for their annual training at the various camping grounds on Salisbury Plain. Owing to scarcity of water and other unforeseen reasons the inter-divisional and army manœuvres had to be abandoned, but the individual training of units of all arms, as well as brigade training, was carried out in a thorough manner under very favourable conditions as regards the weather, and taken as a whole the troops benefited very considerably from the change of air under canvas. The health of all ranks during the period they spent under canvas was exceptionally good, and the military efficiency was certainly increased.

Medical and Hospital Arrangements.

Each regimental unit had a commissioned medical officer appointed to look after the sanitation of the camp and to deal with casualties and cases of sickness. These officers were also entrusted with the training of the regimental stretcher-bearers and regimental sanitary squads in the various duties that these men would have to undertake in time of war. An observation hospital was established at each encampment for the treatment of minor cases of illness that occurred, and the sick were provided with accommodation prior to their transfer to the regular military hospitals established at Bulford Camp and Tidworth Park, Salisbury Plain. Officers of the Royal Army Medical Corps were instructed on arrival to report when assuming charge of any camp to the administrative medical officer of the Tidworth District, and at the same time to state that their equipment was in accordance with the scheduled list laid down. They were also directed to report to the officer commanding each unit as it arrived in camp and to assist him in reference to carrying out the sanitary regulations as noted in standing orders for Salisbury Plain.

The treatment of serious cases, except under circumstances of emergency, was not to be undertaken in the observation hospitals, as these cases were to be transferred to the permanent hospitals at Bulford and Tidworth Park. An infectious disease isolation hospital was placed at Brimstone Bottom and telephonic communication was established with this from each of the military encampments. Ambulance wagons were stationed at each camp for the purpose of transferring the sick to the receiving hospitals, and other ambulance wagons were detailed to accompany the troops

on field days, or when necessary. Notice by telephone was ordered to be sent to the receiving hospital whenever it was intended to transfer sick, the number of cases being despatched and their probable hour of arrival being notified. When possible all sick were to be transferred before noon daily. If from any cause an ambulance wagon was not available in camp, one was to be requisitioned for from the receiving hospital. In each camp hospital a small supply of medical comforts, such as extract of meat, condensed milk, arrowroot, and stimulants, was provided for emergency. Field medical and surgical panniers, containing medicines, appliances, and a complete set of surgical instruments, were issued for the treatment of men reporting sick and for such casualties as might occur. Replenishment when necessary was obtainable on requisition from the officer in charge of the receiving hospital.

The continuous treatment by the intramuscular injection of mercurial cream of cases of syphilis was not lost sight of, as the case-sheets of any men suffering from this disease were forwarded to the medical officer in charge of the unit to which the men belonged. Syringes, "all glass," were issued to each camp hospital and the necessary medicaments were obtainable from the receiving hospital of the camp concerned. This was a very necessary proceeding, for it is of the utmost importance that these cases should not have any interruption in their course of treatment as might otherwise occur when troops are absent from their regular stations. All cases of soldiers attending or receiving treatment in the camp hospitals for any ailment had an entry made in the "admission and discharge book" of the hospital for statistical and other purposes, and a compilation of these returns was made out monthly by each camp hospital, and sent to the officer in charge of the receiving hospital.

Sanitary Duties.

Orders were issued for a weekly health inspection of all troops and details in each camp, the hour for this inspection to be arranged by each medical officer in direct communication with officers commanding units. A sanitary inspection was invariably also made on the day following the arrival of each corps or unit in any encampment. Besides the inspection of the troops frequent sanitary inspections of the camps and their surroundings were made and any defects noted in the "Sanitary Diary" and immediately brought to notice of the commanding officer of the unit concerned. Notes of any recommendations or suggestions, with results, were also included in the weekly sanitary report forwarded by the senior medical officer of each camp to the administrative medical officer of the Tidworth District, who was the chief military medical officer of Salisbury Plain.

Medical officers in charge of the various camp observation hospitals had to arrange for the sanitary squads of units in their camping area to parade once a week for a lecture on camp sanitation. In addition to this the squads were taken round the camp once a week by the medical officer personally, and were given a practical demonstration of the duties they were required to perform. These parades were arranged between the senior medical officer and the commandant of each camp.

Conservancy.

The most important matter of camp sanitation consisted in the conservancy arrangements for the collection, disposal, and disinfection of night soil (human excreta), horse litter, ashes, and rubbish, all of which were removed by contract by civilian labour from the camps daily, and deposited at some distance from the War Department area (not less than half a mile) as agreed upon, in properly constructed carts, in such a manner to satisfy the War Department authorities that no danger to health or public nuisance could arise therefrom. The latrines were all on the pail system, with finely powdered earth to be used as a deodorant. Each pail was emptied in the early hours of the morning and then wiped over, inside and out, with kerosene oil as a deterrent to flies, and a small quantity of a 2½ per cent. cresol solution (liq. cresoli saponatus fortis 1½ oz. to 1 gallon of water) was placed in the interior of the bucket. The latrines had board seats and were partitioned off in single compartments for privacy, the whole being surrounded by a canvas screen. Separate pails were provided for use as receptacles for urine, these being similarly treated with kerosene oil and cresol solution, and also having some fresh chloride of lime placed in them. The floors of the latrines were sprinkled daily with kerosene oil and chloride of lime. The absence of flies under such strict sanitary conditions was very apparent and was the subject of remark by several distinguished sanitarians who visited the camps.

The cook-houses were supplied with tubs, having tight-fitting lids ("swill-tubs") for the collection of greasy water and food refuse; these were also emptied and cleaned out daily by civilian contract. Separate areas were fenced off and notice boards put up to mark them for "ashes," "rubbish," and "horse litter," and separate properly covered carts for each of these went round the camps daily and removed them. Particular attention was paid by the medical officers of each unit that the sanitary condition of the latrines, urinals, cook-houses, lavatories, and refuse areas, was efficiently maintained, and for this purpose they paid continual inspections to these places.

Tents, Water, and Rations.

The sanitary conditions of the men's tents also received particular attention. Tent flies were looped up first thing each morning; in wet weather they were, however, looped up only on the leeward side. In all standing camps the tents were struck periodically, and the ground underneath well swept and left exposed for some hours to the sun, the tents being eventually replaced on their former sites. Tents were never pitched for occupation in the intervals. Where tent bottoms were used they were removed every other day when possible, and the ground beneath thoroughly cleansed. As a rule, however, it was found that the regular troops much preferred the bare ground to tent boards, as they were able to accommodate themselves better on "mother earth" than upon the more rigid boards, which they considered cold from the circulation of air underneath. One blanket was issued to each man as a general rule, but in some units two per head were found advisable.

Filter-water carts were taken by each unit, as where water from any doubtful or untested source had to be used for drinking purposes it was directed that the filter-water cart should invariably be used. Each unit had a special *personnel* told off for water duties; each battalion of infantry, for instance, provided one non-commissioned officer and four privates. Two privates from the Royal Army Medical Corps were detailed for all other duties, to which they were attached for rations and tentage. Rations were all that could be desired, fresh meat and bread being issued daily, except on one day a week when corned beef ("bully") in tins and biscuit were served out. Fresh green vegetables, potatoes, onions, &c., were purchased from the regimental institutes by the company messes out of the men's messing allowance. Messrs. Dickeson had most of the arrangements for the canteens, coffee-rooms, and regimental institutes, and did everything possible to make the men comfortable.

General Remarks.

It was apparent that all branches of the regular army were in a high state of efficiency. Their physical and medical condition has never been better. The special reservists show an improvement on last year and will continue to improve as the old militia men get "weeded out." No remarks can be offered concerning the army reservists, as no members of this branch of the service were called upon to undergo training. It was noted that the new web-equipment was in use by all infantry units and was well reported on. It is, however, regrettable to observe that the Royal Army Medical Corps are still marched out in the old pattern fatiguing equipment with all its array of pipeclay and unyielding straps. During the heavy rains that occurred at some periods of the training the poor quality of the material in the men's greatcoats became very apparent; the cavalry cloaks also appear to be absolutely worthless as far as their waterproof quality is concerned. The old pattern blue Melton cavalry cloak was a great boon to the mounted soldier, as was the dark infantry greatcoat. The khaki-coloured field service cloth now used in the manufacture of these garments is not only not waterproof but soaks up all moisture and rain and becomes unbearably heavy to the wearer as a consequence. The weight of kit allowed for each soldier on manœuvres and training also appears to be on the meagre side, as it does not allow in all cases of sufficient change of flannel shirt, underclothing, and socks to be included. In some units it was noticeable that the men not having brought a change of the regulation

flannel shirts had to resort to purchase of cotton shirts, and some even restricted themselves to wearing gauze vests under their jackets. During the cold nights chill to the abdominal organs resulted, and diarrhœa and colic often followed as a direct consequence.

All ranks appeared to appreciate their life under canvas—by no means an easy one, as *reveillé* sounded daily at 5 A.M. and the marches were often long and fatiguing. No complaints were heard, and the only drawback that seemed to strike the onlooker was the pity that this fine fighting machine of ours, the pick of our youth, living under the best possible conditions for health and vigour, was so small numerically.

THE DEMAND FOR PUBLIC ABATTOIRS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

SLAUGHTER-HOUSE SCANDAL AT NEWCASTLE.

One of the Largest Centres of the Cattle Trade.

NO one with knowledge of sanitary questions denies that there is urgent need of extensive reforms in Newcastle. On the other hand, public opinion has not yet been educated to the point of understanding that at least one requirement, and this among the most pressing, can be obtained in such a manner as to produce revenue instead of augmenting the rates. Though there has been a great falling off in the sale of cattle during the last 20 years the Newcastle Cattle Market still occupies the position of the second greatest fat-cattle market in the Kingdom. In 1889 there were 125,791 cattle, 9053 calves, 325,030 sheep, and 40,930 swine exposed for sale on this market. Twenty years later, in 1909, the figures were 86,729 cattle, 6203 calves, 316,273 sheep, and 30,621 swine. This does not mean, however, a falling off of the food-supply. In 1889, of the cattle brought to market no less than 76,682 came from abroad. The majority, 36,000, came from Denmark and the rest from the United States, Canada, Norway, and Sweden. In 1892, however, the importation of cattle from Scandinavia was prohibited, and Canadian cattle had to be slaughtered immediately on landing. These restrictions are still in force. But there are now large ships with cold storage plant carefully installed that bring the carcasses instead of the live cattle. The food-supply has not decreased, only it comes in a different form. It is to be presumed that the measures taken to prevent the landing of live cattle will be removed when there is no longer any danger of importing cattle disease.

Of the 86,729 cattle brought to the Newcastle market only 19,682 were actually slaughtered in the town, together with 99,476 sheep, 3444 calves, and 13,144 swine. Thus by far the greater number are slaughtered elsewhere. Nevertheless, the slaughtering that is done at Newcastle is sufficient to provide good revenues to the town. If we count in round figures 20,000 horned cattle at 3*s.* each, that would be £3000; 100,000 sheep at 6*d.* would yield £2500; 3444 calves at a little more than 1*s.* would make £200; and 13,144 swine, including payment for the removal of the bristles, another £2300; altogether probably £8000 annual income, not to mention the great profits that must be made on the by-products. With such security a loan could be obtained. It may be objected that this means the establishment of a municipal abattoir; but if this be an objection, it cannot hold good at Newcastle, for there already exists a public abattoir which is the property of the corporation. Unfortunately it is antiquated. But by far the greatest difficulty is to deal with the numerous private slaughter-houses that have been allowed to remain. Some of these I visited, and they made me feel truly sorry for the inhabitants of Newcastle.

A Miserable Municipal Abattoir.

Some three years ago there were 132 licensed slaughter-houses in the city and county of Newcastle. It was openly acknowledged that these places were very generally quite unfit for the purpose. The veterinary officer and the meat inspectors all declared that the private slaughter-houses were so distant one from the other that anything like efficient inspection was impossible. The sanitary committee then refused to renew the licences of some of the worst places. Five groups of slaughter-houses were arranged, but 14 individual slaughter-houses scattered in different directions were still allowed to exist. One of the five groups, consisting of 40 slaughter-houses, was subsequently condemned because the owners would not carry out the improvements judged to be necessary. Nevertheless the licence was renewed for short periods, the fact being that, though there is a municipal abattoir, it is so small and so little in keeping with the requirements of the age, that the authorities could not easily compel butchers to go there. This building, such as it is, has at least the advantage of being side by side with the cattle market, but it is not nearly large enough. Then it is built on the wrong principle. Instead of consisting of one or more large slaughter halls with lofty roofs and air and light streaming in from all sides, it is divided up into little slaughter-houses measuring 16 ft. by 14 ft. 6 in., which are let out to individual butchers. To each of these small slaughter-pens a pen is attached of the same size. Thus both the animals that are to be killed and the methods of killing are kept private and within the four walls of these small premises. The inspector, it is true, has the right of entry, but he cannot constantly run in and out of small compartments. One of the great advantages of a slaughter-hall is that it destroys this fatal ideal of privacy. The preparing of the people's food is a public service, and there ought not to be a vestige of privacy allowed.

Certainly these small municipal slaughter-houses have nice glazed tiles up to the height of six feet. Natural ventilation is provided higher up and is good as far as it goes, but the whole arrangement is wrong. Sometimes two or three butchers club together to hire one of these small slaughter-houses, and when they all work at the same moment there is not enough room for them. In this small space, 16 ft. by 14½ ft., as many as 20 to 30 sheep and three or four big cattle will be killed in one day. Then there are no premises for the treatment of the by-products or facilities for the prompt removal of the meat to a cooling room so that it may set properly. The pen also is only separated from the slaughter-house by a door, which is often allowed to remain open. The poor animals thus obtain a near view of the slaughtering and the cutting up of their fellow creatures while they are waiting to meet their doom. This is certainly cruel and ought not to be allowed. At the end of the row of these diminutive slaughter-houses there is a somewhat larger slaughter-house which is not rented to any particular butcher but is open to all on the payment of a small sum for each animal killed. The charge is only 1*s.* for horned cattle, 6*d.* for calves, and 2*d.* for sheep. Of course, a much higher charge could be made in a public modern abattoir. Nor would such a higher charge justify an increase in the sale price of meat, because it represents but a small sum on the total value of the meat, and the butcher, having no more rent to pay or expenses to incur for the upkeep of his private slaughter-house, can very well pay the higher fees out of this saving. Close by the slaughter-house there is a shed for the sale of meat by auction. This structure is narrow and low, and at the moment of my visit a sheep had been killed there, in spite of the quantity of meat hanging up for sale close to the bleeding animal. This is an example of the carelessness, the indifference to modern principles that prevail even on the municipal property.

Maggots for Dripping and Margarine.

What, then, must be the state of affairs in the private slaughter-houses? What I saw was terrible enough, and yet the inspectors in their official reports tell an even more repulsive story. The best that can be said about a group of private slaughter-houses which I inspected is that the windows had iron rails across but no glass panes, so there was ventilation, and this in all weathers. But there was not much light, for the windows were high up and near the roof. A partition wall did not reach this roof, and on the other side there was another slaughter-house. Thus the air travelled over the top of these dark, noisome shambles. Yet outside and very close at hand there were many inhabited houses. Within one slaughter-house I found a very bad case of tuberculosis. The carcass was hanging from the ceiling, and underneath crouching in a dark corner were four living sheep and a poor frightened little calf. The walls were not of glazed tiles, but of porous brick that had merely been whitewashed. On the ground there was at least half a cartload of intestines, pouches, and filthy offal. A sort of cement is supposed to have been put between the stone pavement to

make it water-tight. The licence of this place expires in a month's time. It would be easy to close it by refusing to renew the licence, but where are the present occupants to go? Such slaughter-houses are a danger to the community; but though what I saw was bad enough, it did not come up to the following case given in his annual report for 1910 by the veterinary officer, Mr. Thomas Parker, F.R.C.V.S. :—

One afternoon, during July last, on entering slaughter-house premises within the city they were found in a filthy condition; dirty sacks and boxes containing old bones, fly-laden and filthy, were scattered about, and a refuse cart standing in the yard was simply overladen with filth. Part of these premises were used in which to prepare cooked meats. On entering the fat-mincing room a large bath was found containing 1 cwt. 104 lb. of intestinal and other fat improperly cleansed and literally alive with maggots. In a tin near the bath was found 1 cwt. 54 lb. of the same kind of fat, also alive with maggots. In another tin was found 1 cwt. 24 lb. of fat which had just been put through a machine-driven mincer, the maggots in this case having been ground up with the fat. Large maggots were crawling about the floor. According to the manager, it was intended to mince the whole lot, and then boil it down for dripping, to be sold for human consumption. The whole of the abominable filth was seized and destroyed, and as repeated warnings had not had the desired effect the proprietor of the establishment was summoned and fined £5 and costs.

It would appear as if some considerable number of persons in this trade had no objection to things putrid. The fat mentioned above is generally used for making margarine, though in this case it was destined for dripping in spite of the maggots it contained. It appears also the impression has gained ground that good sausage skins cannot be made unless the intestines used are in a state of putrefactive decomposition. It is then easier to scrape them. They are rubbed and mixed with coarse dry salt. Though this somewhat reduces the intensity of the stench it does not suffice to purify the skin. So general has the practice of using rotting intestines for sausage-skins become in Newcastle that the sanitary authority has found it necessary to issue a circular to all butchers and others concerned warning them that if any putrid sausage skins were found in their possession they would be seized as unsound food.

Newcastle's Golden Opportunity.

Of course, the preparation of sausage skins should be done only at a public abattoir. The utilisation, treatment or preparation of the blood, the hearts, livers, feet, calves' heads, tripe, &c., should equally be restricted to the premises, where there is always a veterinary surgeon on the spot, together with inspectors and other guardians of the interests and the health of the consumer. It must, therefore, be a large place with a numerous staff. Everything which should be properly controlled must be done there and nowhere else, and there must be specially constructed carts to convey the food in a perfectly protected manner from the abattoir to the retail depôts in different parts of the town. This can be done at Newcastle with greater facility than in most towns, for the initial difficulties are already to a large extent overcome. The first obstacle is inability on the part of the ratepayers to understand the question at issue and their objection to the principle of municipal enterprise. But here the principle is already conceded, a municipal abattoir exists, and it is no longer a question of doing something new, but of doing this in a better, a more profitable, and a more effective manner. Having obtained assent to the principle, the next obstacle generally encountered is to secure a suitable site for a price that will not be so high as to handicap the enterprise too heavily. This is the more difficult as the abattoir should be by the side of the cattle market, and both ought to connect with the railway system and whatever watercourse there may exist in the neighbourhood. Most fortunately, at Newcastle, the municipality already owns a large part of the district of Walker to the east of the city. Here the river Tyne and two railways go through the quarter. So there is every facility. The land is good and dry, and the only objection is the existence of coal mines underneath, so that there might be some subsidence of the soil. The mines, also, belong to the corporation, but have been let to a mining company. Some municipal property has already been damaged by a subsidence, and the question arises whether the town has a claim for damages on the mining company. However this may be, of all forms of municipal construction a cattle market and a public abattoir have the least to fear from a subsidence of the soil. It is preferable in both cases to avoid any heavy overhead structure. There should be no second floor and but slender roofs admitting the utmost light and air. With such structures there is not much danger of a serious catastrophe even if some subsidence of the soil does occur. Thus, there is a great opportunity for Newcastle to place itself on a level with the towns of the continent, especially of Germany. With Denmark the figures given above indicate there has been a large trade in meat, but Copenhagen has a profitable and model municipal slaughter-house. The last account at my disposal dates back to 1908–09. During that year the receipts at the Copenhagen municipal abattoir amounted to £35,460 and the expenditure to £30,565. Thus while the meat was prepared under safe and wholesome conditions, offering a sound guarantee to the public, the municipality was put to no cost, but, on the contrary, cleared a net profit during the year of £4895. Why should not Newcastle do likewise?

(To be continued.)

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

The General Infirmary: Reopening of a Block.

THE south-east block of the General Infirmary, which was opened in 1894 and which, it will be remembered, was in great part destroyed by fire some 12 months ago, was reopened by the Lord Mayor on Oct. 31st. After a short dedicatory service, conducted by the vicar of Leeds, the Lord Mayor, Mr. William Middlebrooke, M.P., in a few well-chosen remarks declared the block reopened. Mr. Charles Lupton, chairman of the weekly board, explained the scheme of reconstruction which the block had undergone. The meeting, which was a very large and representative one, afforded an opportunity for Lord Airedale, who proposed a vote of thanks to the Lord Mayor, to make his first speech in Leeds. He reminded the meeting that the foundation stone of the present infirmary, which was opened in 1868, was laid by his grandfather, emphasised the great interest which his father had always taken in the welfare of the infirmary, an interest to which earlier speakers had borne testimony, and assured the meeting that he would always do what he could to favour the development of the institution, which was one of the most useful in the city. The block, which was originally built separate from the main building, consisted of three storeys, each having a front and a back ward; these were separated from one another by the main staircase, access from which was obtained to entresol wards. The back wards have always been regarded with some disfavour as looking less cheerful and as getting less light than the other wards of the infirmary. In addition to this the access to the various wards was not good; a covered corridor on the ground floor was during the original construction of the block supplemented by a bridge on the first-floor level, while during recent years an improved access has been obtained to the second-floor wards from the terrace by the construction of a second bridge. The reconstruction scheme has done away with the central staircase; in this way the front and back wards have been thrown into one on each floor, the entresol wards have disappeared, and a new access has been obtained to the block on all the floors by extending it at the north end, so that it communicates directly with the main building. This extension provides accommodation for the staircase and the entresol wards. The fire which occurred last year, and which was happily not attended with injury to anyone, brought home to the members of the board certain defects in the construction of the roof of the various blocks of the infirmary, and in the reconstruction of the south-east block these have been borne in mind and precautions have been adopted in connexion with the rest of the building. It is hoped that the block will be in full working order this week.

King Edward Memorial Fund.

The fund which is being raised as a memorial to the late King Edward has now attained a total of £106,000. A meeting of the committee of the fund was held at the infirmary under the chairmanship of the Lord Mayor, who has acted as the president. At this meeting it was decided to hand over to the infirmary the sum of £50,000 in

order to meet the expenses of the reconstruction of the south-east block in so far as that was not covered by insurance, and to pay for the land which has been acquired for the extension of the buildings. The Lord Mayor, whose term of civic office expires in a few days, agreed to the strongly expressed wish of the meeting that he should continue to act as president of the fund until the full amount of £150,000 was obtained. As everyone knows, it is not the collection of the earlier thousands that is the main difficulty in appeals of this kind, for in a large community one can safely rely on the support of a good many people who subscribe to all good objects; the chief difficulty is met with in the endeavour to secure that their excellent example shall be followed by those who can afford the smaller sums which are so essential to the complete success of the appeal. In this connexion attention may be called to a letter in the local press from Mr. G. Lane Fox, pointing out to the inhabitants of his county the large amount of work that is done by the infirmary for patients who come from all parts of the West Riding, and in many cases from places which give a very small amount of pecuniary support to the institution. He calls on those who can afford to do so to increase their subsriptions, and gives the best of all examples by substantially increasing his own. It is to be hoped that this appeal will bear fruit. Mr. Lane Fox's letter touches very pertinently on an aspect of the work of the infirmary which has been frequently spoken of by Mr. Charles Lupton, the chairman of the board, and as recently as at the meeting held at Manchester of representatives of the provincial hospitals to consider the bearing of the Insurance Bill on the funds of the voluntary hospitals. As Mr. Lupton explained, a considerable amount of work is undertaken by the infirmary which could not be done at the smaller centres; the patients must be dealt with at institutions like the General Infirmary, and it would be with the utmost possible reluctance that any difficulties would be raised to the ready admission of cases from a distance provided always they were of a character which could not be dealt with at the smaller centres.

Nov. 7th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Schools for Crippled Children.

IN our large cities there are unfortunately, especially in industrial centres, a large number of cripples, many so handicapped that they are unable to attend the public elementary schools. Within a radius of three-quarters of a mile from the Manchester University Settlement in Ancoats there are 300 crippled children. The Santa Fina branch of this settlement has begun to do something for some of these unfortunates. In one of the rooms of the settlement there is a little daily class of 12 crippled children, ranging in ages from 5 to 8, a lady having undertaken their instruction on the Froebel system. Mrs. Humphry Ward gave an address to help the cause of cripple schools for children, and urged that Manchester should join hands with London in the foundation of its school. Manchester has a residential school, but it is desirable also to have a day cripple school, such as exists in Liverpool, Birmingham, and London. The first school for cripples in London was started in 1899, and the project flourished. The crippled children are brought to the school, for which purpose there are 45 ambulances and 40 horse omnibuses. They are brought at 9.30 by the nurse, who is responsible for their safety, with special helpers. They have an interval for play in the forenoon, at 12 they get dinner, and resume work at 1.30 until 3 o'clock, when the ambulances arrive and take every child home. In London there are now 39 day schools for the physically defective, with total accommodation for 2901 children. The average attendance of the children for the past year was 2237. The children remain in attendance at the school until they are 16, and there is abundant testimony to the good results of the early training in the after-life of these persons.

Salford Hospital Annual Meeting: Very Small Contributions by Working Men.

The annual meeting of the subscribers to the Salford Royal Hospital was held on Oct. 27th. The King Edward VII. Memorial Wing is now completed, and the hospital will now accommodate 209 beds, or 74 more than before the extension. Only 39 of the additional beds will be occupied in the first instance. These will increase the annual expenditure to £10,250, and the annual income is only £8200, so that unless new sources of income are obtained to the amount of £2050 a year the capital of the hospital will be reduced. In response to the appeal issued in June, 1907, for £70,000, nearly £60,000 have been received. The chairman remarked that if the Insurance Bill passed in its present form the hospitals in the country would suffer great loss. The total number of the in-patients, out-patients, and accident cases was about 30,000, or a ratio of 1 to 8 of the townspeople. Although the great majority of the patients came from the working-classes, yet the total of the workmen's contributions, apart from the Saturday and Sunday Funds, was only £383, and the proceeds of the Saturday and Sunday Funds were steadily declining. The collections last year in Manchester and Salford together amounted to a little over £7000. Newcastle-on-Tyne collected three times as much. It was reported that the King had graciously accepted the position of Patron. In connexion with the resignation of Mr. Boutflower, it was stated that the services given to the hospital by Mr. Boutflower and his father had extended over 94 years.

Manchester Crematorium.

The annual meeting of the supporters of this institution was held on Oct. 27th. The report showed a profit of £172, and the chairman stated that the sentiment in favour of cremation was growing, as shown by inquiries from various bodies and societies to inspect the institution. The Bishop of Carlisle is now associated with the Bishops of Manchester and Oxford in approving of this method of disposition of the bodies of the dead. One speaker advocated the view that there ought to be compulsory powers to cremate all bodies of persons who had died from infectious diseases.

Ancoats Hospital: Its Work and Deficit.

At the annual meeting of the friends of Ancoats Hospital it was stated that 23,890 cases of accident had been treated in the hospital, as against 23,279 in the previous year. The in-patients numbered 1450, out-patients 10,547, and patients treated in their homes 1710. The hospital authorities hope that with the Royal Infirmary in its new site, they may expect some relief in the accident department. The increase of new casualty cases at the rate of 65 per day as compared with 41 in 1908, is seriously taxing the resources of the hospital. The system of "recommends" has been given up, and all sick poor in this busy industrial district who come to the hospital are duly treated. The income is £6879, and the expenditure £8660, leaving a balance on the deficit side on the year's account of £1780. This, with the deficits of previous years, makes a total debt of £9321 due to the bank. A special appeal was made on behalf of the hospital some time ago, whereby £8667 were received in donations, and £727 in new annual subscriptions. In the report it is stated that as regards the Insurance Bill "it is difficult at present to see any provision in it which would tend to the relief of the in-patient department, the costly part of the hospital's work."

The Insurance Bill: Uncompromising Resolution.

A meeting attended by over 350 members of the profession in Manchester and Salford was held in Manchester on Nov. 3rd to hear an address by Mr. J. Smith Whitaker, the medical secretary of the British Medical Association, on the Insurance Bill and the position of the profession under its provisions. Dr. Helme presided. The following resolution was carried unanimously:—

That this meeting affirms its unwavering adherence to the declared policy of the British Medical Association (including the six cardinal points) in relation to the National Insurance Bill, and declines to accept any amendment that would defeat the object of that policy, and is resolved to refuse any arrangements for medical attendance and terms which do not comply with that policy and afford adequate remuneration.

Midwives and the Insurance Bill: Their Complaint and Demand.

A meeting of midwives was held in Manchester on Nov. 2nd to urge that working midwives should be appointed on all local committees for the administration of the maternity benefit under the Insurance Bill. The general contention of the speakers was that notwithstanding there are 30,000 women on the Midwives Register, no provision is made for their particular employment under the Bill. Further, that the representation of medical men

on all committees under the scheme, coupled with the exclusion of the midwives, would lead to women losing much of their work. One speaker stated that they had been unable to secure an interview with Mr. Lloyd George. Under the Bill the midwife had no security at all for the engagement of her services and the payment for them. Another speaker said that 30,000 men belonging to a profession affected by the Bill would not have received the treatment which the voteless midwives had received. A resolution was carried calling on the Government to provide for the appointment of working midwives to the local committees dealing with the administration of maternity benefits under the Bill.

Nov. 6th.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Winsley Sanatorium.

THE board of management of the Winsley Sanatorium has given its assent to a scheme of extension which has long been under careful consideration. The plan which has been adopted provides better accommodation for the resident medical officer, matron, and servants, with some increase in the dining-hall, kitchen premises, and storerooms. This will set free for patients rooms at present occupied by the staff. The medical officer is to have a self-contained house forming part of a new administrative block, and the whole extension, which will make the accommodation sufficient for 100 patients, is to be carried out on the block system. It is expected that this will cost about £9000, with very little addition to the cost of upkeep. The balance in hand amounts to over £4000; the remainder will, it is hoped, be made good by further subscriptions (some of which are already promised), by the accumulation of the surplus on revenue during 1912 and 1913, and by selling or letting the added beds (30 in number) to local authorities. The Bristol members of the board felt compelled to make their acceptance of the scheme subject to "the distribution of the beds being made on the basis that the present holders of beds have the additional beds allocated in the proportion of their present holding." This is because it is thought that under the provisions of the National Insurance Bill, if and when it becomes law, Bristol may have to reconsider the whole matter and set up for herself a comprehensive scheme for the treatment of tuberculosis, including a separate sanatorium.

Bristol Medical School Dinner.

The annual dinner of the Bristol Medical School will be held on Tuesday, Nov. 21st, at the Royal Hotel, College Green. The chair will be taken by Mr. C. E. S. Flemming, of Bradford-on-Avon, and the guest of the evening will be Professor Howard Marsh, Regius professor of surgery in the University of Cambridge and Master of Downing College.

Bristol School for Mothers.

The Bristol School for Mothers has had a most encouraging career so far, and there was a good attendance at the annual meeting on Nov. 6th. When the school was opened two years ago there were ten members; now there are 100 attending more or less regularly, and the average number present at each weekly meeting is 35. The chief speaker was Dr. Florence Willey, who spoke of the paramount need for caring for working-class mothers during pregnancy and lactation, and securing adequate rest and food for them. Dr. Annie Cornall, who is medical officer to the school, said that it was difficult to attract the poorest and most ignorant mothers to their meeting, and hoped that the Notification of Births Act, about to be adopted in Bristol, might help in this respect. Dr. D. S. Davies, medical officer of health of the city, spoke of the valuable help given by the school to the city health committee during the summer outbreak of diarrhœa in lending two lady health visitors to the city for the time being. The work of the school is about to be municipalised, in so far that a lady medical officer is to be appointed, with two lady health visitors to assist her, but, as Alderman E. H. Cook observed, it is to be hoped that the voluntary organisation will continue its work in conjunction with these new officials. The accounts show a small deficit, but this will no doubt be made good.

Memorial Hospital to the late Sir Charles Dilke.

A meeting of Radical Members of Parliament was recently held in the House of Commons, when the proposal, referred to in THE LANCET of Sept. 9th, to erect a hospital in the Forest of Dean, Gloucestershire, as a memorial to the late Sir Charles Dilke was approved. It is proposed to issue to every Member of Parliament a circular, signed by representatives of all parties, inviting support for the scheme. Earl Beauchamp is chairman of the memorial committee, Sir W. Wedderburn, vice-chairman, and Mr. H. Webb, M.P., treasurer.

The Sewerage of Bath.

A Local Government Board inquiry was held recently at Bath into an application of the local town council for permission to borrow £35,000 for purposes of sewerage for the parishes of Twerton and Weston. This is part of the larger scheme of sewage disposal for Bath which is now being carried out, as these two parishes were included within the city boundaries on Nov. 1st.

The Bridgwater Hospital.

A meeting was held at Bridgwater on Oct. 28th, under the presidency of the mayor, to consider the financial position of the Bridgwater Hospital and the question of providing additional accommodation for women and children. After some discussion it was resolved to hold a carnival in 1912, the proceeds of which are to be devoted to paying off the debt on the hospital. It was stated that the centenary of the institution will take place in 1913, and in connexion with the celebration of this, and as a memorial to the late King, it was decided to add a new children's wing to the hospital. A general committee was appointed to carry out these objects, and several subscriptions were promised towards the erection of the new wing, including £100 from Mr. S. Sanders, M.P., £56 from Mr. G. Porter, and several smaller sums.

The Injunction of a Manufacturing Nuisance.

In the Chancery Division, before Mr. Justice Parker, a case which has caused much interest in the "Three Towns" was concluded on Nov. 2nd. It was an action brought by the mayor and burgesses of Plymouth against the Plymouth Fish Guano and Oil Company. The plaintiffs asked for a perpetual injunction to restrain the defendant company from carrying on at their factory and works the manufacture of fish guano, fish manure, oil, or other products of putrid and decomposed fish offal and refuse so as to cause a nuisance. The defendants denied that "they used offensive matter, and contended that their business was a lawful one and not dangerous to public health." The judge eventually gave judgment for the plaintiff corporation and granted the injunction.

Medical Candidates at the Municipal Elections.

At the Barnstaple (Devon) municipal election three medical men were amongst the 13 candidates for the six vacant seats, and two of these, Dr. Alexander John Kendrew and Dr. George Stephen Ware, were eventually elected. The election created great interest in Barnstaple, and the local press stated that the Insurance Bill was the cause of the medical men becoming candidates. Notwithstanding a denial of this assertion, the *Western Morning News* stated that it was rumoured that members of the Friendly Societies would not support the medical men. At the Bath municipal elections two medical men, Dr. Preston King and Mr. Richard James Herbert Scott, were elected.

Death of Dr. Thomas Henry Stocker Pullin.

Dr. T. H. S. Pullin died at his residence, Abernethy House, Sidmouth, on Oct. 26th, in his eighty-eighth year. Dr. Pullin received his medical education at St. Bartholomew's Hospital, and qualified as M.R.C.S. and L.S.A. in 1850. Twelve years later he graduated as M.D. at the University of St. Andrews, and in 1882 he obtained the F.R.C.S. of Edinburgh. Shortly after qualifying Dr. Pullin acted as medical officer of the board of health during the cholera epidemic at Portsmouth, and for a short time was assistant surgeon at Christ's Hospital, London. He then came to Sidmouth, where he soon established an extensive practice. He was surgeon to the Sidmouth Dispensary, medical officer of health of the urban district, Admiralty surgeon, and certifying factory surgeon. Dr. Pullin was very popular in Sidmouth and East Devon. He took a great interest in everything relating to the welfare of Sidmouth. The funeral took place on Oct. 31st and was largely attended.

Nov. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Medical Societies.

THE Edinburgh Medico-Chirurgical Society opened its ninety-first session on Nov. 1st. Dr. Byrom Bramwell delivered his valedictory address, and on the motion of Sir James Affleck was cordially thanked for his conduct in the chair. Mr. J. M. Cotterill was elected to the chair, Mr. Alexander Miles became senior secretary on the resignation of Dr. F. D. Boyd, and Dr. J. Stewart Fowler was elected junior secretary. It was intimated that a discussion had been arranged on the treatment of fractures, to be introduced by Mr. C. W. Cathcart, and one on vaccine-therapy by Dr. James Ritchie, of the Royal College of Physicians' Laboratory.—The Edinburgh Royal Medical Society has appointed the following Presidents for the coming session: Dr. R. G. Gordon, Dr. T. C. Ritchie, Dr. F. R. Luke, and Dr. J. T. Morrison. Dr. Gordon is senior president. This is an excellent as well as an ancient society and can be warmly commended to the students. It is perhaps the best field for his training as a thinker and speaker on medical topics.

The Edinburgh New Nursing Home.

The promoters of the scheme to provide a nursing home at a moderate cost for persons of limited means, to which reference was made in THE LANCET of Sept. 9th, are to be congratulated on having obtained from the public the money for which they appealed. They have secured suitable property for the purposes of the scheme in Chalmers-street.

The General Medical Council.

Dr. Norman Walker addressed his constituents in Edinburgh on Tuesday evening, Oct. 31st. Dr. G. A. Gibson occupied the chair. There is no other candidate.

Opticians and the Glasgow Eye Infirmary.

At a recent meeting of the council of the Institute of Ophthalmic Opticians, held in London, reference took place to the application recently made on behalf of the Glasgow Eye Infirmary to the Board of Trade for registration under the Limited Liability Act, without the necessity of the word "limited" being added to the name of the institution. It was reported that the powers sought would be detrimental to the interests of opticians, and that the Law and Parliamentary Committee of the Institute had decided to oppose the granting of the licence. As a result of the negotiations with the Board of Trade the clause under which the Glasgow Eye Infirmary would have been empowered to supply spectacles to its patients was deleted from the licence ultimately granted.

Dental Treatment for Glasgow School Children.

At a meeting of the Glasgow School Board the minutes of the committee on the medical inspection of scholars showed that a motion had been adopted "that dental treatment be given to a child undoubtedly necessitous, and that steps be taken to have the competency of paying for that treatment tested forthwith by a special case in the Court of Session." This question came up four months ago, when the medical officer of the school board reported that over 90 per cent. of the school children in Glasgow had bad teeth and 50 per cent. had very bad teeth. The suggestion was made by the committee that the board should give advice to parents as to what they should do with their children to prevent the state of matters growing worse. The difficulty was that they did not know exactly whether or not they had the legal power to do such work. It was thought that until they got the opinion of the court it would not be proper to embark on such expenditure. Already they were paying £4000 a year for medical inspection. If they were deliberately to begin dental treatment it would cost £500 in the first year and might entail medical treatment which would end, perhaps, in the cost running to £5000. Testing the case would cost about £300. An amendment was proposed to the minutes, suggesting that the board, instead of testing the case, should go ahead with the dental treatment of children. A sum of £500 was a great deal to give lawyers for advice on a matter which was perfectly clear from the department's memorandum. In Deptford they had treated over 3000 children for £446, with successful results in from 70 to 80 per cent. That was the price of the Court of Session action proposed. After a long discussion the minutes were carried by a large majority.

Medical Appointments at Glasgow.

Dr. Carl H. Browning, formerly lecturer in bacteriology, has been appointed University Lecturer in Clinical Pathology and Director of the Clinical Research Laboratory at the Western Infirmary, Glasgow.—At a meeting of the governors of Anderson's College Medical School, Glasgow, held last week, Dr. William Dove Macfarlane, jun., surgeon to the Royal Samaritan Hospital for Women, was appointed to the chair of midwifery and gynæcology at the school.

Wick Parish Council and the Local Government Board.

At a recent meeting of the Wick parish council a letter was submitted from the Local Government Board in regard to the proposed reduction of the salary of Mr. G Banks, medical officer of the Northern division of Wick parish. After careful consideration the Board was unable to agree with the council that there was reasonable ground for reducing the salary of the medical officer. It was reckoned that there were 350 poor on the roll in the parish, and that half of the total was in the Northern district. The medical officer had to attend 175 persons. Having regard to these figures and to the extent of the parish, the Board could not regard as excessive the salary of £56 at present allowed to Mr. Banks. It was also pointed out that Mr. Banks's period of service had extended over 40 years.

Dundee Parish Council and Vaccination.

The Local Government Board has communicated with Dundee parish council as to its inaction in regard to vaccination defaulters. At the last meeting of the Dundee parish council a motion to defer proceedings against defaulters for three months was carried. On the clerk's reporting proceedings to the Local Government Board, the Board sent a communication to the effect that the parish council had a statutory duty to perform in respect of the list of defaulters, and that if it failed to perform it the Local Government Board was empowered to compel it to do so. The Board looked to the parish council reconsidering its decision, and thus relieving the Board from taking steps. Notice of motion to rescind the previous decision has been given by one of the members of the parish council.

Nov. 6th

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Ireland and the Insurance Bill.

ON Nov. 2nd a deputation of Irish medical men met the Chancellor of the Exchequer by appointment in reference to the Insurance Bill. After some of them had spoken, Mr. Lloyd George, in a most fair way, said he was willing that "medical benefits" should extend to Ireland as they did to England and Scotland, but that the Nationalist Members thought otherwise, and so he would yield to them; but he suggested that the deputation should see the Irish Members. An informal meeting subsequently took place in the House of Commons, at which it came out that the Nationalist Members had drawn up a series of amendments relating to the Bill as it affected Ireland, and that "medical benefits" had been left out. They threw the blame for this on the Irish medical profession, for a letter had been sent to the secretary of the combined British Medical and Irish Medical Associations' Committee to meet the subcommittee of the Nationalist Members dealing with the Insurance Bill on a certain day in Dublin, to discuss the matter, and on that day no medical man appeared. They naturally concluded that the medical profession did not want "medical benefits." In explanation it was pointed out that the secretary of the combined medical committee was in the south of Ireland, and that when the letter reached him the date of the meeting was passed. The deputation, having made this explanation so as to clear up a very natural misunderstanding, pointed out that they did not object to the Bill if it applied to Ireland in the same way as it did to Scotland and England; what they protested against was the plan suggested originally by the committee of the Nationalist Members, which they regarded as unworkable. The Nationalist Members pleaded

financial grounds. However, they asked the deputation to meet them again and to table their views. Next day, Nov. 3rd, the suggested meeting took place, and the deputation put forward as their plan the six points adopted by the British Medical Association, to which the Irish Nationalist Members would not agree. It is clear that the Irish Nationalist party is divided on the matter, the majority being rural representatives, and, pressed by their constituents, say the amount to be paid by farmers and their workers is too high and that they are already looked after medically by the dispensary medical officers, while the minority—representing the towns—see that they will have difficulty with their labour constituents. Further, some of the Irish Nationalist Members favour the appointment of medical inspectors to go about examining for certificates, &c. Others say: "Give the dispensary doctors a small (2*s.* or 3*s.*) grant for certificates, drop 'medical benefits,' but accept the sickness and sanatoria part of the scheme." The medical profession would rather let the Bill drop—so far as Ireland is concerned—unless it is applied in the same way as in England and Scotland; but the Nationalist Members are feeling the difficulty they will have with the Labour Party, especially in the industrial centres, if they abandon the "medical benefits." Is a skilled workman who in England will have "medical benefits" to lose these benefits when he comes over to Ireland? The Nationalist Members have been looking everywhere for some plan to suit Ireland, but so far no constructive legislative scheme adapted to both urban and rural districts has been evolved. It may appear yet in their amendments.

Medical Inspection of Schools in Ireland.

The Meath Hospital is the only Dublin hospital which has this year kept up the old custom of opening its session with an address from one of the staff. Dr. Oliver St. John Gogarty, surgeon to the hospital, chose as his subject the need for medical inspection of schools in Ireland. He pointed out that according to the reports of the medical officer of the Education Committee of the London County Council one child in every three required medical attention. Defects of the nose and throat were the most common. Dr. Gogarty traced the evil effects, mental and physical, of adenoids. He protested against the long school hours in force in Ireland, and held that if the children were in good health shorter hours would be sufficient to give the same amount of instruction. Medical inspection of schools would pay its own way in the increased efficiency of the schools and the increased health of the children. Dr. Gogarty added that the Treasury gave for all forms of education in Ireland £1,632,000, whereas for Scotland the grant was £3,250,000. The address has attracted much attention in the public press.

Health of Belfast.

The report of the medical officer of health for the period from Sept. 17th to Oct. 14th showed that the general death-rate was 17·6, the zymotic rate was 4·0, and that from chest affections 3·2. Of the 170 cases of infectious diseases notified during this period, 99, or 58·23 per cent., were scarlet fever, 18 were typhoid fever, and 26 were diphtheria. The excessive mortality from zymotic disease, as compared with 1910, is almost entirely due to the number of deaths registered as due to epidemic diarrhœa and enteritis, 105, or 89 74 per cent., of the deaths registered from zymotic diseases being attributed to this cause. This report brings us up to the middle of October, but it appears that during the month of October 140 cases of scarlet fever, 25 of diphtheria, and 22 of typhoid fever were notified, while the death-rate from zymotic disease during that period is said to be about 4·5.

Belfast Water-Supply.

Fortunately, the wet weather of the past fortnight has improved the water-supply of Belfast. The month of October was the wettest month since December, 1910, although only on 12 days did rain fall. The rainfall in Belfast was 3·57 inches, and Sunday, Oct. 29th (on which 0·94 inch fell), was the wettest day this year in that city. In some places in Ulster the rainfall in October was even heavier than in Belfast; for instance, at Seaforde, Co. Down, on 13 days 4·41 inches fell, while in the Mourne Mountains the rainfall was over 6 inches, and 1·87 inches fell on Oct. 30th. On one occasion within 24 hours a little over 2 inches was recorded, so that the flow in the Kilkeel and Annalong rivers increased from 6,000,000 to 600,000,000 gallons; but owing to the utter want of management in not having a reservoir in the Mourne district for storage a large amount of this abundant supply ran to waste. Even with this copious rain (and it is still continuing) the supply is only about one-fourth of what is usually available at this time of year, hence the city is still given a restricted quantity of water. It is said that the Water Commissioners are trying to find a site for the storage reservoir in the Mourne district. It seems strange to the ordinary observer that this was not settled before the conduit pipes passing through Slieve Donard mountain were constructed at enormous cost, which simply bring to Belfast a portion of the water of the Annalong and Kilkeel rivers. Had a reservoir been made there long ago, Belfast, like Glasgow and London, would have no need to give a restricted supply at present, and citizens would not have been expected to pay for what they do not get.

Scarlet Fever in Banbridge and in Londonderry.

A serious epidemic of scarlet fever is prevailing in Banbridge, where at present there are about 56 patients under treatment in the hospital. Fortunately the disease is of a mild type, and so far the mortality has been *nil*. The national schools are to be closed some time longer as a means of checking the disease. On the other hand, the type of the disease in Belfast is severe. There is also at present an epidemic of scarlet fever in the waterside district of Londonderry, a large number of children being ill with it in the workhouse fever hospital.

Typhoid Fever in Tyrone and Fermanagh Asylum.

A serious outbreak of typhoid fever has occurred amongst the attendants, nurses, and patients in Tyrone and Fermanagh Asylum at Cranny, Omagh. Up to Nov. 4th, 70 persons in all, about 20 being attendants and nurses, have fallen victims to the disease. Three deaths have already taken place. More male than female patients are ill. At a meeting of Omagh rural council held on Nov. 4th Mr. J. J. Todd, medical officer of health, reporting on this outbreak, said he was of opinion that the asylum authorities should be requested to erect a septic tank, the sewage being at present discharged into the river, which immediately passed through the town of Omagh. He urged that the rural council should direct that the insanitary disposal of the sewage from the institution should cease. But nothing was done.

Nov. 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Prophylaxis and Treatment of Syphilis and Yaws in Martinique.

SINCE the discovery of "606" its employment and results have given rise on all sides, both in France and abroad, to lively discussion in scientific societies. Some there are who recognise in it a universal efficacy in all cases of syphilis, and even go so far as to attribute to it radical cures. Others charge it with inducing serious inconveniences, and, when it is used injudiciously and without all necessary precautions, even death itself. Finally, some accord to it its proper place, that of a very powerful drug, which has given excellent results in the hands of those who know how to select appropriate cases and to use precautions. A communication by MM. Noc and Stévenel to the Society of Tropical Pathology has revealed the gravity of syphilis in Martinique, and has confirmed in this respect the prior demonstrations of Kermorgant. These observers have found in "606" an admirable remedy, especially in regard to the prophylaxis of syphilis in hot climates. Their results have been most satisfactory in 44 syphilitics, as well as in two subjects of yaws submitted to treatment with it. The convenience of this treatment by one or two intravenous injections has caused the negroes, who hitherto have shown themselves rebellious against mercurial treatment, to come in crowds to be injected with "606."

A Clinique of Blind Masseurs in Paris.

A body of blind masseurs have recently opened in Paris a clinique for treatment by massage. In consequence of the extreme delicacy of their sense of touch the blind succeed in an exceptional manner in this occupation. They are also the

most discreet of masseurs. Many mineral-water resorts, such as Vichy, Uriage, Plombières, Néris, Châtel-Guyon, Bourbonne, and Bourbon l'Archambault, possess experienced blind masseurs, both male and female. In Japan, moreover, massage is in point of fact a monopoly for the blind, so well known that the same word designates both masseur and blind. As these experiments at French watering places have proved favourable for them, under a subvention from the Minister of the Interior, a special course of massage for the blind has been instituted under the conduct of a blind medical man, Dr. Fabre. Success must surely be wished for this institution, which opens an honourable means of livelihood for the blind—a class for whom professional openings have hitherto been limited.

The Struggle against Absinthe.

For a long time means have been sought in France of making war on absinthe, at least to limit its consumption as much as possible. A new Bill has recently been presented to interdict the manufacture and sale of absinthe. This Bill is very sweeping: it ordains that the manufacture, importation, circulation, and sale of every liquor of the nature of absinthe shall be interdicted. It prescribes a penalty of from three months' imprisonment to two years' imprisonment, with a fine of from 500 to 10,000 francs, or of either of these penalties. Importers and vendors are to be punished with imprisonment of from three months to a year, or a fine of from 100 to 5000 francs, or both. The tribunal may also altogether prohibit from trading in drinks anyone who shall be reconvicted, and the interdicted drinks and material shall be confiscated. The Bill (if it passes) is to come into force from the date of its passage as regards the manufacture, and within two years as regards the circulation and sale.

The Sale of Serums.

In THE LANCET of Sept. 9th I referred to a decree of the Court of Cassation, forbidding to the medical profession the sale of serums, even when prepared and injected by themselves, without the authority of the Academy of Medicine. On Oct. 27th this question was definitely settled by the Correctional Tribunal of the Seine. Henceforth, therefore, unless the Court of Cassation should reopen the question, medical men will not be able to augment their fees with the cost of a serum that has not received the sanction of the Academy of Medicine. This novel legislation prohibits a practice that has become general, and, as a result, there is a considerable outcry in the medical world. The case before the Tribunal was that of an appeal made by Dr. Régnier against a judgment by default, which had condemned him to pay 1000 francs as damages towards the Syndicate of Pharmacists of the Seine for a breach of the law regarding the sale of serums. Dr. Régnier was in the habit of injecting his syphilitic patients in a clinique named after him with an antisyphilitic serum obtained from immunised apes. But he also sent this serum into the provinces or to patients on the request of their medical advisers. The serum was injected only by the medical men. Dr. Régnier represented to the Tribunal that the price asked by him included not only the cost of the serum, but also his fee for personal services, microscopical examinations of the blood of the patients, and the direction and surveillance of the treatment. The Tribunal reduced the fine from 1000 to 100 francs.

Ovarian Grafting.

When a woman on account of ovarian trouble of any kind is obliged to undergo removal of the ovaries, various disturbances of health arise, troubles that are greater in proportion as the patient has yet before her many years of functional life. To ameliorate this condition, Dr. Tuffier, since 1906, has performed 130 ovarian graftings, which he considers permissible in case of complete removal of the ovaries. In five cases the grafts were taken from another woman, in 109 cases from the patient's own ovaries, and in 87 cases he has grafted a single ovary. The "hetero-grafts" demand special conditions, which can rarely be obtained. In only three cases out of 119 cases followed up has the grafted ovary been eliminated. In 116 cases it has been well tolerated, and then either it has been absorbed or remained *in situ*, though inert, or else after a time of torpor lasting from one to five months, it has become the seat of monthly congestions which may continue for two years. When the woman has no uterus the grafts give no relief from the troubles due to suppression of the ovaries. But when the uterus has been preserved and the graft takes, menstruation becomes re-established, preceded by congestive phenomena in the region of the graft from one to five days before menstruation. This is not due to the presence of a supernumerary ovary, for when such exists, as Dr. Tuffier has observed in a strikingly decisive case, the graft does not become the seat of congestive phenomena; in such a case the troubles disappear as long as menstruation lasts. These troubles, therefore, are to be attributed to the suppression of menstruation, which is a means of eliminating toxins.

Nov. 7th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Failure of an Action for Libel brought by one Medical Man against Another.

IN an action for libel recently heard in the Vienna High Court a certain Dr. Panesch, M.D. Vienna, claimed damages from Dr. Grün for having been made the object of calumnious remarks by the latter. Dr. Grün had, in the periodical press and in medical clubs, remarked that the plaintiff, although he pretended to treat patients "by more natural methods" than the orthodox practitioners, in reality employed the ordinary prescriptions and remedies which are in everyday use. Dr. Grün also stated that Dr. Panesch was in public a vigorous antivaccinator, whilst in private he performed vaccinations just as any regular practitioner would. It must be explained that there exists in this city a certain political party whose main object is to excite opposition to medical science and to hinder medical progress and research. This party is also responsible for arousing animosity against foreigners who have been appointed professors in Austrian universities, and has even succeeded in scaring some of them away. Dr. Panesch was for some time the editor of the journal which expresses the views of this party, and even now he is one of the staff of *Natürliche Heilmethoden*, which is a decided opponent of regular medicine. In the hearing of the case the defendant was able to prove that the plaintiff had vaccinated and prescribed within the last few years regularly in accordance with recognised orthodox methods, but that he, nevertheless, informed his patients that his way of treatment differed entirely from that of other doctors of medicine by applying only "natural remedies," and that he always used to pose as an adherent of and believer in a new system of pathology. The judge expressed in a most severe manner his disapproval of the plaintiff's action, and inflicted a fine upon him for abusing the patience of the court.

The Vienna Medical Council.

The election of the new Medical Council (Aerzte-Kammer) for Vienna took place not long ago, and with very few exceptions the former members were returned. Professor Finger will again be chosen President of the Council, whilst Dr. Gruss will be Vice-President. The main object of the recent election was the same as last time—namely, to unite all sections of the profession by nominating and electing all the leaders of the different parties as they may be called, and thus to ensure a uniform working for the benefit of the profession. The Vienna Medical Council has naturally more influence than any other, representing as it does the capital of the Empire and the University, and some very important work will soon be brought before it, for the new Medical Act with its numerous regulations will have to be considered, and the profession is far from being satisfied with its provisions and wording as it stands at present.

Adulteration of Food Products.

The recent universal rise of prices for all articles of food and other absolutely necessary commodities has led dealers to attempt to increase their profits by adulteration. On the other hand, the public naturally try to get full value for their money, and the market inspectors all over the country have consequently been instructed to be on the alert, especially as regards milk, butter, and flour. The result is that numerous prosecutions for adulteration of the above-mentioned articles are now proceeding, and it must be acknowledged that the Home Office does its utmost to protect the public. In order

to facilitate the supervision of the milk-supply surprise visits are made at the smaller shops, and instruments for testing milk are issued to dairymen. The scarcity of milch cows has caused a large importation of Dutch and Russian butter into Austria; this branch of the provision trade is strictly controlled by the State, whilst the importation of meat is forbidden—a decidedly unpopular regulation. The fact of the matter is that the recent epidemic of foot-and-mouth disease in Austria, which proved fatal to 30 per cent. of the cattle, has created such a scarcity of meat, that the importation of frozen meat will have to be permitted sooner or later without reference to political considerations.

The Advantages of the Winter Term for Post-graduate Study by English Visitors.

The winter session of 1911–12 will be a memorable one for the medical faculty of the university, as a large part of the new hospital will be in use and the new clinics are justly an object of pride for every Austrian medical man. The only drawback involved in the division of clinical teaching between the old and the new hospitals is the loss of time for the students. Amongst the lectures, the majority of which are open to any students and medical men from any part of the world, there are special courses conducted in English; these latter are intended chiefly for the benefit of the numerous English and American visitors at present completing their studies in this city. The Americans have created a colony here, having their medical club, their café, and their lecture arrangements. Through their influence it has come about that an English-speaking medical visitor may obtain the advantage of German scientific instruction and practice, may see a number of operations, and may perform some himself, without speaking a single word of German, all the conversation and oral instruction being conducted in his native tongue. The fees for these classes are comparatively low—from £2 10*s.* to £4 4*s.* per month, and there is a wide range of subjects, in any one of which a class may be formed if a few applications to that effect are made.

Nov. 6th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Epidemic of Cholera.

THANKS to the vigorous measures of the sanitary authorities and also to cool weather the cholera epidemic has been markedly on the decrease in Constantinople. Last week not a single death was recorded. To-day, however, the Turkish newspaper *Yeni Gazetta* reports that cholera has visited the large asylum for the insane at Scutari. According to this daily paper six inmates were stricken last Monday. The symptoms and the bacteriological examination showed that the cases were genuine cholera Asiatica. It is asserted that the water sources at Scutari are contaminated. The sanitary commission is investigating the matter. During the full swing of the epidemic I offered myself to the municipal authorities, and was attached to the sanitary station of Peri-Pasha, on the Golden Horn, where cholera raged most. I thus gained experience, not only in the course of the disease and its treatment, but also in the superstitious attitude of the people of that particular district, for the most part destitute and ignorant, to the epidemic and to the medical profession. I found that lactic acid and opium were efficient means of combating the first symptoms. I also found thymol and, in later stages, hypodermic injections of morphine of considerable use. The most difficult part was to persuade the people of the urgent necessity of immediately reporting to the medical man every suspicious case. Frequently the patients were utterly neglected by their relatives, who preferred every possible domestic remedy to any medical intervention. Some actually believed that it was in the interest of the physician to poison the cholera-stricken patient in order so much the quicker to stamp out the epidemic. On more than one occasion I found a dead body thrown out into the street during night time. It was impossible to trace whence it came, so secret was the matter kept by the inhabitants. In some quarters of Stamboul the people conspired against the medical authorities and the attendant physicians and caused them worry and even personal injury. The people dreaded most of all hypodermic injections and would often oppose them fiercely. Keeping a contaminated house under strict cordon was another difficulty. No matter how sharp was the watch kept, the inmates would always succeed in escaping supervision. They would escape from windows, thus helping the propagation of the disease, frequently knocking down the sentinel and running away. On one occasion, however, a Jew tried to escape and was shot dead by the sentinel. This put a stop to further attempts at evasion.

Turkish Cholera Remedies.

Among the orthodox Turks the old and the priests were always ready to give counsels as to how to live and behave during a cholera epidemic. Frequently they offered advice in treatment, asserting at the same time that doctors were the real cause of the trouble, and should be shunned just as much as the epidemic. Here are some remedies against cholera recommended by some old-fashioned Ottomans: (1) Drink infusion of juniper berries; (2) carry with you an agate stone or on your neck a stone of hyacinth; (3) never fail to have in your pocket a bone of a dead child; (4) masticate pimpernel; and (5) since cholera is mostly caused by the moon, drink decoctions of laurel fruit when the planet Mars or Mercury is in the ascendant, as these planets are the enemies of the moon.

Cholera in the Provinces.

In the provinces the epidemic has also diminished, but in a lesser degree. There the spread of cholera was due to the extremely bad conditions of living, to the dirt of the streets, to the want of proper canalisation and lack of drinkable water, and to the ignorance and obstinate refusal of the lower classes of the population to follow medical advice. The great scarcity of provincial medical men was another very serious cause. Often the old women of a place attempted playing the rôle of doctors, with disastrous results. Thus it was reported from a village that a number of such old Megæras had shut a young cholera-stricken woman in a hot oven, and the unfortunate patient died from suffocation. I should mention the utter inadequacy of medical salaries as paid by the municipal authorities, of which physicians have frequently complained to me. I suppose this unsatisfactory state of affairs is largely due to the present Italo-Turkish war, with which the whole attention of the metropolis is taken up. The only topic of conversation is war, which drowns all other interests.

Nov. 2nd.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS)

Continued Prevalence of Rabies.

OWING to the long-enforced laws in Great Britain compelling the muzzling of dogs, rabies is practically unknown in England. The same is the case in Germany and Denmark. The zoophilists of the United States are fond of stating that there is no such thing as rabies, and that the well-known symptoms are merely psychical and produced by fright. The current monthly *Bulletin* of the Department of Health of the City of New York, however, while admitting that rabies is among the rarest of fatal diseases, shows that during the first eight months of 1911 the department investigated 2462 cases reported of dog-bite, among which 7 genuine cases of rabies developed. Many of the two thousand and odd cases were submitted to the Pasteur treatment, which is itself as tedious and painful as a disease, and compels the sufferers to undergo great expense, discomfort, and loss of time. The number treated at the Pasteur Institute alone during the eight months was 312, as compared with 262 for 1910 and 182 for 1909. The victim is obliged to shoulder the expense, which, the *Bulletin* says, is unfair. The power of the health department should be extended; at present it is limited to investigation of the reported attacks by dogs, the destruction of undoubtedly rabid dogs, the administration of Pasteur treatment to willing patients, and to an emergency power to kill unmuzzled animals in times of danger. This last privilege is so objectionable to dog lovers that its practice is impossible. There is a State law enabling the Commissioner of Agriculture to quarantine the dogs of an infected district, but this is inadequate. Education of dog owners is demanded

and liberty to keep down the stray dog population. It has been suggested that municipal and sanitary authorities throughout the country should devise some method to protect the public by the introduction and enforcement of measures similar to those that have proved successful in England, Germany, and Denmark The licensing of dogs in New York, alone among great cities, is left to a private corporation, the Society for the Prevention of Cruelty to Animals.

Conference of Sanitary Officers of New York State.

The second annual meeting of the association of these officers began in New York on Oct. 24th. In the State there are 1400 sanitary districts, nearly all of which were represented. The State Legislature was roundly denounced for decreasing the appropriation for the aid in prevention of tuberculosis, while raising that for the study of diseases of the lower animals, hog cholera in particular, and the attention of that body was called to the necessity for more stringent regulations on the practice of spitting in the streets. On the evening of Oct. 26th, Dr. Simon Flexner, director of the Rockefeller Institute for Experimental Research, stated that the institute had discovered a serum for the cure of spinal meningitis, which was to be injected directly into the cord. An address was given by Dr. C. E. Walton on "The Doctor and the Health Officer as Co-labourers." Dr. Walton thought that promiscuous kissing, especially among children, demanded legislative interference. Dr. William H. Guilfoy, registrar of the New York health department, said that New York had at last succeeded in obtaining a satisfactory system of registration of births and deaths, the only trustworthy one in the whole country. The facts that children could not enter the public schools without having certificates that they were six years old, or get work in a shop or store without producing working permits, had been strong aids to efficient registration. An International Waterway Commission to prevent the contamination by sewage of the rivers and lakes on the boundaries of Canada and the States was advocated by Dr. McCullough, chief of the health department of Ontario, Canada. Laws to regulate cold storage of food were proposed by many speakers. Mr. R L. Cox, counsel for the Association of Life Insurance Presidents, complained of the inadequate equipment of many health departments in the States, and urged the establishment of a clearing-house of health departments. On Oct. 27th the members were invited to inspect the Rockefeller Institute. Dr. W. S Magill, director of the State Hygienic Laboratory, informed the members that although the directions on each package of diphtheria antitoxin sent out by the State were plain enough, he found that not more than one physician in a hundred followed them implicitly.

Infantile Paralysis a Dust Disease.

At a meeting of the Neurological Section of the New York Academy of Medicine on Oct. 10th Dr. Marcus Neustaedter gave an account of experiments conducted by him and Dr. W. C Thro, of the Medical Department of Cornell University, with regard to the causation of acute poliomyelitis. Dr. Neustaedter holds that dust plays a prominent part in the spread of the malady. He drew the following conclusions: first, that the disease is essentially an infantile one, prevailing principally among very young children who play upon the floor; second, that it occurs mostly in the dry season; third, that the character of the neighbourhood and conditions of life do not play a material part in its spread; fourth, that children in the same family may be attacked one after the other, and that in a given house children may be attacked in different families in quick succession and on the lines of neighbourly communication; and fifth, that the upper air passages seem to be the channels of infection. Experiments on monkeys appeared to show fairly conclusively the important part played by dust in spreading the disease.

Dental and Eye Clinics for School Children.

The Board of Estimate of New York City has under consideration a plan to provide, at the cost of the city, oculists and dentists to treat ocular and dental defects in children in the public schools. The board's special committee on health, hospitals, and charities has recommended that these duties devolve on the Board of Health's division of child hygiene. The committee's report recommends that provision be made in the budget of 1912 for municipal dental clinics.

The Milk Stations of the New York Milk Committee to be Closed.

The 31 stations of the New York Milk Committee are to be closed on Nov. 1st, in accordance with the plan of campaign announced at the beginning of last summer. The committee, however, has suggested that the city assume supervision of the infants enrolled at these stations and has offered the use of the stations and equipment rent free up to Jan. 1st next.

Enlargement of St. Luke's Hospital, New York.

An out-patient department building for St. Luke's Hospital, New York, was opened on Oct. 19th. It cost $250,000 (£50,000), the amount having been bequeathed by the late Mr. John G. Hecksher.

Death of Dr. Alexander Hugh Ferguson, of Chicago.

Dr. Alexander Hugh Ferguson died from blood poisoning at his home on Oct. 20th. He was born in Ontario, Canada, on Feb. 27th, 1853, and was therefore 58 years of age. He took his M.D. degree in the Medical College of Trinity University, Toronto. After study-travel in Europe, he settled in practice in Winnipeg in 1881, where he founded the Manitoba Medical College, at which he was professor—first of physiology and subsequently of surgery. Going to Chicago in 1894, he became professor of clinical surgery in 1900 at the College of Physicians and Surgeons there. He became surgeon to the Post-Graduate Hospital and Cook County Hospital for the Insane, and surgeon in chief to the Chicago Hospital. He was a member of the British Medical Association, the American Medical Association, the International Surgical Association, and a Fellow of the Chicago Academy of Medicine, as well as of many other medical societies.

Oct. 28th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Plague.

THE mortality from plague in India during the week ending Sept. 23rd amounted to 6668 deaths, of which Bombay Presidency accounted for 4748 deaths. In other provinces the figures were as follows: Madras, 583 deaths; Bengal, 18; the United Provinces, 42; the Punjab, 5; Burma, 17; and the Central Provinces, 379. There were 546 and 189 fatal cases in Mysore and Central India respectively.

A Consumption Sanatorium.

The foundation-stone of the Hardinge Consumptive Hospital at Dharampur (Simla Hills) was laid by the Viceroy on Oct. 4th. The Maharaja of Patiala has sanctioned Rs. 60,000 for the building of the hospital. The building will consist of (1) an out-patient department and dispensary room; (2) indoor wards; (3) large operation room, with anæsthetising room; (4) bacteriological and chemical analysis rooms, with apparatus even for spectrum examination of blood, urine, &c., and for carrying out opsonic index examination. At present there are to be eight male and four female wards, but cottages will be erected as funds permit and the demand arises. The main building is on the pavilion system with ample verandah accommodation for patients in all weathers. There will be accommodation for a resident assistant surgeon, two sub-assistant surgeons, and a compounder. This is the first sanatorium of its kind in the East.

Panama Canal and Yellow Fever.

Major S. P. James, I.M.S., statistical officer to the Government of India, goes on deputation for ten months to Panama and the West Indies to study yellow fever in the endemic area and so advise the Government as to the measures which are necessary to prevent the disease spreading to India when the Panama Canal is opened. He leaves Simla on Oct. 23rd and goes to the Straits, thence to Hong-Kong (to attend the International Conference on Tropical Medicine), after which he proceeds *viâ* Hawaii to Panama (where he spends three months), afterwards visiting the West Indies. Captain A. G. McKendrick, I.M.S., acts for him in his absence.

The Medical Registration Act of Bombay.

The Bombay Medical Act of 1911 (Bill VI. of 1911) is

now published and is for consideration by the Legislative Council. It extends only to the Bombay Presidency. The Council is to consist of 13 members, as follows: (*a*) a president nominated by the Governor; (*b*) six members nominated by the Governor; (*c*) four members nominated by graduates of the University of Bombay; and (*d*) two members elected by the medical practitioners practising in Bombay. No person is eligible to be a member of the Council unless he is a member of one of the services or is a graduate or licentiate of the University of Bombay. This clause excludes an independent medical practitioner of any nationality or of any European college or university, and is an injustice which requires amendment. The members of Council are to be elected for a term of five years. £1 is the fee for registration. A person convicted of grave unprofessional conduct may be removed from the Register. No medical certificate is to be valid, except that of a medical man on the Register. No one can hold a hospital or other public medical appointment unless he is on the Register. Every registrar of deaths has to inform the registrar of the Council of the death of a practitioner on the Register. All examining bodies have to furnish any information required of them by the Council. Any attempt to give false information to the registrar is punishable by a fine of 300 rupees. The Council may make rules as to any examination. The objects of the Bill are to protect the public against irregularly qualified practitioners, and to ascertain if practitioners have certain recognised qualifications stated in the schedule. It places no direct restriction upon the practice of Indian vaids and hakims, but will improve the status of those practising the Western medical art. It places no obstacle on the recovery of fees by unregistered persons. In this respect it is weak.

Oct. 8th.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Alabama Medical College:* Dr. William F. R. Philips has been appointed to the chair of Anatomy.—*Berlin:* Dr. Edmund Lesser, Director of the Dermatological Clinic, has been promoted to be Ordinary Professor of Dermatology.—*Bonn:* Dr. Ludwig Tobler, of Heidelberg, has been offered an Extraordinary Professorship of Children's Diseases.—*Düsseldorf (Academy of Practical Medicine):* Dr. Emil Ballowitz, Professor of Anatomy in Münster, has been appointed to the chair of Topographical Anatomy.—*Göttingen:* Dr. Creite, *privat-docent*, has been appointed Director of the Surgical Side of the Policlinic in succession to Dr. J. Rosenbach, retired.—*Marburg:* Dr. M. Heyde has been recognised as *privat-docent* of Surgery.—*Munich:* Dr. Seydel, Professor in the University and Director of the Academy of Military Medicine, has been appointed Staff-Surgeon-General of the Bavarian Army in succession to His Excellency General von Bestelmeyer, who is retiring.—*Padua:* Dr. G. A. Pari has been recognised as *privat-docent* of Medical Pathology, and Dr. C. Finzi as *privat-docent* of Midwifery and Gynæcology.—*Palermo:* Dr. Cesare La Rocca has been recognised as *privat-docent* of Anatomy, Dr. Fausto Orestano as *privat-docent* of Operative Medicine, Dr. Giuseppe Spagnolio as *privat-docent* of Medical Pathology, Dr. Di Cristina Giovanni as *privat-docent* of Pædiatry, and Dr. Menotti Iorfida as *privat-docent* of External Pathology.—*Pavia:* Dr. F. Strada has been recognised as *privat-docent* of Pathological Anatomy and Histology, and Dr. Verga as *privat-docent* of External Pathology.—*Rome:* Dr. G. Garbini has been recognised as *privat-docent* of Psychiatry.—*Vienna:* Dr. Otto Porges has been recognised as *privat-docent* of Medicine.

ASYLUMS IN DIFFICULTY.—Owing to all the county asylums in Lancashire being crowded the Lancashire asylums board found it imperative to construct a new asylum, and Walley was fixed on as a site as early as 1902. Since then opposition from the residents of the district and delay in passing the plans by the Commissioners in Lunacy prevented a start being made with the work until a year ago, when the contract was let to a large building firm for £355,846. It was expected that it would take three and a half years to complete the building, of which less than one-third has been constructed during the past year. It has just been officially announced at Preston by the Lancashire asylums board that the contractors have paid off their men and stopped the work of building the asylum. The Derbyshire county council decided to build a large lunatic asylum in the Hope Valley to accommodate 800 inmates at a cost of £240,000. Some opposition has been offered by some of the residents, but the county council intends to persevere with the scheme and carry it through.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The lectures before the College for next year are, as at present arranged, as follows: Goulstonian, Dr. H. G. Adamson; Lumleian, Dr. Percy Kidd; Croonian, Mr. L. S. Dudgeon; Milroy, Dr. F. A. Bainbridge; Horace Dobell, Dr. C. J. Martin; Fitz-Patrick, Dr. Raymond Crawfurd; Oliver-Sharpey, Sir Ronald Ross.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the annual general meeting of the Fellows and Members of the Royal College of Surgeons of England on Thursday next Dr. Joseph Smith, President of the above society, will move a resolution affirming the desirability of admitting Members to direct representation on the Council.

COLONIAL MEDICAL SERVICES.—*West African Medical Staff:* Dr. E. Slack, medical officer, Gold Coast, has resigned, and Dr. C. S. Thompson, medical officer, Southern Nigeria, has retired. Mr. A. G. Eldred, medical officer, Gold Coast, has been transferred to the Nyasaland Protectorate. The following officers have been promoted: Dr. J. A. Clough, medical officer, Southern Nigeria, to be a senior medical officer, Gold Coast; Mr. J. W. Collett, medical officer, Southern Nigeria, to be senior medical officer, Sierra Leone; Mr. C. F. Watson, medical officer, Northern Nigeria, to be a senior medical officer, Northern Nigeria; and Dr. W. H. A. Gordon-Hall, medical officer, Northern Nigeria, to be a senior medical officer, Northern Nigeria. The following have been selected for appointment to the staff: Dr. E. C. Braithwaite (Southern Nigeria), Dr. B. J. Courtney (Northern Nigeria), and Dr. H. R. M. Ferguson (Southern Nigeria). *Other Colonies and Protectorates:* The following have been selected for appointment: Dr. A. Barber, as a medical officer in the Straits Settlements; Dr. G. E Craig, as a medical officer in British Guiana; Dr. F. W. Falconer, as a house surgeon in the Federated Malay States; Dr. A. Mathieson, as a medical officer in the Straits Settlements; Dr. R. F. Priestley, as a medical officer with the work of a house surgeon in the Straits Settlements; Dr. S. P. Proctor, as a supernumerary medical officer in Trinidad; and Dr. C. J. Smith, as a house surgeon in the Federated Malay States.

A HEALTH CONFERENCE AND EXHIBITION.—A biennial conference and exhibition is to be held under the patronage of Her Royal Highness Princess Christian of Schleswig-Holstein at the Horticultural Hall, Westminster, on June 24th, 25th, 26th, and 27th, 1912. The conference, which will extend over the four days, will deal with (1) the health of infants; (2) the health of boys and girls; (3) public health; and (4) the care and cure of the sick; and it and the exhibition are intended to appeal to all classes. Opportunity will be given for the discussion of the higher technical and scientific subjects connected with public health, but the chief aim is to illustrate the simple practical methods of hygiene and sanitation which are attainable by even the humblest households, if only the inmates are willing and anxious, by regarding elementary principles, to insure good health to themselves and their children, and by this means to help toward maintaining a sound and healthy race. The coöperation of all public health bodies and officials, as well as local health organisations, throughout the country, is being sought. Among the exhibits will be cookery demonstrations, first aid and home nursing, crèche life, a model home and how to clean it, healthy occupations for boys and girls, and the methods whereby a knowledge of simple domestic hygiene may be applied to everyday life. Representatives of health organisations are invited to communicate with the promoter and organising secretary to the conference and exhibition, Miss R. V. Gill, and to suggest any subjects for discussion, and to offer any advice upon the methods which may be adopted to ensure the practical utility of the exhibition. Space will be allotted to

the exhibits of philanthropic bodies and workers in order that every opportunity may be afforded to give publicity to such work as may benefit the community. Communications relating to the conference and private exhibits should be addressed to Miss Gill; communications regarding trade exhibits to the business manager, Mr. Frank Virgo, at 35, Ludgate-hill, London, E.C.

Apollinaris Water has received the Grand Prix at the Dresden Exhibition.

MEDICAL MAGISTRATE.—The Lord Chancellor has appointed Mr. Carey Pearce Coombs, M.D. Lond., M.R.C.S. Eng., of Castle Cary, a justice of the peace for the county of Somerset.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the meeting of the President and Fellows of the Royal College of Physicians of Ireland held on Nov. 3rd, Mr. Charles Greer, F.R.C.S.I., was admitted to the Membership of the College and Mr. R. J. Cyriax and Dr. L. S. Modi were admitted Licentiates in Midwifery.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.—The council of this school has appointed Dr. Walter d'Este Emery to be Lecturer in General Pathology, and Dr. W. H. B. Stoddart to be Lecturer in Mental Pathology.—The St. Dunstan's trustees have awarded an Exhibition, tenable at the Medical School, to Miss N. Gibson, and a special grant to Miss Joyce B. Reed. The School Scholarship has been awarded to Miss Joyce B. Reed.—The Mabel Webb Research Scholarship has been awarded to Miss C. Leetham, who will carry out research in physiology in the Physiological Department.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. C. J. Auffret, formerly Inspector-General of the French Army Medical Service.—Dr. Caspary, formerly professor of dermatology in Königsberg.—Dr. Max Jaffe, professor of pharmacology and medical chemistry in the University of Berlin, aged 70. He was the author of many original papers on pharmacological subjects, and enjoyed a very extensive practice, patients coming to him from Russia and other foreign countries. His advice, too, was constantly sought by Berlin practitioners, amongst whom he was very popular.—Dr. Getto, who is supposed to be the Nestor of German medical men, has died at Deidesheim, aged 98.—Dr. A. W. C. Berns, of Utrecht, aged 74, who during the Franco-German War established a hospital at Düsseldorf for the sick and wounded, and was afterwards a professor in Freiburg. In his youth he had been a minister in Holland, where he was born and educated both for the Church and for medicine, taking his medical degree in Utrecht in 1869. He returned to Holland in 1876, and practised for several years in Amsterdam.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

National Insurance Bill.

THE House of Commons continues to make steady progress with the National Insurance Bill under the closure resolution. The debates are proceeding with greater smoothness than was anticipated at the commencement of the autumn session. Many of the clauses which are now being disposed of contain technical details of machinery. The principal points of controversy in which the medical profession are closely concerned will, it appears, not be reviewed until the report stage. Mr. MCKINNON WOOD, who as Secretary to the Treasury is acting on behalf of the Chancellor of the Exchequer at question time, has stated that points of detail arising out of the decision of the Committee concerning the relations between the Friendly Societies and the medical profession have been under discussion and will be dealt with on report.

On Tuesday, Nov. 7th, the House of Commons had before it the amended proposals of the Government with regard to the inclusion of soldiers and sailors within the provisions of the National Insurance Bill. The weekly deduction from pay is to be 1½*d*. Maternity benefits will be given to the wives of soldiers and sailors. Men who have been members of approved societies are to have their contributions credited to their own societies, and this will enable the societies to admit them when discharged to full benefits. Men who do not join societies will be allowed to be members of a Navy and Army Insurance Fund. Although no charge for sanatorium benefit will be made upon the contributions in respect of men while serving, it is intended that such men should, if they contract tuberculosis during service be given treatment in the sanatoriums provided under the scheme, and that the cost of such treatment should be borne by Army and Navy votes.

Owing to the time absorbed by the discussion of the scheme for soldiers and sailors, no opportunity was available before the closure resolution took effect to consider the details of Clauses 41 and 42. Clause 41 relates to the constitution of the Insurance Commissioners, but on the motion of Mr. LLOYD GEORGE it was amended so as to provide that one of the Commissioners at least should be "a duly qualified medical practitioner who has had personal experience of general practice."

Clause 42 sets up an Advisory Committee for the purpose of giving the Insurance Commissioners advice and assistance in connexion with the making and altering of regulations. It was originally proposed that the committee should consist of "representatives of associations of employers and approved societies and of such other persons as the Commissioners may appoint." By an amendment proposed by the Chancellor of the Exchequer, "duly qualified medical practitioners who have personal experience of general practice" are included specifically amongst the categories of persons to be appointed to the Advisory Committee.

A very vigorous protest was entered in the House of Commons on Wednesday, Nov. 8th, on the relatively smaller representation of the Local Health Committees which Mr. LLOYD GEORGE's new proposals give to the medical profession. As amended Clause 43 (appointment of Local Health Committees) provides that—

"Such number of the members of the committee as the Insurance Commissioners having regard to the circumstances of each case determine (but in no case less than 24 or more than 48) shall be appointed in such manner as may be prescribed by regulations of the Insurance Commissioners so as to secure representation of the insured persons resident in the county or county borough who are members of approved societies, and who are deposit contributors in proportion, as nearly as may be, to their respective numbers; and the regulations so made shall provide for conferring on the approved societies which have members resident in the county or county borough the power of appointing the representatives of such members, and, where an association of the deposit contributors resident in the county or county borough has been formed under such regulations as aforesaid for conferring on such association the power of appointing the representatives of the deposit contributors.

2. Of the remaining members of the committee, who shall not exceed two-thirds of the number of members appointed in manner aforesaid, one-half shall be appointed by the council of the county or county borough, two shall be elected in manner provided by regulations made by the Insurance Commissioners, either by any association of duly qualified medical practitioners resident in the county or county borough which may have been formed for that purpose under such regulations, or if no such association has been formed by such practitioners, and the others shall be appointed by the Insurance Commissioners.

Provided that the members appointed by the council of the county or county borough shall consist wholly or in part of members of the local sanitary authorities and two at least shall be women, and of the members appointed by the Insurance Commissioners one at least shall be a duly qualified medical practitioner and two at least shall be women.

3. The Insurance Commissioners may, where any part of the cost of medical benefit or sanatorium benefit is defrayed by the council of the county or county borough, increase the representation of the council and make a corresponding diminution in the representation of the insured persons."

The effect of this change is to increase greatly the standard of numbers on the Local Health Committees, and to give the preponderating control in them to the Friendly Society element. There is no corresponding increase in the medical representation. Before the change was made Sir PHILIP MAGNUS described it as a "betrayal" of the interests of the medical profession. Sir ROBERT FINLAY regarded it as the re-introduction of the Friendly Society control which was acutely resented by the doctors. Mr. LLOYD GEORGE denied that there was any breach of faith involved in giving a majority to the insured persons, but Sir ROBERT FINLAY declared that the right honourable gentleman would not have satisfied the medical profession if it had had the new scheme before it. The Chancellor's amendment was carried. The Government has indicated its readiness to adopt the designation "Insurance Committee" instead of "Local Health Committee."

HOUSE OF LORDS.

THURSDAY, NOV. 2ND.

The Indian Sanitary Commissioner.

Earl CURZON, in the course of a speech raising several points in regard to Indian administration, asked the Secretary of State for India what decision he had come to in respect to the reported decision of the Government of India to abolish several superior offices. Amongst those offices was that of the Sanitary Commissioner.

The Marquis of CREWE, in the course of his reply, said that the question of centralisation or of provincialism was not involved as regarded the Sanitary Commissioner. The proposal submitted to him in this case was that instead of having a director-general of the medical

service and a commissioner of sanitation, to throw these offices once more under one head, and to give the director-general of medicine full charge of sanitation. As to this, he thought, with the full agreement of the Indian Council, that it was desirable to retain the Sanitary Commissioner, but as regarded his precise relations with the Director-General of the Indian Medical Service, he had asked the Government of India to reconsider the question with a view to come to a decision as to what exactly those relations ought to be. It had been found that a complete separation of sanitation and medical research from the practical and clinical side of medicine had created a good deal of difficulty, and had tended to make the research side unpopular with the young men who wished to keep their general information alive. They said that it was necessary for them to have some chance of watching the processes of applied science, and that if they had not a chance of doing so they were in no better position than if they were in the laboratory of some maker of patent medicines or preparer of drugs in the form now so popular. They had not the chance of improving themselves in the general knowledge and practice of their profession so long as research was carried on—as the tendency had been to carry it on far away from large hospitals and the means of studying cases. It was therefore desired that the medical and bacteriological and sanitary sides should be more closely brought together. He thought that that was an argument which demanded consideration, and had therefore asked the Government of India to consider carefully what the relations of the Sanitary Commission, as it existed, ought to be to the Director-General of the Medical Service.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 1ST.

The Medical Profession and the National Insurance Bill.

Mr. AMERY asked the Secretary to the Treasury whether the Chancellor of the Exchequer had now successfully adjusted the outstanding points of difference with the medical profession on the National Insurance Bill; and when amendments dealing with these points would be put on the paper.—Mr. MCKINNON WOOD replied: So far as I am aware, the most important amendments affecting the medical profession were dealt with by the Committee on Clause 14. Points of detail arising out of the decision of the Committee concerning the relations between the societies and the medical profession have been under discussion, and will be dealt with on report.

National Insurance Topics.

Mr. AMERY asked the Secretary to the Treasury in what manner the medical benefit, due to the end of the current year, would be administered in the case of a deposit contributor who after suspension from sick benefit has become an inmate of a workhouse infirmary.—Mr. MCKINNON WOOD answered: The Local Health Committee will place the services of a doctor at the disposal of any insured person who is for the time being entitled to medical benefit.

Mr. AMERY: Will not a person in that case already receive medical attendance gratis from the workhouse authorities?—Mr. MCKINNON WOOD: Probably he would.

Mr. AMERY: In that case what advantage would medical benefit be, and would the value of the medical benefit given to the individual be credited to the Post Office Fund in general.—Mr. MCKINNON WOOD: I think it would be credited to the Post Office Fund in general. He would be receiving medical treatment in another form under the Poor-law.

Mr. GODFREY LOCKER-LAMPSON asked the right honourable gentleman what arrangements would be made for the provision of medical attendance upon an insured person who happened to fall ill outside the district covered by the panel of doctors who attended upon the members of the approved society to which he belonged.—Mr. MCKINNON WOOD replied: The honourable Member is under a misapprehension in supposing that a panel of doctors will be appointed for an approved society. The panel will be appointed for the area of a Local Health Committee. The administrative details necessary to provide for the temporary or permanent migration of insured persons from one such area to another can be dealt with by the regulations to be made by the Insurance Commissioners under Clause 14.

Mr. G. LOCKER-LAMPSON also asked whether any steps would be taken to utilise existing provident dispensaries under the National Insurance Bill.—Mr MCKINNON WOOD said in reply: I am unable to give a general answer to this question. The matter will depend to a large extent on the use made in each case by the Local Health Committees and Insurance Commissioners of their powers under Clause 14 (4).

Sir J. LONSDALE asked whether dispensary medical officers in Ireland who were required under the National Insurance Bill, Clause 59, to attend and treat deposit contributors in their area would be remunerated upon the same scale as medical practitioners with whom arrangements were made by the Local Health Committee; and if it would be practicable under this Bill to provide for the superannuation of dispensary medical officers on attaining the age of 65 years.—Mr. MCKINNON WOOD answered: Clause 59 does not require the same scale to be prescribed in the two cases specified. It would not be possible to provide under the National Insurance Bill for the superannuation of dispensary medical officers.

Mr. CATHCART WASON asked the Lord Advocate whether the Scotch Office had brought before the Chancellor of the Exchequer the position of deposit contributors in the Highland and Islands, and of the fact that under the Bill as it stood in many cases the deposit contributors would have no opportunity of availing themselves of the medical benefits of the Bill; and whether he would use every legitimate influence in his power to obtain a special grant to enable medical officers to visit far distant patients.—Mr. URE answered: I can assure my honourable friend that the matters to which he refers are under consideration.

Sanitary Condition of Osborne College.

Mr. DOUGLAS HALL asked the Civil Lord of the Admiralty whether his attention had been called to the complaints with regard to the sanitary condition of certain parts of Osborne College; and whether he would consider the advisability of rebuilding the portions of the College which were unhealthy.—Mr. G. LAMBERT replied: The question of replacing the temporary buildings now used by buildings of a more permanent nature is at the present time engaging the attention of the Admiralty. But I cannot admit the suggestion that the existing buildings are injurious to the health of the cadets.

Lord CHARLES BERESFORD: Is it not a fact that there have been very serious epidemics at Osborne on many occasions?—Mr. LAMBERT: Yes, there have been epidemics, but they have been brought in from the outside. Boys are brought into Osborne about the age of 13, when they are peculiarly subject to these epidemics—mumps, measles, and such like.

Lord CHARLES BERESFORD: Has it not been officially reported by the officers at Osborne College that the College is unhealthy?—Mr. LAMBERT: No, I have not heard of it.

Naval Sick Berth Staff.

Lord CHARLES BERESFORD asked the Secretary to the Admiralty whether he was aware of the discontent amongst all ratings of the naval sick berth staff, and whether he would inform the House why an attendant looking after a mild case of measles received an allowance of 6*d.* a day, yet an attendant carrying out the risky work of looking after a lunatic only received an allowance of 4*d.* a day, a dispenser was only awarded an allowance of 2*d.* a day, looking to the fact that his duties during the influenza season in the North Sea or in the fever months in the Mediterranean were very heavy, and the allowance to men qualified in massage had been reduced from 1*s.* to 6*d.* a day.—Mr. MACNAMARA said, in reply: The various allowances were adopted on the recommendation of the recent committee on the Naval Medical Service, and were graded with due regard to the value, difficulty, danger, &c., of the particular work for which allowance is given.

Sisters in the Naval Medical Service.

Lord CHARLES BERESFORD asked the Secretary to the Admiralty whether a new rank of Superintending Sister had been instituted; whether he would state to the House the total number of sisters in the Naval Medical Service; whether he was aware that seven sisters had been promoted over the heads of their seniors; whether he would state the seniority of the four superintending sisters appointed to the Home hospitals, and also the three superintending sisters appointed abroad; whether, out of the seven superintending sisters selected, four had done no foreign service and the other three had not yet completed a first commission abroad; and whether he had any reason to believe that a selection of this character would create a sense of unfairness amongst the sisters of the Naval Medical Service.—Mr. MACNAMARA said, in reply: The total number of sisters in Queen Alexandra's Royal Naval Nursing Service is 70, inclusive of three head sisters and seven newly appointed superintending sisters. The superintending sisters had seniority in the rank of sister as from Feb. 1st, 1905, June 1st, 1905, May 1st, 1906 Dec. 23rd, 1908, Jan. 2nd, 1909, Jan. 11th, 1909, and Jan. 18th, 1909, respectively. Four of them have not yet served abroad, and the other three had not completed a normal term of foreign service at the date of their promotion. As a result of the most careful consideration the Board found it necessary in making these promotions to pass over a number of sisters who, although qualified to perform their present duties satisfactorily, were not fitted for the discharge of the more important administrative duties devolving on a superintending sister.

Care of the Feeble-minded.

Dr. CHAPPLE asked the President of the Local Government Board whether his attention had been drawn to the resolution of the National Association for the Feeble-minded urging the Government to pass a Bill making the permanent segregation of the feeble-minded compulsory; and whether in the interests of these defectives themselves, for the sake of sufferers still unborn, and for the relief of the community from the ever-increasing burden of the taxation paid by the fit for the support of the unfit, he would bring in a Bill to give effect to this resolution.

Mr HICKS-BEACH asked the Prime Minister to say when His Majesty's Government proposed to give effect to the report of the Royal Commission on the Care and Control of the Feeble-minded, issued three years ago, by bringing forward a measure to carry out its recommendations.—Mr. ASQUITH replied to both questions: I have every hope that legislation dealing with this question will be undertaken next session.

THURSDAY, NOV. 2ND.

Irish Dispensary Doctors and the National Insurance Bill.

Sir J. LONSDALE asked the Chief Secretary to the Lord Lieutenant of Ireland to state the number of medical officers, dispensary and workhouse, in the Poor-law service in Ireland who were aged 65 years and upwards; and whether, having regard to the additional work, entailing severe physical exertion, which would devolve upon dispensary medical officers under the provisions of the National Insurance Bill, it was intended to frame proposals for the superannuation of those officials who had passed the age of 65.—Mr. BIRRELL replied: The information desired is not directly available and could only be obtained by searching through the original appointment of all the medical officers in Ireland. A clause respecting superannuation of dispensary medical officers would hardly be germane to the National Insurance Bill.

Local Provident Medical Associations.

Mr. SANDYS asked the Chancellor of the Exchequer, what would be the position under the National Insurance Bill of a local provident medical association providing medical attendance for about 1600 members resident in the district at a small weekly payment.—Mr. LLOYD GEORGE wrote in reply: I would refer the honourable Member to Clause 14 (4), which makes provision for utilising such associations in certain circumstances for the purposes of medical benefit under the Bill.

Vaccination in Scotland.

Mr. BARNES asked the Lord Advocate whether there was any specified number of marks required by the Scottish Local Government Board for the efficient vaccination of children, and, if so, how many; whether he was aware that children of poor people who were vaccinated gratuitously at the Sanitary Chambers, Glasgow, were vaccinated in 12 places, and, if so, would he take steps to put a stop to the practice and to make it more conform to the practice observed by private medical practitioners; and whether he would state if vaccination operations at the Sanitary Chambers, Glasgow, were performed exclusively by duly qualified medical practitioners, and, if not, by whom.—Mr. URE answered: I am informed that the Scottish Local Government Board

does not specify the number of marks required for the efficient vaccination of children. It is aware that children are vaccinated gratuitously at the Sanitary Chambers in Glasgow, and that all primary infantile vaccinations are performed there by duly qualified medical practitioners. The Board is further informed that it is the case that 12 separate punctures are made in primary vaccination of infants, such punctures being very close together. A general description of the method of vaccination in the Sanitary Chambers, Glasgow, will be found at p. 19 of Appendix VIII. of the final report of the Royal Commission on Vaccination, 1897.

Asylum Officers' Superannuation Bill.

Mr. ASQUITH, in the course of a written answer, informed Mr. NIELD that he was afraid that there was no reasonable prospect of the Asylum Officers (Employment, Pensions, and Superannuation) Bill being passed into law during the present session.

Vaccination in the Army.

Mr. JOHN WARD asked the Under Secretary of State for War whether he could give the number of men, recruits or otherwise, in the British army at home or abroad who went into hospital on account of vaccination or revaccination, or sickness consequent on vaccination or revaccination, in the years 1900 to 1910.—Colonel SEELY furnished the following written reply: No statistics prior to 1907 are available. The figures for subsequent years are as follows:—1907, 379; 1908, 316; 1909, 284; 1910, 379.

Mr. POINTER asked the Under Secretary of State for War whether he could explain the statement on p. 41 of the Annual Report of the Sanitary Commissioner with the Government of India for 1909 that none of the women with the European troops in India who were attacked by small-pox during the year 1909 had been revaccinated, in view of the statement on p. 203 of the Army Medical Department Report for 1906 that in October of each year all men, as well as women and children, were inspected, and those revaccinated who did not show either satisfactory marks or records of vaccination; and whether, if the women in question were, in fact, not revaccinated, he would state how it was that they escaped the operation at the last annual inspection of their vaccinal condition.—Colonel SEELY wrote in reply: It may be presumed that at the vaccination in question no renewal of vaccination was considered necessary either because the women bore marks which were considered satisfactory marks of vaccination or because there was a record of revaccination in their cases.

Vaccination in Eastbourne.

Mr. RUPERT GWYNNE asked the President of the Local Government Board whether, after the lapse of ten years, summonses against defaulters under the Vaccination Acts had been obtained at Eastbourne by the vaccination officer through the pressure of the Local Government Board; whether there had been any case of small-pox in the town during that period; what was the total number of children in the town legally exempted from vaccination under the Vaccination Acts, 1898 and 1907, and what special circumstances, if any, prompted the action of the Board.—Mr. BURNS wrote in reply: It is the duty of the vaccination officer to take proceedings to secure compliance with the Vaccination Acts, and the Board's inspector, at his last inspection of vaccination in this union, reminded him of this duty. The Board understands that the vaccination officer has recently obtained summonses against certain persons who have not complied with the Acts. During the last ten years there have been two cases of small-pox in Eastbourne. The total number of children in the Eastbourne Union who have been legally exempted from vaccination from the time of the passing of the Vaccination Act, 1898, to July 31st, 1911, is, according to the Board's records 5640. Some five-sixths of these have been children residing in the town of Eastbourne.

MONDAY, NOV. 6TH.

Patent Medicines.

Mr. CHARLES BATHURST asked the Secretary to the Treasury whether the Customs and Excise Returns for the year ended March 31st, 1911, disclosed payment of stamp duties in respect of patent medicines of upwards of £325,000; if so, whether this represented an increase, and to what extent, on the amount of the duties paid under the same head during the previous financial year; what number of packages of patent medicines the above duties represented, and whether, in view of the amount of such medicines widely advertised and of no curative value consumed by poor persons, the Government contemplated introducing any legislation dealing with this question.—Mr. MCKINNON WOOD replied: The yield on the duty on patent medicines in the year ended March 31st last was £325,646, which was an increase of £12,532 on the receipt for the previous year, but is little more than £2000 over the average receipts for the past ten years. No figures are available as to the number of packets of medicines represented by the figures for the year. The last part of the question appears to be one for the Home Office.

Sanatorium Benefit.

Mr. KING asked the Secretary to the Treasury whether he had had under consideration the results of recent actuarial investigations carried out in the Francis Galton Laboratory of the University of London into the falling death-rate from phthisis and the length of life of sanatorium patients; and, if so, whether, before sanctioning the expenditure of many thousands of pounds on the erection of sanatoriums, he would cause a fresh actuarial inquiry to be made as to the effectiveness of sanatorium treatment.—Mr. MCKINNON WOOD said in reply: The right honourable gentleman is satisfied that "sanatorium benefit," as defined in the National Insurance Bill, which is capable of modification in accordance with the growth of medical experience, comprises the best known means for treating tuberculosis and of aiding in preventing its spread.

Medical Benefits in the Highlands.

Mr. CATHCART WASON asked the Secretary to the Treasury whether, in view of the fact that in many places in the Highlands and Islands of Scotland it would be impossible for deposit contributors to obtain medical benefits under the Insurance Bill, he would allow the Local Government Board for Scotland power to apportion that part of the Scottish money available for the Highlands and Islands for more general purposes than sanatoriums, such as increase of medical service, grants in aid of travelling expenses of medical men attending insured persons, provision of hospital accommodation, and removal of insanitary conditions in places where the public health rate was at the legal maximum.—Mr. MCKINNON WOOD answered: I trust that it may prove to be possible to provide medical benefit for all deposit contributors, and some of the expenses which my honourable friend specifies could under the Bill as it stands be properly incurred by the Local Health Committees. I fear it would not be possible to provide for the application of funds contributed under the Bill directly to the removal of insanitary conditions.

TUESDAY, NOV. 7TH.

Cholera Outbreak in India.

In answer to Mr. MITCHELL-THOMSON, who asked for information regarding the outbreak of cholera in the 1st Battalion Royal Scots, Mr. MONTAGU (Under Secretary of State for India) said: The following telegram was received by the Secretary of State for India from the Governor-General on Nov. 4th:—"Outbreak of cholera in 1st Battalion Royal Scots. Total cases up to date 25, deaths 10. It was explosive outbreak, occurring suddenly on Nov. 1st, due to infection acquired in Benares city, where it was prevalent and aggravated by inrush of pilgrims on account of recent eclipse. Troops moved to camp. Outbreak at once checked, now well in hand and probably over."

The Office of Public Vaccinator.

Mr. CRAWSHAY-WILLIAMS asked the President of the Local Government Board whether his attention had been called to the opinion of Dr. Killick Millard, medical officer of health of Leicester, that the future control of small-pox lay with the medical officer of health rather than with the public vaccinator; and whether the Board was prepared to allow the position of public vaccinator to lapse as vacancies arise.—Mr. BURNS replied: My attention has been drawn to the opinion attributed to this particular medical officer of health. I am not at present proposing any alteration in the position of the office of public vaccinator.

National Insurance Bill Topics.

Mr. H. HOPE asked the Secretary to the Treasury whether doctors in popular holiday resorts would receive remuneration for attending persons insured under the National Insurance Bill who were on holiday in such places.—Mr. MCKINNON WOOD replied: The question will be one to be dealt with by the regulations to be drawn up under Clause 14.

Mr PRETYMAN asked the Chancellor of the Exchequer whether the surgery of a country doctor required to dispense under the National Insurance Bill would become liable to inspection under the provision of the Food and Drugs Act.—Mr. LLOYD GEORGE wrote in reply: There is nothing in the Insurance Bill to alter the existing position of doctors' dispensaries in this respect.

Sir WALTER MENZIES asked the Chancellor of the Exchequer whether he could see his way to introduce a clause into the National Insurance Bill providing that insured persons who had lost faith in, or had conscientious objections to, orthodox medical treatment might be allowed to consult unregistered medical practitioners, such as herbalists, &c., if they so desired; and would such unregistered practitioners be allowed on the panel for the district.—Mr. LLOYD GEORGE wrote in reply: I would refer my honourable friend to the provisions of Clause 14 (3) of the Bill as amended in Committee. As regards the second question the answer is in the negative.

BOOKS, ETC., RECEIVED.

AMBROSE COMPANY, LIMITED, 55 and 57, Wigmore-street, London, W.

Demoniacal Obsession and Possession as Causes of Insanity. By Dr. C. Williams, author of "A New Method of Treating the Insane." Price 1*s.* net.

ARNOLD, EDWARD, 41 and 43, Maddox-street, London, W.

The Graven Palm. A Manual of the Science of Palmistry. By Mrs. Robinson. Price 10*s.* 6*d.* net.

CASSELL AND COMPANY, LIMITED, London, New York, Toronto, and Melbourne.

New Tracts for the Times. The Declining Birth-rate, its National and International Significance. By A. Newsholme, M.D., M.R.C.S., Principal Medical Officer of the Local Government Board, author of "Elements of Vital Statistics," &c. Price 6*d.* net.

CHAPMAN AND HALL, LIMITED, London.

The Surgeon's Log, being Impressions of the Far East. By J. Johnston Abraham. Price 7*s.* 6*d.* net.

DOIG BROS. AND CO., LIMITED, 53, Stowell-street, Newcastle-upon-Tyne.

A Practical Hygiene. By J. Stephenson, F.I.Hy., Demonstrator in Hygiene at Rutherford College, Newcastle-upon-Tyne, Teacher of Hygiene under Gateshead Education Committee. Price 1*s.* 4*d.* net; 1*s.* 7*d.* post free.

DULAU AND CO., LIMITED, 37, Soho-square, London, W.

University of London. Galton Laboratory for National Eugenics. Eugenics Laboratory Lecture Series. IV. On the Marriage of First Cousins. By Ethel M. Elderton, Galton Research Scholar. Price 1*s.* net.

Department of Applied Statistics, University College, London. Questions of the Day and of the Fray. No. IV. The Fight against Tuberculosis and the Death-rate from Phthisis. By Karl Pearson, F.R.S., Galton Professor of Eugenics in the University of London. Price 1*s.* net.

EYRE AND SPOTTISWOODE, LIMITED, London.

Improvised Methods of Aid in the Field. For the Use of Voluntary Aid Detachments and Members of the Territorial Royal Army Medical Corps. By H. Mackay, M.D., T.D., Lt.-Col. R.A.M.C.T., Commanding 1st S.W. Mtd. Bde. Field Ambulance R.A.M.C. Price 1*s.* 6*d.* net.

FISCHER, GUSTAV, Jena.

Jahresbericht über die Ergebnisse der Tuberkuloseforschung, 1910. Von Chefarzt Dr. F. Köhler. (Abdruck aus dem Klinischen Jahrbuch, Fünfundzwanzigster Band.) Price M.2.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Aphorismen für die hals-, nasen- und ohren-ärztliche Praxis. Von Dr. Franz Bruck, Berlin-Charlottenburg. Price M.1.

Handbuch der allgemeinen und speziellen Arzneiverordnungslehre. Auf Grundlage des Deutschen Arzneibuches 5. Ausgabe und der neuesten ausländischen Pharmakopöen. Bearbeitet von Dr. C. A. Ewald, Geh.Med.-Rat, o. Honorarprofessor an der Königl. Universität, dirigierender Arzt am Augusta-Hospital zu Berlin, und Dr. A. Heffter, Geh.Med.-Rat, o. Professor und Direktor des pharmakologischen Instituts an der Königl. Universität zu Berlin. Mit einem Beitrag von Professor Dr. E. Friedberger. Vierzehnte gänzlich umgearbeitete Auflage. Price not stated.

Das Erkenntnisproblem und seine kritische Lösung. Von Berthold Kern. Zweite erweiterte Auflage. Price M.5.

Die Differentialdiagnose zwischen Magengeschwür und Magenkrebs. Die pathologische Anatomie dieser Erkrankungen in Beziehung zu ihrer Darstellung im Röntgenbilde. Von Prof. Dr. V. Schmieden. (Aus der Königlichen chirurgischen Universitätsklinik zu Berlin. Director: Geh.Med.-Rath Prof. Dr. Bier.) (Sonderabdruck aus dem Archiv für klinische Chirurgie, 96. Band.) Price M.3.

Besteht nach der deutschen Rechtssprechung zwischen Heiratskandidaten (Nupturienten) eine Pflicht zur Offenbarung überstandener Geschlechtskrankheiten? Von Prof. Dr. Julius Heller, Charlottenburg-Berlin. (Nach einem Vortrag in der Berliner dermatologischen Gesellschaft am 13. Juni, 1911.) Price M.1.

KLINKHARDT, DR. WERNER, VERLAG VON, Liebigstrasse, 2, Leipzig.

Aus Theorie und Praxis der Chemotherapie. Von Paul Ehrlich. Price M.1.20.

Grundriss der hämatologischen Diagnostik und praktischen Blutuntersuchung. Ein Leitfaden für Anfänger Studierende und praktische Aerzte. Von A. Pappenheim. Price, paper, M.12; bound, M 13.50

Lehrbuch der Hyperämiebehandlung akuter chirurgischer Infektionen. Theorie und Praxis für Aerzte und Chirurgen. Von Dr. med. Eugen Joseph, Privatdozent der Chirurgie an der Friedrich-Wilhelms-Universität Berlin. Mit einem Vorwort von Prof. August Bier. Price, paper, M.7; bound, M.8.

LAURIE, T. WERNER, Clifford's Inn, Fleet-street, London.

A Manual of Heraldry. By Gale Pedrick, F.R.Hist.S. Price 6*s.* net.

The Makers of Mischief. By Stanley Portal Hyatt. Price 6*s.*

Two Hundred Opera Plots. By Gladys Davidson, author of "Stories from the Operas," "The Old Testament Story," &c. In two volumes. Price 3*s.* 6*d.* net each.

The Dinner Calendar. A Dinner for Every Day in the Year. Compiled by May Little, First-class Diploma, late Staff Teacher of the National Society's Training School of Cookery, London. Price 1*s.* net.

MARHOLD, CARL, Verlagsbuchhandlung, Halle a.S.

Klinik für psychische und nervöse Krankheiten. Herausgegeben von Robert Sommer, Dr. med. et phil., o.Professor an der Universität Giessen. VI. Band. 3 Heft. Price, M.12 pro Band.

Die Divertikel und Dilatationen der Speiseröhre. Von Dr. Hugo Starck, a.o.Professor der inneren Medizin, Heidelberg, Chefarzt am städt. Krankenhaus Karlsruhe. Price M.2.40.

METHUEN AND CO., LIMITED, 36, Essex-street, London, W.C.

Prevention and Cure. By Eustace Miles, M.A. Price 3*s.* 6*d.* net.

MILLS AND BOON, LIMITED, 49, Rupert-street, London, W.

Child Nurture. A Handbook for Parents and Teachers. By Honnor Morten, author of "The Nursery Nurses' Companion," &c. Price 3*s.* 6*d.* net.

SPRINGER, JULIUS, Linkstrasse, 23/24, Berlin, W.9.

Die Registrierung des Herzschalles. Graphische Studien. Von Dr. Heinrich Gerhartz, Assistent der Kgl. Universitäts-Poliklinik für innere Kranke zu Berlin. Price, paper, M.8; bound, M.9.

Uber Ruheübungen und Ruheübungs-Apparate. Zur Psychologie und Hygiene des Denkens. Zwei Vorträge gehalten von Dr. med. et phil. Leo Hirschlaff, Nervenarzt in Berlin. Price M.1.

Technik der klinischen Blutuntersuchung für Studierende und Aerzte. Von Dr. A Pappenheim, Berlin. Price, paper, M.2; bound, M.2.60.

TAYLOR AND FRANCIS, Red Lion Court, Fleet-street, London.

University of London. University College. Calendar. Session MDCCCCXI.-MDCCCCXII. Price not stated.

TIPOGRAFIA DI PAOLO NERI, Bologna.

Dott. Alfonso Poppi, Rinologo e Chirurgo Comprimario dell' Ospedale Maggiore di Bologna. L'Ipofisi Cerebrale, Faringea e la Glandola Pineale in Patologia. Di una probabile eziologia primitiva comune a varie forme morbose. Price L.10.

UNIVERSITY CORRESPONDENCE COLLEGE. Burlington House, Cambridge. London Office: 32, Red Lion-square, Holborn, W.C.

University Correspondence College. The Calendar, 1911-1912. Price 1*s.* net.

UNIVERSITY CORRESPONDENCE COLLEGE, London. (UNIVERSITY TUTORIAL PRESS, LIMITED, Editorial Offices, Burlington House, Cambridge. Warehouse: W. B. Clive, 157, Drury-lane, London, W.C.)

The London University Guide, 1912. Containing the Regulations for Examinations to be held in 1912 and 1913. Gratis.

UNIVERSITY OF LONDON PRESS, LIMITED, London. (Published for the University of London Press, Ltd., by Hodder and Stoughton, Warwick-square, London, E.C.)

University of London. The Calendar for the Year 1911-1912. Price 6*s.* net; postage, 5*d.*

Regulations and Courses for Internal Students. September, 1911. Price not stated.

Regulations for External Students. September, 1911. Price 1*s.* 6*d.* net; postage, 4*d.*

VOGEL, F. C. W., VERLAG VON, Leipzig.

Vademekum der speziellen Chirurgie und Orthopädie für Aerzte. Von Dr. Hermann Ziegner. Dirigierender Arzt des Städtischen Krankenhauses Custrin. Mit einem Vorwort von Prof. Dr. R. Klapp, Berlin. Price, paper, M.5; bound, M.6.

Der Muskuläre Kopfschmerz. Von Dr. med. A. Müller in M.-Gladbach. Price, paper, M.2.75.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CAIRD, F. M., M.B., C.M.Edin., has been appointed William Banks Memorial Lecturer in the University of Liverpool.

COX, W. J., M.B., B.Ch. Vict., has been appointed School Medical Officer to the Birkenhead Corporation.

FENWICK, D. E., M.B., Ch.B. New Zealand, has been appointed Clinical Assistant to the Chelsea Hospital for Women.

HARDENBERG, E. J. F., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Post Office at Chingford.

JEFFERISS, FREDERICK B., F.R.C.S. Edin., M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon to St. Bartholomew's Hospital, Rochester.

JOHNSTONE, JOHN ECCLES ST. GEORGE, M.B., B.Ch., B.A.O. Dub., has been appointed District Medical Officer by the Gloucester Board of Guardians.

JOSCELYNE, A. E., M.D. Durh., M.R.C.S., has been appointed Physician to the Taunton and Somerset Hospital.

MCNAB, PETER, M.B., Ch.B. Edin., has been appointed Assistant House Surgeon to the Royal Albert Hospital, Devonport.

PEILE, WILLIAM HALL, M.D. Dub., L.R.C.P. Lond., M.R.C.S., D.P.H. Lond., has been appointed Medical Officer of Health for the Sidmouth (Devon) Urban District.

SHARPE, F. A., M.D. Lond., D.P.H., has been appointed Medical Officer of Health and School Medical Officer at Chesterfield.

STURDEE, EDWIN LAWRANCE, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Exmouth (Devon) Dispensary.

THOMAS, JOSIAH TELFER, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer to the Camborne (Cornwall) Dispensary.

WALLIS, BASIL, L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer by the Helston (Cornwall) Board of Guardians.

WOOLF, ALBERT EDWARD MORTIMER, B.C. Cantab., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Assistant Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £80 per annum, all found.

BATH, EASTERN DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 per annum, with rooms, coals, gas, and attendance.

BIRMINGHAM CITY FEVER HOSPITAL, Lodge-road.—Assistant Resident Medical Officer. Salary £120 per annum, with board, residence, &c.

BIRMINGHAM GENERAL HOSPITAL, JAFFRAY BRANCH, Gravelly Hill, near Birmingham.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

BIRMINGHAM UNIVERSITY.—Lectureship in Mental Diseases.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

BRISTOL, COSSHAM MEMORIAL HOSPITAL, Kingswood.—House Surgeon. Salary £50 per annum, with board, lodging, and washing.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CAMBRIDGE COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, washing, and attendance.

DERBY, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £140 per annum, with board and residence.

DONNYBROOK, DUBLIN, ROYAL HOSPITAL FOR INCURABLES.—Visiting Medical Officer.

EXETER ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

GATESHEAD, COUNTY BOROUGH OF.—Assistant School Medical Officer. Salary £250 per annum.

GRIMSBY AND DISTRICT HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board, lodging, attendance, and washing.

HENDON, N.W., CENTRAL LONDON SICK ASYLUM.—Second Assistant Medical Officer. Salary £120 per annum, with board and residence.

HITHER GREEN, S.E., PARK HOSPITAL FOR CHILDREN.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for five months. Salary 30 guineas.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Physician to Out-patients. Also Surgeon to Out-patients. Also Medical Registrar. Salary £127 10*s.* per annum. Also House Surgeon for six months. Salary £30, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.
ITALIAN HOSPITAL, Queen-square, W.C.—House Surgeon for six months. Salary £60 per annum, with board and residence.
LINCOLN CITY FEVER HOSPITAL.—Assistant Medical Officer of Health and Resident Medical Officer, unmarried. Salary £150 per annum, with rooms, coals, light, and attendance.
LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Resident Medical Officer. Salary £250 per annum, with board and residence.
LONDON HOSPITAL DENTAL SCHOOL.—Two House Anæsthetists. Salary £40.
LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN, 8, Hunter-street, Brunswick-square, W.C.—Demonstrator in Anatomy (female).
LISCARD, CHESHIRE, WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and service.
MAIDSTONE, WEST KENT GENERAL HOSPITAL.—House Surgeon and Assistant House Surgeon, both unmarried. Salary £100 and £80 per annum respectively, with board, lodging, and laundry.
MULLINGAR DISTRICT LUNATIC ASYLUM.—Resident Assistant Medical Officer, unmarried. Salary £112 10s. per annum.
NEW HOSPITAL FOR WOMEN, Euston-road.—House Physician, two House Surgeons, and Obstetric Assistant for six months. Also two Clinical Assistants and one Pathologist. All females.
NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, lodging, and washing.
PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.
QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Surgeon-in-Charge of Out-patient Department for Ear, Nose, and Throat.
ROYAL EAR HOSPITAL, Soho.—Honorary Assistant Anæsthetist.
ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Dental Surgeon.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, W.C.—Clinical Assistants for six months.
SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.
SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.
TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, and washing.
UNIVERSITY OF LONDON.—Examiners.
WALSALL AND DISTRICT HOSPITAL.—House Physician and Casualty Officer. Salary £80 per annum, with board, residence, and laundry.
WEST AFRICAN MEDICAL STAFF.—Appointments. Salary £400 per annum.
WEST LONDON HOSPITAL, Hammersmith, W.—House Physician for six months. Board, lodging, and laundry allowance.
WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Horbury, in the county of Yorkshire, West Riding; at Llandovery, in the county of Carmarthenshire; and at Urlingford, in the county of Kilkenny.

Births, Marriages, and Deaths.

BIRTHS.

CAZENOVE.—On Nov. 1st, at West Norwood Lodge, Knight's Hill, West Norwood, the wife of W. R. Cazenove, M.R.C.S., L.R.C.P., of a son.
COCKBURN.—On Nov. 4th, at Castlebar-road, Ealing, the wife of R. P. Cockburn, M.D., of a son.
EVANS.—On Oct. 30th, at Marina-crescent, Herne Bay, the wife of R. C. T. Evans, M.B., B.S. Lond., D.P.H., &c., of a daughter.

MARRIAGES.

WHITE—MAWE.—On Nov. 1st, at All Souls, Langham-place, Clifford White, M.D., of New Cavendish-street, to Elaine Maud, daughter of the late Francis Walford Mawe, of Charters Towers, Queensland.
WOODS—SEDDON.—On Nov. 4th, at Marylebone Parish Church, Staff-Surgeon S. H. Woods, M.D., R.N., H.M.S. *Gibraltar*, to Rubi, youngest daughter of the late Right Hon. Richard J. Seddon, P.C., Prime Minister of New Zealand, and Mrs. Seddon, of Eccleston, Wellington.

DEATHS.

COUTTS.—On Nov. 1st, at Castlenau, Barnes, John Alfred Coutts, M.B. Cantab., F.R.C.P., of Upper Berkeley-street, W., aged 60 years.
MILLINGTON.—On Nov. 5th, at The Clevelands, Wolverhampton, William Millington, M.D., M.R.C.P., in his 91st year.
SUDLOW.—On Oct. 30th, at Penton House, Stoke-on-Trent, Marion, beloved wife of George Wray Sudlow, M.B., B.S., M.R.C.S., L.R.C.P., and elder daughter of James W. Shovelton Carholme, Ellesmere Park, Eccles, aged 28 years.
WILKS.—On the 8th inst., at 8, Prince Arthur-road, Hampstead, Sir Samuel Wilks, Bart., M.D., F.R.S., LL.D., in his 88th year. Funeral service at Parish Church, Hampstead, on Saturday, the 11th inst., at 2.30 P.M.

IN MEMORIAM.

CLUTTON.—In memory of Henry Hugh Clutton, F.R.C.S., of 2, Portland-place, who passed away Nov. 9th, 1909, aged 59.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A MYSTERIOUS REFORM.

AN anonymous correspondent has sent us a postcard inscribed as follows:—

TWO REFORMS URGENTLY NEEDED.

1st. *Allopathic* Medical Students to refrain from *Rowdyism*.

2nd. *Allopathy* to be abolished, and Medical Botany to take its place. *Allopathy is nothing but a curse. It has murdered millions.*

While we feel that entertaining views of this sort should not be confined to the columns of the *Herb Doctor*, we wish that those who hold and preach them would explain what exactly they mean by the queer word "allopathy." If we knew what was the curse that ought to be abolished, we might lend our support to the reformers. Alligators, ally tors, and alibis are quite familiar to us, and so is medical botany, which we believe some students would like abolished from the second professional examination. We can find no reference to "allopathy" in the "Encyclopædia Britannica," and we are forced to conclude that the postcard was really intended for a non-medical contemporary whose name begins with Alley.

"LOCOMOTION ATAXIA."

THE following ingenious couplet appears in this week's *Truth*:—

"Occupet urbanas, ceu morbus, ataxia raedas:
Res bona dumtaxat, nec male pestis olet."

INSTRUCTION FOR PUPIL MIDWIVES.

A MEDICAL man wishes to learn of an inexpensive course of instruction in midwifery for the licence of the Central Midwives Board. Inquiry at one lying-in hospital showed that the charge for five months would be £35, which is beyond the means of our correspondent.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Nov. 1st–14th (London).—"The Englishwoman" Exhibition of Arts and Handicrafts.
,, 3rd–11th (London, Olympia).—Tenth International Motor Exhibition.
,, 9th–11th (Cape Town).—Congress of the South African Branch of the Royal Sanitary Institute.
,, 10th–25th (Manchester).—Smoke Abatement Exhibition.
,, 14th and 15th (Vienna).—Jubilee of Union of Austrian Dental Surgeons.
,, 21st–23rd (Montreal).—Canadian Public Health Association (First Annual Meeting).
November (Rome).—Fourth International Congress of Physical Education.
Dec. 4th–9th (Havana, Cuba).—American Public Health Association.
,, 19th–23rd (Moscow).—Third Pan-Russian Therapeutical Congress.

In 1912:—

Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
March (London).—First Congress of Pure Food and Health Society of Great Britain.
,, (Berlin).—Thirty third Balneological Congress.
April 14th–20th (Rome).—Seventh International Congress on Tuberculosis.
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 27th–June 1st (London).—Eighteenth International Congress of Americanists.
,, (London).—International Horticultural Exhibition.
June 24th–27th (London).—The (Biennial) Health Conference and Exhibition.
June (London).—Missionary Exhibition.
July 2nd–5th (London).—Congress of the Universities of the Empire.
,, 2nd–6th (Doncaster).—Seventy-third Annual Show of the Royal Agricultural Society of England.
,, 12th–16th (London).—Imperial Conference of Teachers' Associations.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

SURGICAL SECTION (Hon. Secretaries—L. A. Dunn, James Berry): at 5.30 P.M.

Opening Remarks by the President, Mr. Clinton T. Dent.

Dr. Ringrose Gore: Case of Caries of Frontal Bone and Intracranial Abscess due to B. Typhosus 11 Years after Attack of Typhoid.

Mr. H. Betham Robinson: Extra-peritoneal Rupture of the Bladder without Fracture of the Pelvis.

Mr. L. A. Dunn: Retrograde Enteric Intussusception.

THURSDAY.

DERMATOLOGICAL SECTION (Hon. Secretaries—J. H. Sequeira, Wilfred Fox), at 11, Chandos-street, W.: at 5 P.M.

Dr. J. L. Bunch: (1) Urticaria Pigmentosa; (2) Atrophic Seborrhoid; (3) Multiple Angiomata.

Dr. Sequeira: Extensive Ringworm.

And other Cases.

SPECIAL MEETING at 15, Cavendish-square, W.: at 8.30 P.M.

Discussion

On Eczematoid Ringworm of the Extremities and Groin (opened by Dr. A Whitfield).

Dr. Sabouraud (Paris) will take part in the Discussion.

FRIDAY.

OTOLOGICAL SECTION (Hon. Secretaries—Sydney Scott, A. Logan Turner), at 11, Chandos-street, W.: at 5 P.M.

Cases and Specimens

Will be shown by Dr. Milligan, Mr. Cheatle, Mr. West, Dr. Dundas Grant, Dr. Dan McKenzie, Mr. Mollison, Mr. Sewell, and others.

ELECTRO-THERAPEUTICAL SECTION (Hon. Secretaries—G. Harrison Orton, Cecil R. C. Lyster): at 8.30 P.M.

Papers:

Dr. Alfred C. Jordan: Radiography in Intestinal Stasis (with lantern illustration).

Dr. C. J. Morton: X Ray Prognosis in Fractures (illustrated by lantern slides).

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Discussion on the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System (introduced by Dr. F. W. M tt). The following have promised to take part:—Sir David Ferrier, Sir Victor Horsley, Dr. G. H. Savage, Dr. R. Russell, Dr. T. B. Hyslop, Major French, R.A.M.C., Dr. F. Buzzard, and Mr. A. Fleming.

ROYAL METEOROLOGICAL SOCIETY, Institute of Civil Engineers, Great George-street, Westminster, S.W.

WEDNESDAY.—7.30 P.M., Mr. C. Harding: The Abnormal Summer of 1911.—Mr. W. Larden: Notes on Solar Halos.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover-square, W.

WEDNESDAY.—8 P.M., Mr. J. E. Barnard: A Geometric Slide Photomicrographic Apparatus.—Rev. H. Friend: British Enchytraeids—II. The Genus Fridericia. Some Slides of Rock Sections, presented by Mr. H. J. Grayson, will be exhibited.

ILLUMINATING ENGINEERING SOCIETY, House of the Royal Society of Arts, John-street, Adelphi, W.C.

FRIDAY.—8 P.M., Dr. H. R. B. Hickman: Notes on the Design of Motor Car Headlights.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY AND WEDNESDAY.—5 P.M., Sir Henry Butlin: Cancer. (Hunterian Lecture.)

FRIDAY.—5 P.M., Dr. R. H. Paramore: The Intra-abdomino-pelvic Pressure in Man; its Nature, Variations, and Physiological Significance. (Hunterian Lecture.)

ROYAL COLLEGE OF SURGEONS OF EDINBURGH (Surgeons' Hall, Nicolson-street, Edinburgh).

FRIDAY.—4.30 P.M., Mr. A. Keith: Anatomy in Scotland during the Life and Times of Sir John Struthers. (Sir John Struthers Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. J. M. H. MacLeod: Clinique (Skin). 5.15 P.M., Lecture:—Dr. W. I. Bruce: X Ray Examination as an Aid to Diagnosis (continued).

TUESDAY.—4 P.M., Dr. G. Rankin: Clinique (Medical). 5.15 P.M., Lecture:—Mr. A. W. M. Robson, C.V.O.; Jejunal and Gastro-jejunal Ulcers.

WEDNESDAY.—4 P.M., Mr. A. Edmunds: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. C. Mercier: To Show Cases.

THURSDAY.—4 P.M., Mr. J. M. G. Swainson: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. J. S. R. Russell: The Differential Diagnosis of Paraplegia (with lantern demonstration).

FRIDAY.—4 P.M., Mr. S. Stephenson: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. R. Lloyd: Administration of Anæsthetics.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Saunders: Clinical, with cases.

WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine. (Lecture III.).

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture III.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. D. Robinson: Gynæcological or Obstetric Subjects.

SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Mr. R. Carling: Thrombosis and Embolism.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 3.30 P.M., Special Lecture:—Mr. Cargill: Colour Blindness and Colour Defects, their Varieties and Importance, and the Methods of Detection.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Dr. Moon: Nervous Manifestations in Children and their Treatment.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. R. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies).

TUESDAY.—Clinic:—2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. A. J. Whiting: Graphic Methods of Studying Heart Disease.

WEDNESDAY.—Clinics:—2 P.M., Throat Operations; 2.30 P.M., Children Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 2.30 P.M., X Rays (Mr. W. Stewart); 5.30 P.M., Eye Operations.

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Address:—Sir James Crichton-Browne: Nerves and Nervousness.

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Hartley: Streptotrichosis of the Lung and Pleura.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY AND FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. J. Taylor: Cases from the Wards.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Mr. J. G. French: Tracheoscopy, &c.

FRIDAY.—3.45 P.M., Lecture:—Dr. W. Wingrave: Clinical Pathology.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Mr. W. Hampson: X Rays, Measurement of Dose.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Syphilis—Treatment (Constitutional and Local in all its Forms).

ROYAL SANITARY INSTITUTE, 90, Buckingham Palace-road, S.W.

TUESDAY.—8 P.M., Mr. R. A. Roechling: Sewage Farms.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. F. C. Moore: Colitis. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (15th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (16th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (18th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

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TO COLONIAL AND FOREIGN SUBSCRIBERS.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—Messrs. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 8th, 1911.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 2	30·03	S.W.	...	70	56	43	48	50	Overcast
,, 3	30·03	S.W.	0·21	87	56	44	45	46	Fine
,, 4	29·86	S W.	0·09	82	56	46	50	52	Cloudy
,, 5	29·53	W.	0·23	92	59	47	46	48	Cloudy
,, 6	29·78	S.W.	0·02	85	52	41	41	42	Fine
,, 7	29·97	S.W.	...	81	55	41	43	44	Fine
,, 8	29·66	S.W.	0·29	81	53	44	47	48	Overcast

The following journals, magazines, &c., have been received:—Polyclinic, Australian Medical Journal, Dominion Medical Monthly, Journal of Nervous and Mental Diseases, Archives of Pediatrics, Die Therapie der Egenwart, Archiv für Experimentelle Pathologie und Pharmakologie, Revue de Psychiatrie, Transvaal Medical Journal, South African Medical Record, Tuberculosis, The Child, Journal of Tropical Medicine and Hygiene, Indian Public Health, Edinburgh Medical Journal, Medical Review, Monthly Cyclopædia, North of England Clinical Journal, Architect and Contractor, Maryland Medical Journal, Journal of the Royal Army Medical Corps, Quarterly Journal of Experimental Physiology, Canadian Journal of Medicine and Surgery, Journal of Laryngology, Rhinology, and Otology, Public Health, Journal of Mental Science, Bio-chemical Journal, American Journal of Medical Sciences, Medical Times, Nation in Arms.

Communications, Letters, &c., have been received from—

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The Hunterian Lectures
ON
RECENT DEVELOPMENTS IN THE RECOGNITION, TREATMENT, AND PROPHYLAXIS OF SYPHILIS.

Delivered before the Royal College of Surgeons of England on Nov. 7th and 10th, 1911,

BY H. C. FRENCH, M.R.C.S., L.R.C.P.,
MAJOR, ROYAL ARMY MEDICAL CORPS.

LECTURE II.*

Delivered on Nov. 10th.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—In my first lecture I dealt with the diagnosis of syphilis, and in this it is proposed to deal with treatment.

ABORTIVE TREATMENT.

Persons conversant with early syphilis require to know two clinical facts if the spirochæta pallida is not definitely demonstrated—namely, Was induration present in the chancre? Were the adjacent lymphatic glands discretely enlarged? In untreated syphilis the number of cases where these two signs do not exist is very small; so that when they co-exist treatment is fully justified. Otherwise we should always wait for more definite evidence of the disease. The Wassermann reaction, unfortunately, does not help us much in the primary stage. The alleged abortive cure of syphilis in the primary stage by excising chancres, or treatment by new drugs, such as hectine and salvarsan, requires to be received with very considerable caution and closely examined. The so-called primary stage varies in different countries and with different observers. Results are not infrequently worked out on the relative frequency of syphilis occurring in a consecutive series of all venereal sores, but this is obviously fallacious. In the last 100 cases of untreated venereal sores occurring at Malta not 10 per cent. were syphilis. During two months two years ago the bulk of venereal sores were syphilis. Relative incidence is largely dependent on the value of control at the source.

A statement from the bacteriological side was recently made[1] that "during the past 15 months about 300 cases have been treated with salvarsan. ..... The number of cases in which the only clinical evidence of infection was the primary sore is 22. ..... In none of the 22 cases has any symptom appeared since the treatment." It is further stated by the same writer that "treatment should be begun as soon as possible where there is the suggestion of a primary syphilitic lesion: even if spirochætæ cannot be found and the serum reaction is negative, treatment should be begun without delay." I merely mention this example, as such premature claims to abort syphilis are of not infrequent occurrence. To pursue such a policy on insufficient evidence does not further the best interests of accurate diagnosis, and the confidence of the patient may be destroyed.

ARSENICAL COMPOUNDS.

Dr. Hallopeau (France), using hectine (benzol-sulphone-para-amino-phenol arsenate of sodium) (containing 21 per cent. of arsenic) recently claims to have aborted syphilis in five out of six cases when the drug was locally used in the sheath of the penis in combination with mercurial and potassium iodide treatment. He states "that the time has arrived to treat syphilis by 30 daily injections of hectine," and he does not hesitate under these conditions to "allow marriage immediately to syphilitics who have followed this cure." By the courtesy of the French colonial authorities at Tunis a supply of hectine was recently sent to Malta for my use. Owing, however, to careful diagnosis on the lines previously mentioned, to the continued use of mercury, and to local preventive measures, early syphilis, as will be later explained, has been entirely stamped out in Malta this year, and in a garrison of 7000 troops there was no primary syphilitic case to try the new remedy on. Dr. Hallopeau also recently states "that iodide of potassium, in opposition to the generally received opinion, exerts a well-marked effect on the chancre."

Without claiming any originality in the matter, this marked effect on the chancre and lymphatic glands was pointed out in this country, and also in Italy 14 years ago,[2] and again 8 years ago;[3] but, like inorganic or organic arsenic in average cases of early syphilis, I do not at this stage pin my faith on potassium iodide as on mercury as a real curative agent, although it is potent in the removal of induration. Iodide of potassium, like salvarsan, is a good cicatrising agent, and has a powerful action on tissue metabolism, and is therefore capable of promoting the absorption of granulation tissue before its conversion into unalterable fibroid tissue. This would *ipso facto* allow local applications and bactericidal agents normally present in blood to have freer access to the spirochætæ. Mercurial inunction applied nightly to large indurations can effect a similar result and expedite local resolution. This local treatment and reduction of induration in the chancre is very important, and without doubt minimises the occurrence of relapsed chancres. It assists other medication to attack the spirochætæ embedded in fibrous tissue, and if "granule shedding" can "naturally" occur in spirochætæ local recrudescences of the chancre are thus explicable when treatment, local and constitutional, is not sufficiently intensive. It is necessary, however, to distinguish between aborting and modifying syphilis. Sir Jonathan Hutchinson has repeatedly pointed out that mercury administered in the primary stage in the manner recommended by him can effectually modify syphilis in many but not in all cases. He writes: "I never expect to see secondary symptoms now if I have seen the case before we begin."[4] It is common knowledge that if we push mercury in the first three months from contagion the patient declines in many instances to believe he has had syphilis because the secondary symptoms are so modified.

SALVARSAN.

Dr. Levy-Bing, whose work I saw in Paris a month ago, and who has given over 500 injections of salvarsan intramuscularly and intravenously, informs me that in the numerous cases in which he has tried it salvarsan does not ever abort syphilis even when given in four weekly doses of 0·6 gramme in the primary stage. Further, that nervous affections and severe relapse are very common six to seven months later, unless mercury is also prescribed. He mentioned two recent cases where meningitis, facial paralysis, and extensive skin eruptions had shortly appeared from his omitting to follow up the salvarsan with mercury. Dr. Levy-Bing speaks not only from the clinical but from the pathological point of view. He uses the ultra-microscope and performs a Wassermann test every two months. He finds that salvarsan in some instances produces a negative Wassermann test more quickly than mercury, but that it rapidly becomes positive again.

Mr. McDonagh states that he has "had 3 cases within the last 12 months of men early in the secondary stage cured by salvarsan return with a diffuse macular rash ..... which appeared a few weeks after the patient noticed the site of his original sore swell and become red." He considers that this certainly speaks for the efficacy of salvarsan, and states that "within the short time it has been in use already 7 cases of an undoubted re-infection have been reported." In the army such cases have not been regarded as cures or as re-infections, but are usually marked "relapse" in the syphilis register and sent into hospital for more intense and thorough treatment. Without in any way wishing to detract from the undoubted value of salvarsan in certain phases of syphilis, it is noticeable that in early syphilis, after using soamin and arsacetin, a similar condition of affairs occurred. There was marked temporary improvement and a gain in weight, but permanent benefit did not accrue, and relapses were early and severe. It is only three years ago that we were informed that[5] "Injections of soamin can be looked on as prophylactic in the majority of cases against any further development of the disease if given early and in sufficient quantities." On the evidence of cases treated at Woolwich I disputed this view at the time.[6] Eighteen months later, in March, 1910, an expert medical committee at the War Office stated as a result of impartial evidence collected from six large stations, "that the utility of these preparations (arylarsenates) as a prophylactic against syphilis has not been proved, and does not recommend their administration for that purpose."

There is abundant evidence to show that, like the arylarsenates, the claim of salvarsan to abort syphilis has not been substantiated. Applied locally it acts like a caustic

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and expedites healing of the chancre in early syphilis, but other forms of local treatment have also this effect.[6] It is useful to inject salvarsan early to expedite the healing of primary lesions, especially amongst prostitute women, and rapidly follow this up with our *pièce de résistance*—mercury—as the real curative agent.

LOCAL TREATMENT.

Metchnikoff claims to have successfully inoculated the treponema pallidum and prevented syphilis by the early application within 24 hours from contagion of an ointment of calomel 10 parts and lanoline 20 parts. The use of soap or vaseline prior to coitus and washing with any antiseptic lotions immediately afterwards are also of great prophylactic value, and have been long recognised. Any oily substance would tend to block the minute orifices by which the micro-organisms gain an entry, and also tend to lessen the risk of abrasions caused by coitus. Cauterisation rapidly converts an unhealthy sore into a healing ulcer, stops phagedæna, tends to limit bubo formation, and expedites recovery. The application of a caustic does not in reality alter the nature of an infecting sore, and the condition of the adjacent lymphatics nearly always comes to our rescue. Further, a rash occurs in syphilis, whether the chancre is cauterised or not. I consider that non-infecting sores (soft chancres), if unhealthy-looking or discharging, should be touched with pure carbolic acid, which is comparatively painless, on admission and every third day, according to the indication of the particular case. Chancres, unless phagedænic, need not be touched if indurated and not ulcerated, or if they bleed profusely before and after touching, since such bleeding, as in simple inflammation, is a sign of commencing resolution. Many writers have advised the withholding of mercury in cases of phagedæna. I admit that caution and judgment are necessary. Local treatment by nitric in preference to carbolic acid, free exposure, prolonged baths, diet, and stimulants ordinarily suffice for phagedænic ulcers, except when the nearest glands are typical of syphilis, when mercurial inunctions should be used. A lowering treatment would have an unquestionably bad effect, whether dietetic or medicinal, especially if mercury is given when syphilis is non-existent.

MERCURIAL TREATMENT.

During the past 18 years my work has been almost exclusively confined to treating venereal diseases in large military stations at home and abroad. During this period I have extensively tried most of the recognised modes of mercurial administration, by the mouth, by inunctions, by injections, and by calomel vapour baths.

In the army, in the case of in-patients who are necessarily in hospital in the chancre and rash stage, we are chiefly concerned in trying to arrive at what best holds the syphilis in check. In the garrison of Woolwich in the year 1904 intramuscular injections of insoluble grey oil were ordinarily used for in-patients, and the inauguration of the out-patient system throughout the army dated from January of that year. In 1904 there were 331 admissions for syphilis, the average number of men constantly daily sick in hospital throughout the year with syphilis being 56. In October, 1905, inunctions of ung. hydrarg. and baths were commenced for in-patients, weekly grey oil injections being reserved for out-patients. There was a steady decrease in syphilis. In 1908 there were 53 admissions for syphilis, the average number constantly sick in hospital being only six. The following table shows these facts at a glance for the years 1904–1908:—

TABLE I.—*Syphilis: In-patients. Woolwich.*

Year.	Average daily strength of garrison.	Admissions: actual number.	"Constantly sick": actual number.	Ratio per 1000.	
				Admissions.	Constantly sick.
1904	5311	331	56	62·32	10·70
1905	4966	202	30	41·49	6·14
1906	5096	129	14	15·12	2·72
1907	4702	87	13	18·50	2·71
1908	5666	53	6	8·75	1·28

In 1904 grey oil intramuscular mercurial injections for in-patients and out-patients. In 1905–08 mercurial inunctions for in-patients—injections for out-patients.

I now come to the question of relapse. In Malta, in December, 1909, in a garrison of 6300 soldiers there were 171 cases remaining on the syphilis register under treatment by mercury, first as in-patients and later as out-patients, for syphilis, and out of these 31 suffered from relapse during the year 1909. In December, 1910, in a garrison of 6800 soldiers, there were 160 cases of syphilis remaining under mercurial treatment, with 21 relapses during the year 1910. These figures for relapse cases for the years 1909–1910 at Malta included men developing tertiary or other late manifestations of syphilis 5 to 10 years after contracting the disease. These figures embraced numerous transfers from other stations, foreign and home. Some of them were severe cases in men suffering from malaria, or the effects of tropical stations. Relapses were very unusual early in the disease. Syphilis cases in Malta, as at Woolwich, are ordinarily treated by inunctions of mercury in hospital in the primary and early secondary stage, and later, for military convenience, by injections of grey oil for out-patients. In 1911 the results are still better, and in a garrison of 7000 troops there is only one case of syphilis at present in hospital (a recent arrival with a severe throat relapse under salvarsan). There are 160 syphilis cases on the register doing their full duty free from any external manifestation of the disease. These figures compare favourably with those of any garrison in the world, and are a lasting tribute to the judicious use of mercury. Time prevents my dealing more fully with the clinical aspects of the relative merits of various modes of administration of mercury. They have received a great deal of attention lately.[7]

EFFECTS OF TREATMENT ON THE WASSERMANN REACTION.

To turn to the pathological aspect. We were asked to accept the Wassermann test as the real arbiter of the value of the various methods of administration of mercury and salvarsan. We will see, therefore, what recent reports tell us on these important points.

Mr. H. W. Bayly, pathologist London Lock Hospital, states that "82 per cent. of cases treated by inunction and 35 per cent. of cases treated by injection showed some effect of treatment after only three months." As far as he has gone, therefore, his conclusion is that inunction is the best form of administration of mercury, and he further gathers that Mr. McDonagh's large continental experience leads him also to this opinion. "Calomel injection seems much better than pill treatment, but not so good as inunction, as estimated by the Wassermann reaction. Potassium iodide and the arylarsenates have no effect on the Wassermann reaction, as far as three months' treatment is concerned." Neisser finds that iodide of potassium has an action on the Wassermann reaction.

At a meeting of the British Medical Association in 1910 Mr. McDonagh (London Lock Hospital) stated that "a patient should, before the disease has become generalised, receive the most active and vigorous form of treatment possible. Mercury, in the form of inunctions, is more potent in this respect than when given in any other form." Working at the Wassermann reaction on the continent he found that it was "almost a rule to obtain a 'negative' reaction after a patient had had a course of inunctions, or less frequently injections." As this bacteriologist has applied the Wassermann test in over 5000 cases his words carry very great weight, and he speaks from the clinical as well as from the pathological point of view.

Taking the Wassermann reaction as our test, Table II. indicates the ultimate effect on syphilis after a year, as distinguished from the immediate effect. Mercurial insoluble injections are contrasted with salvarsan injections on the Wassermann original reaction. The figures are some of those published by Major L. W. Harrison, who has probably done more research work on these points than any one else in this country.[8]

Judging from this table it would seem that after a period of about one year from contagion mercurial insoluble injection appears to be as efficacious as salvarsan as judged by Wassermann's original test, which is considered to be the standard. The course of mercurial injections employed, however, was extremely mild, and is recently obsolete in the army. A more intensive early course was introduced two years ago, and this may be productive of better results in future. Major Harrison states that "possibly injections may not be the best form in which to administer mercury." If so, it would appear wiser to test other mercurial methods before

TABLE II.

Tested after—	Results obtained by Wassermann's original test.		
	Total cases.	Positive.	Negative.
End of third course of mercurial injections (11th month). 14 injections in all given...	79	42	37
End of fourth course of mercurial injections (15th month). 18 injections in all given...	101	32	69
Three to 11 months after the last injection of salvarsan...	99	33	66

discarding them. Inunctions thoroughly applied in early syphilis appear to have a much greater effect on the Wassermann reaction.

Amongst a further series of 129 cases tabulated at the same time, in which salvarsan was used when mercury is reported to have failed,[9] it is observed that mercurial inunctions were only used in 8 instances, and merely as part of a mixed treatment in which inunctions took a minor share. There were 35 tertiary, malignant, parasyphilitic, or brain syphilis cases. These were unusually severe cases selected from other stations or those in which certain methods other than inunction had failed.

It is interesting to note in this connexion that Professor Fournier's valuable statistics on tabes in 1891 were based on "mercurial" methods other than injection.[10] He gives the statistics of 321 cases of tabes thus: 15 cases, no treatment; 8, potassium iodide, no mercury; 285 were treated by mercury, or more often a combination of mercury and iodide. Of these 285 cases, 70 were treated from a few days to two months, 108 from three to six months, 51 from seven to 12 months, 23 about 12 months, 20 from one to two years, 5 from two to three years, 6 for three years, and 2 for four years.

Sir David Ferrier says that "these statistics favour the view that a still more thorough and effective treatment might prevent the development of tabes altogether. ..... As regards salvarsan we had better 'wait and see.'"

Salvarsan was only placed on the market in December, 1910, and has not been issued for use to troops at Malta, so I am obliged to quote from the experiences of others. Major Harrison, in London, who received a free issue in July, 1910, had 18 clinical relapses amongst 115 cases of syphilis. In 31 instances the Wassermann test became negative after the use of salvarsan, but returned to positive. This occurred within a period of 3 to 11 months. Cases were selected for salvarsan treatment which had at least one year to serve. The results, therefore, on clinical grounds, if we accept relapses as our test, are apparently no better than with mercury.

Dr. Karl Lange[11] summarises the results of Wassermann reaction after salvarsan treatment in 268 cases of syphilis representing more than 2000 determinations at the Rudolf Virchow Infirmary. Eighteen cases, including one case of malignant syphilis and one of tabes, were negative before treatment. Nine cases were also negative where mercury had been used previously to salvarsan, and remained negative after salvarsan. Two cases of primary sore injected during exhibition of negative Wassermann also remained negative. Five cases of tertiary syphilis became positive after injection, and one died with a positive reaction. Ninety-seven cases remained positive after the salvarsan injection, of which 54 were absolutely unaltered. Amongst these, two adults and six children died during the positive period, although in these cases the degree of reaction had been partially reduced before death. Thirty-four cases exhibited a distinct reduction in the positive reaction during a period of observation extending over five weeks, but did not become negative. One case of severe laryngeal syphilis exhibited a strongly positive reaction for six weeks in spite of repeated injections of salvarsan. Neisser found that in only 10 per cent. of cases treated by salvarsan a positive Wassermann was changed to negative, and he pointed out that "the reaction cannot decide whether the cure is permanent or not." He pleads for "a combined treatment with these injections and mercury or iodide of potassium," and recommends the use of mercury for three years. Professor Werther, who has treated some 350 cases with salvarsan, states that "in cases treated by him in October, 1910, only 12 per cent. gave a negative Wasserman. ..... The combination of mercury with salvarsan has a more rapid effect on the reaction than a second dose of salvarsan." Professor Ehrlich states that "in some cases a negative reaction may be present, but after an injection of '606' the reaction becomes positive." If this is so, one naturally asks what is the potential value of a Wassermann test in syphilis, as the figures of Dr. Karl Lange previously quoted, and those of numerous other independent observers, indicate that a large bulk of the cases remain positive, whereas with mercurial inunctions they have been proved to become negative. One assumes that to obtain a negative reaction is the object of the Wassermann test and our guide to the relative therapeutic value of the remedy. This is the usual criterion of all pathological reports when attempts are made to assert the superiority of salvarsan over mercury.

As regards mixed treatment by salvarsan and then mercury and iodide of potassium, a similar plea was put forward with atoxyl, soamin, and arsacetin; and atoxylate of mercury was later evolved by Uhlenhuth which has proved of very little use. Dr. G. Pernet refers to "therapeutic rockets which come down like sticks," and Mr. C. F. Marshall considers that "an attempt is made to break the fall of salvarsan by a parachute of mercury and iodides." If "606" is to become a substitute for mercury it must be judged on its own merits. An adjuvant is a different matter, and as such salvarsan, according to the literature, appears to have a definite place in selected cases, mainly in those in which iodide of potassium was formerly used. The almost universal trend of opinion now is that salvarsan is not to be considered a substitute for mercury in average cases of early syphilis. The effect of this drug on induration in the chancre and the induration in the lymphatic glands is reported by numerous observers to be slight and not nearly as marked as with mercury. Such induration and enlarged glands are the repositories of syphilis, and, if not thoroughly reduced, relapse is usually ensured. The therapeutic action of salvarsan may be brilliant, but the effect is temporary judging by clinical reports and the evidence of the Wassermann reaction. In parasyphilis salvarsan is of little avail, judging by published opinions. In certain ulcerative conditions, in malignant, laryngeal, and tertiary syphilis, salvarsan is valuable, also in mutilating syphilis where phagedæna attacks the lesions, or in persons suffering from mercurial poisoning resulting from injudicious administration.

COMPARATIVE TOXICITY OF ACTION.

In a recent review on the "Experimental Chemistry of the Spirilloses"[12] it is stated: "We have for a long time had in mercury a specific remedy for syphilis, but a great disadvantage consists in its intense toxicity in relation to curative action." Is this impeachment of mercury fair, is it true?

As regards relative toxicity of action, there are 35 recorded deaths under salvarsan quoted in English literature[13] in a period of a little over a year. Dr. Levy Bing informed me of two other deaths under salvarsan in Paris in the week preceding my arrival, and four deaths previously, none of which had as yet been published. They did not occur amongst persons *in extremis*, but, I gather, amongst otherwise healthy adults. He is of opinion that the total number of deaths under salvarsan probably amounts to 70 or 80 persons.

Intravenous mercurial injections were introduced in 1864 by Scarvenzio and gave rise to some toxic signs, including death, and for this reason were discontinued. In a recent book on salvarsan Mr. J. E. R. McDonagh states that under mercurial injections the deaths number 70. The cases, however, are not quoted or the references given; I can only trace 26 under intramuscular mercurial injections.[14] These deaths under mercury date from 1864 and occurred over a period of nearly 50 years in a much larger number of cases. The toxicity of salvarsan, therefore, would appear to be at least equal to, if not greater than, that of mercury, quite apart from other recorded toxic signs. In the British Pharmacopœia both are classed amongst the poisons.

The occurrence of cancer after the use of arsenic was recently brought forward by Sir Jonathan Hutchinson. This is at present *sub judice*. One drawing on the table from

the College Museum shows an extensive dermatitis and so-called psoriasis directly due to arsenic.

The question arises whether salvarsan, the most recent organic preparations like atoxyl, is decomposed in the system into inorganic arsenic. Dr. J. M. Fortescue-Brickdale (lecturer on pharmacology, Oxford) states: "In man the excretion of atoxyl usually amounted to 50 to 90 per cent. within nine hours, partly as atoxyl and partly in another form, the latter being found in the urine for several days. The atoxyl retained in the body is to some extent decomposed, so that after a sufficiently long time enough inorganic arsenic is formed to produce the ordinary toxic symptoms. When atoxyl is applied to the treatment of syphilis, chorea, or any of the grave forms of anæmia, there is no evidence that any further action takes place than can be ascribed to the gradual splitting off of inorganic arsenic, and thus no advantage is gained in giving a rapidly eliminated form in large doses rather than one which, being slowly excreted, can be given in small ones."

I have used in selected cases of syphilis Donovan's and Fowler's inorganic arsenical preparations by the mouth for 18 years with great success. Others testify to their value, and they have existed in the British Pharmacopœia for 50 years. They are apparently less toxic, as no death is known. They are most valuable in late secondary or tertiary manifestations, and in cases where malaria exists in association with syphilis. Sanatogen, which is organic phosphorus, is also valuable in severe and malignant syphilis, and causes a rapid gain of weight, when cases previously unbenefited by mercury or potassium iodide rapidly improve, and these drugs can then be given with advantage.

Mr. Ernest Lane has drawn attention to certain difficulties in the technique which occurred with intravenous mercurial injections. These, no doubt, can be obviated, but the veins may be friable in syphilis, and in one instance that I saw the entry was only made after 11 attempts on the veins of both arms by an experienced man.

Some Canons regarding Results of Treatment.

In forming an opinion on the relative value of different drugs in treating syphilis the following canons may prove useful: First, the drug must be tried alone and judged on its own merits. Secondly, the manifestations of early syphilis, more especially induration in the chancre, must be removed in four to six weeks, and glandular enlargements, when they exist, must be rapidly reduced in three months from contagion. Mercury can do this. Thirdly, the result of the Wassermann original reaction should be recorded at three, six, and nine months, if this test when the technique is standardised is later accepted as conclusive evidence of syphilis. Fourthly, the recurrence of symptoms or relapse within the first 6–12 months from contagion must be noted, bearing in mind that a large number of cases of syphilis are often very mild and may not relapse even with an entire absence of treatment until parasyphilis occurs. Fifthly, the later occurrence, or otherwise, of tertiary manifestations and parasyphilis recorded. Sixthly, the mortality.

Before discussing some general considerations I draw your attention to some drawings of yaws on the table. This is a disease closely simulating syphilis, but due to a different spirochæta. In connexion with remarks in my first lecture on the varieties of spirochætæ found in primary syphilitic chancres, it is possible that we may find different types of syphilis due to other spirochætæ, just as varieties of trypanosomes are found.

Observations on Treatment.

As far back as 1786 John Hunter condemned "the ungrateful and unsettled mind of man" in his endeavour to obtain a substitute for mercury in the treatment of syphilis. He wrote: "If there is such a thing as a specific, mercury is one for the venereal disease ..... yet mankind are in pursuit of other specifics for this, as if specifics were more common than disease."[15] If for the word venereal we substitute early syphilitic disease, then Hunter's words are as true to-day as at the date when they were written. In amplification of Hunter's words the following facts require consideration before we lightly dismiss mercury in favour of arsenic. The grave effects of syphilis are largely due to the original intensity of infection, to personal susceptibility to the action of the virus from lowered general health, to racial susceptibility, to intemperate habits, to the neglect of early treatment, and to the injudicious use of mercurial preparations. The primary and early secondary stages run a definite course, and no line of treatment can absolutely prevent the evolution of manifestations, but good treatment in hospital in the early stages markedly ameliorates the general blood condition.

Owing to our ignorance of the laws of assimilation and elimination, it is unwise to give the patient in any stage as much mercury as he can stand, because this practice, though advocated by some persons, constitutes an abuse of the drug. This may result in mercurial stomatitis, or mercurial stasis and poisoning, from at first being unduly accumulated and later too suddenly eliminated. This would also affect the general health, which is a most important consideration, as the manifestations of syphilis are usually in inverse ratio to it. Treatment should, I think, be directed towards enabling the patient to take the drug by regulating elimination, and inducing an increase of metabolism by baths, food, and general exercise in the fresh air. If the bactericidal properties in the blood are to effect the cure of syphilis, this must necessarily result from increased metabolism due to the careful administration of mercurial or other preparations. As a result of such administration the lymphatic glands become reduced in size, and so continue their depurative and eliminatory function. When this fails they break down and suppurate. This result is not infrequently seen in neglected or badly treated syphilis. Too long a continuance of a large dose in any form creates a markedly retrograde effect, and gives rise to anæmia, loss of weight and general condition, as well as acting as a systemic poison, and it probably prevents antibodies forming in the blood. The factor "general condition," when adequately maintained, has no doubt as powerful an effect as the mercury in improving the status of the red blood corpuscles, and in eliminating the syphilis by improving the tone of eliminating organs, such as the liver, kidneys, and skin. "If blood counts be made it will be found that the count of red cells and the amount of hæmoglobin increase during the first three weeks of mercurial treatment begun when secondary manifestations of syphilis have occurred. After that time if mercury is still given the hæmoglobin and, later, the number of red corpuscles begin to decline."[16] Hydrotherapeutics and electro-therapeutics are useful adjuncts to a mercurial course, and a valuable complement after it.

Before iodide of potassium is administered the question of renal sufficiency should be adequately gauged. If albumin is present or the quantity of urine is insufficient the iodide eruptions are likely to occur, and hence the value of free dilution of the drug together with hot-air or electric-light baths. These exercise a markedly beneficial effect on the kidneys and assist elimination by the skin. The headache and osteocopic pain of early syphilis may rapidly yield to potassium iodide alone or in combination with mercury, and a pustular syphilitic rash is markedly benefited. The drug may give rise to headache if albumin is present in the urine. Potassium iodide is more obviously beneficial the further the stage from primary infection, and its use, therefore, is imperative in the late secondary and tertiary stages or in any manifestations, however early, such as malignant syphilis presenting the attributes of those stages. This drug is most valuable in cases of early syphilitic orchitis, in periostitis, nodes, gummata, gummatous ulcerations, and in threatened brain or cord lesions. Patients who are intolerant of small doses, such as gr. v., may take a larger one with impunity. The drug is best borne about an hour after meals in dilute solution in such vehicles as water, milk, and sarsaparilla. The depressant action is best avoided by prescribing it for short periods of 10 to 14 days at a time, and in solution with ammonia carbonate, and by administering the large dose at bedtime and avoiding its use in the early morning. It is then not so likely to derange digestion or cause depression. A course of a month once a year is valuable as a precautionary measure against parasyphilitic affections, and is strongly advocated by Sir William Gowers. The drug, as a matter of routine, should always be given as the complement of the mercurial course, since it is generally believed to assist in the gradual elimination of the accumulated mercury, and so guard against mercurial stasis and poisoning. It should not be given when mercurial poisoning has actually occurred. It also acts, especially when combined with sarsaparilla, by relieving the liver and kidneys, which may be chronically congested or lardaceous. Potassium iodide can remove the barricades of nascent fibrous tissue in which the syphilitic virus or its toxin is no doubt lodged in latent and later stages, and thus permits the leucocytes to

enter and effect the removal of the virus or its products, and this explains the lessened anæmia of the patient in suitable cases. The drug often rapidly reduces the enlarged glands, and its moderate use, therefore, causes a more healthy tone of tissues, blood, lymphatics, and organs, which can then more naturally overcome the localised effects of the spirochæta. In certain stages of threatened brain syphilis which have been neglected in the early stage mercury may prove more valuable, but commonly in "syphilis grave" or in "malignant" syphilis mercury may prove quite useless, and general condition is the first consideration.

Quinine in dilute acid solution is often most valuable precedent to, or after, the first mercurial course in cachectic cases. Whether it exerts a specific action on the treponema pallidum as on the malarial parasite is uncertain, but I always temporarily substitute it for mercury if there is an associated malarial history or if syphilitic fever is present. As early syphilis is associated with a loss in numbers of the red blood corpuscles and in the amount of hæmoglobin in these cells, quite possibly its chief action may be in overcoming the degenerative action, and thus assisting the blood to deal with the inroads of the virus in the early and more remediable phases of the disease by an increase in its phagocytic power or by the formation of antibodies. Cod-liver oil and iron are similarly valuable for their hæmatinic powers. Any drug, however, or any means which tend to reduce the number of spirochætæ in the system in the early stages, will consequently lessen the amount of toxin produced which can later injure the central nervous system and give rise to parasyphilitic affections.

The very greatest advantage may accrue from a cessation of mercury or potassium iodide and the substitution of other tonic remedies. I think that this is more especially the case in alcoholic, scorbutic, anæmic, malarial, or tubercular subjects, and in malignant syphilis. There is no class of disease in which the beneficial results of judicious and early treatment are so marked as in syphilis. If the remedy used is doing good the result is early apparent and the manifestations of the disease disappear; if, on the contrary, the manifestations are stationary or growing progressively worse the remedy is inadequate and fresh methods should be essayed, either by an increase or decrease of dose or the substitution of other drugs and remedies. If there are ulcers in the throat or mouth local treatment is requisite, and a minced meat or stew diet is essential to successful results. Otherwise the patient tends to lose weight if he is unable to masticate or swallow too solid food, and mercury would only aggravate matters. Success more often depends on maintaining the strength by the judicious use of stimulants and nutritious food than on drugs. This is especially true in cases of iritis, severe throat lesions, necrosis of bone, and in malignant syphilis.

PROPHYLAXIS.

Coming to the important question of prophylaxis, there are two essentially different modes of State intervention. First, the system known as Regulation, which implies registration and attendance. The second mode is "to require doctors and others to notify all cases of actually existing disease in persons of whatever class or sex to the health authority, who inquires into the means of segregation and treatment (as in the case of other infectious diseases) and is empowered to remove the patient to hospital if necessary." In the case of poor persons this implies a certain outlay for hospital accommodation and food, but it pays the State a hundredfold. Notification is not unequal between men and women, nor does it unduly encourage immorality. Inquiries extending over 20 years in Brussels elicited the fact that amongst 1523 out of 3505 women the primary cause of prostitution is poverty. If, therefore, prostitution is mainly dependent on poverty, and it is impossible to remove the latter, prostitution must be supervised. The late Dr. Parkes said: "In the case of venereal diseases the State must as much protect its citizens as from the danger of foul water or the risks of any other perilous and unhealthy trade."

I have outlined elsewhere the prevalence and some of the fundamental facts on which the "control of venereal diseases at their sources in civil communities" is dependent.[17] It is merely desired to point out now that in India, where control has existed since 1897 under the Cantonment Act, venereal diseases have steadily decreased year by year in the 70,000 British troops always stationed there amongst a native population of 300 millions. In 1895 in India the admissions to hospital for all forms of venereal disease reached the enormous total of 537 per 1000 of strength. In 1908 the admission-rate was only 70 per 1000, and yearly less since. In 1897 there were 661 invalids from India to England for venereal disease, and in 1908 only 59 invalids.[18] In 1895 there were over 3000 soldiers (three regiments) constantly sick in hospital with venereal diseases; and in 1908 only 500. This is an enormous saving in men and money, as a trained soldier landed in India costs the State £100. Coming to the civil aspect in England, A Royal Commission on the Blind, the Deaf, and the Dumb, which reported to both Houses of Parliament in the year 1889, estimated that about 7000 persons in the United Kingdom had lost their sight from ophthalmia neonatorum, and assessed the cost to the State for these cases of preventable blindness at £350,000 a year. This disease is recently notifiable. Syphilis is directly responsible for about 12 per cent. of all male admissions to lunatic asylums. This is independent of the cost of maintaining cases in workhouses and infirmaries.

When quite a young man I expressed the view that it was quite feasible to stamp out syphilis if the necessary measures were taken.[19] The ideal of my youth has borne fruit in my old age. At Malta freshly contracted syphilis has been practically stamped out during this year, and recently soft chancres very nearly so. In the year 1911 to date there have been only three or four cases of freshly contracted syphilis amongst troops at Malta. In 1909 there were 87, and in 1910 35 freshly contracted cases. There is only one "venereal sore" case at present in hospital. The troops number 7000. An equal number of sailors of the Royal Navy arrive periodically, and the population of the island is a quarter of a million persons. It is not proposed to weary you with statistics, but merely to mention how this has been done: (1) Confidential notification applied to both sexes; (2) segregation of diseased men and women in hospital in the early contagious period of disease for a few weeks; and (3) prophylaxis by efficient in-patient and later out-patient treatment.

You will say, "Ah! but the clandestine—how do you control her? It is she, and not the professional prostitute, who spreads syphilis five times out of six." This may be so in large cities, and it is very difficult to control, but this is an insufficient reason for doing nothing. No one asks for the Contagious Disease Acts to be reapplied to 12 towns in England, but common sense in dealing with these matters would appear to suggest that some form of public health control should be exercised in all towns, since the disease in question is worse than small-pox. The following are very practical suggestions:—

1. Rigid suppression of solicitation in the streets by women, or by men, who act as middlemen and finance the situation, or live on the earnings of women. Police action is possible under the Town Clauses Act of 1847. The Act is applied in London, and the police have power to arrest persons soliciting without the person solicited being called on to give evidence.

2. The prostitution of girls under age should be suppressed. At the St. Lazare Hospital, Paris, minors are separated from the elder women in the wards and in the chapel.

3. Complete and compulsory courses of instruction in venereal diseases should be instituted in every university so as to ensure the training of really competent practitioners.

The foregoing were among the main recommendations of an International Conference in Brussels in 1899.

In conclusion, the St. Lazare Hospital, Paris, built in 1683, first convent, then prison, now part hospital, part prison, has 1000 beds for the lower classes of diseased prostitutes. There is a life-size, gruesome picture over the chapel entrance of a dead prostitute being carried out in solemn state for burial. The picture, no doubt, is placed there to remind those who enter that "The wages of sin is death." The Scriptural reading, however, appears more humane, "Let him who is without sin cast the first stone."

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Clinical Lecture
ON
COLOTOMY
AND
SOME MISCONCEPTIONS OF ITS RESULTS.

Delivered at Charing Cross Hospital

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GENTLEMEN,—There are few operative measures that engender in the mind of patients, nurses, and practitioners so much dislike as colotomy. The reason for this is not difficult to understand; yet this is eminently a life-saving and pain-saving procedure, and its evil repute is, I am quite convinced, not justified. I would go further and say that the discomforts and disadvantages of colotomy are unduly magnified. Indeed, evils which are in no way due to the artificial anus but depend upon other factors are laid to its account, and it is the sifting of these quite extraneous evils from those inherent to the colotomy itself, and the placing of them where they rightly belong, which is my purpose to-day.

I do this because I know that the fear or dislike of colotomy leads to a great deal of unnecessarily prolonged suffering, and even to painful and torturing deaths, for no one can deny the agony of a death by intestinal obstruction. I would say, boldly and without hesitation, that many of the defects or disadvantages attributed to colotomy are so attributed from erroneous conceptions of their origin, and from ignorance of the nature of the function of the sigmoid and rectum.

Even such an apparently old subject as the anatomy of the sigmoid and rectum, as taught even now in quite "up-to-date" books, is wrong, in view of recent research by modern methods and advantages—I mean the gross anatomy; while the character of the vermicular action of the large bowel has hitherto been quite misunderstood, and upon this misconception I must strongly insist, because the normal expulsive movements of the large bowel are so exceedingly sluggish that they could not possibly give rise to diarrhœa even in the absence of a sphincter: diarrhœa means abnormal stimulation of the peristalsis, and not loss of sphincter control.

SUPPOSED DISABILITIES ARISING FROM THE OPERATION.

Let us first see what the supposed disabilities consequent on colotomy are:

1. Loss of the sense of desire to defæcate—i.e., warning.
2. Excessive number of actions—i.e., diarrhœa.
3. Loss of control over defæcation.
4. Excoriation of the skin.
5. The wearing of an apparatus.
6. The presence of an artificial anus on the abdomen.

The latter two are inevitable, but in practice they are really the minor of the evils, and if the former disabilities are reduced to a minimum the wearing of an apparatus is a small penalty to pay for relief from pain and the peaceful prolongation of a life—a life which may be valuable and useful.

To come to actual facts, therefore, we find that it is the inability to know when the bowel is going to act and how often it is going to act per diem which are the two great practical factors, because the amount of skin excoriation is largely dependent upon these conditions.

SENSE OF WARNING.

Now everyone attributes the loss of warning to the fact that in colotomy the bowel is opened above the sphincters ani. This is entirely erroneous. The sense of warning in no degree depends upon the sphincters ani, but chiefly upon the relaxation of the lower sigmoid sphincter, which exists where the pelvic colon (sigmoid) joins the rectum. The relaxation of this coincides with the passage of the fæcal mass from the sigmoid into the rectum.

It must be remembered that the rectum is normally quite empty. Certainly the lower half (ampulla) is accepted by all authorities as being empty, normally, and that the lower part of the pelvic colon or sigmoid is the fæcal reservoir, where the normally inspissated content of the large bowel rests until it is expelled, which in normal persons is every 24 hours.

In so far as the warning preceding defæcation is concerned, therefore, its loss depends, not upon the absence of the rectal sphincters, but of the loss of the sigmoid sphincter. However, there is evidence to show that sensory stimuli must precede the relaxation of the sigmoid sphincter—analogy alone would suggest this; and that these sensory stimuli originate, not only from the mucosa covering the sphincter of the sigmoid, but from a large extent of the sigmoid mucosa; hence the loss of the sigmoid sphincter with its mucosal covering does not remove all the sources whence the premonitory sensory stimuli preceding defæcation arise.

Clinical evidence, derived from the sensations of patients who have colotomies, clearly shows that most of the successful cases have very definite warning of the impending action of their colotomies; while others learn by certain sensations peculiar to each, and which are not normal warnings, when their bowel is going to act. Hence, even though the acutest warning of the impending action of the bowel is superseded by the performance of a colotomy, all warning is not cut off, or if it is "auræ" develop which efficiently replace the warning. Consequently, we cannot maintain that one of the great disabilities of colotomy is the inability to know when the bowel is going to act.

HOW OFTEN IS THE COLOTOMY GOING TO ACT (DIARRHŒA)?

This is the great difficulty with colotomy, and it is usually entirely attributed to the loss of the sphincters ani.

Cause of Diarrhœa.

First, consider what this means. In effect this explanation of diarrhœa in colotomy says the fæces run away from the bowel because the colostomy opening has not a sphincter, like the normal anus, wherewith to restrain the fæces. This is an entirely wrong explanation. The chief reason the patient has diarrhœa, or even why he has more than one action, or at most two actions, of the bowel per diem, is that the mucosa of his colon is chronically inflamed—i.e., the patient has always some degree of colitis. The best proof of this assertion is the result of treatment. Cure the colitis or remove its cause and the diarrhœa ceases, yet is the patient still minus a sphincter. So it was not the absence of the sphincter which formerly permitted the diarrhœa.

Is this assertion reasonable? You have only to follow the reasoning to its logical conclusion to see that it is so. In the person whose sphincteric apparatus is intact—sigmoid and anus—the presence of colitis in a late stage will result in diarrhœa, and sphincteric action is absolutely incompetent to prevent it—i.e., the diarrhœa occurs in spite of the presence of normal sphincters.

Understand clearly what I mean. A normal person empties the sigmoid once daily. The fæcal mass lies in the sigmoid stationary, not because it is retained there by a sphincter, most certainly not by the anal sphincters or the levator ani, but because the *vis a tergo*—i.e., the propulsion forwards of the contents of the transverse and descending colon—is very slow and gradual, so that until a sufficient mass of fæces has had time to accumulate in the sigmoid the peristaltic action of the latter remains in abeyance. Hence, for example, the presence in the sigmoid of the débris of the preceding day's breakfast alone is insufficient to excite the peristalsis of the sigmoid, and it is not until the débris of the preceding evening meal has arrived in the sigmoid that the total bulk is sufficient to start peristalsis.

The best stimulant to bowel action is distension. When the débris of 24 hours food has collected in the sigmoid the distension it produces suffices to start the process of defæcation, the sigmoid sphincter relaxes, peristaltic action is excited, and the fæcal mass is driven into the rectum, when the desire to empty the bowel becomes imperative and voluntary action is called into play, either to expel the mass or to retain it. This voluntary retention is partly exerted through the sphincters ani and the levator ani.

What happens, however, if the mucosa is inflamed or the muscular coats unduly excited? The débris of each meal as it arrives at the sigmoid is *not* retained at all or only for a short time, but on the contrary is hurried into the rectum and expelled—in short, diarrhœa results, and in spite of normal sphincters. In fact, we find that the sphincters are chiefly expulsive agencies, being essential for the cleanly completion of defæcation.

Apply this reasoning to the patient's case when he has a colotomy. If the surface of the colon is healthy—i.e., free from colitis—the débris of the food will gradually collect and remain in the sigmoid until sufficient bulk has accumulated to excite the normal peristaltic action, when an evacuation occurs. This bulk of stool usually represents in the normal patient the food débris of the preceding 24 hours; hence a second action should not be necessary, or possible even, for another 24 hours.

On the contrary, if the mucosa is catarrhal, the undue stimulation excited partly by the excess of mucus, partly by the excess of flatus which is almost always associated with catarrh, and by the muscular stimulation produced by the toxins present, all these stimuli result in excessive peristaltic activity of the bowel wall; hence inability of the sigmoid to retain the débris of more than one meal (or even less than one meal) which is expelled from the bowel as soon as it arrives instead of lying in the sigmoid until the débris of the 24 hours has collected, when a normal stood would result. So we see that diarrhœa in colotomy is not due to the absence of a sphincter. It would, indeed, be a mighty sphincter which could for long retain the stool in the presence of catarrh—i.e., colitis. That the colotomy is unjustly blamed as the cause of diarrhœa is therefore patent.

Condition of Bowel in Colotomy Patients.

We generally find that colotomy is performed in a bowel already the seat of colitis, either above a malignant growth or a stricture, or infective ulceration of the rectum; often the two latter conditions are part of a process diffused throughout the bowel, and one often most intractable to treatment, and a colotomy may or may not be proper treatment.

Above a cancerous growth the bowel is always catarrhal, and for some time after the performance of a colotomy some degree of diarrhœa will result in these cases, until, indeed, the catarrhal condition subsides as a result of the relief of the chronic intestinal obstruction. When this is attained the bowel will act once, or at most twice, daily. If, however, the catarrhal condition of the bowel is maintained by any cause then the diarrhœa persists, and will persist, till the cause of the catarrh is removed, and for a short time longer.

Oral Sepsis.

The obstruction, and hence the catarrh, produced solely by the growth being relieved by the colotomy, is there usually a cessation of the diarrhœa? I regret to say No, because in most cases there is an additional source of catarrh present. It is to this *additional* cause of catarrh or colitis that most of the inconvenience or evil attributed to the colotomy must be charged; certainly not to the absence of a sphincter. What is the commonest cause of this "residual" colitis? In my opinion it is by far most often due to oral sepsis. So with a not inconsiderable experience of colotomy, I wish to emphasise strongly the proposition *that the comfort of a patient with a colotomy is directly proportionate to the presence or absence of oral or nasal accessory sinus sepsis.*

Site of Colotomy.

Granted, therefore, that this corollary is correct, it follows that the many ingenious methods of endeavouring to manufacture a sphincter "to prevent diarrhœa" are not only unnecessary but are bound to fail to effect this object—not even nature's sphincters can prevent diarrhœa. But inasmuch as it is impossible by any method of performing colotomy known to me to retain the whole of the fæcal reservoir, the sigmoid, the operation, by reducing the storage capacity of the bowel, inevitably interferes to some extent with the normal capacity to hold the accumulation of the 24 hours' food débris, which means that the one normal daily evacuation will be interfered with. The nearer the rectum the colotomy opening is placed the less do we reduce the storage capacity, and *vice versâ*. Hence the selection of the transverse colon as the site of a colotomy is absolutely indefensible, while the historical method of selecting the proximal end of the sigmoid is also incorrect; the question of prolapse apart, the ideal site for a colotomy is the junction of sigmoid and rectum.

Regulation of Diet.

It is because we do reduce the storage capacity of the colon that throughout I have reiterated that a successful colotomy, even in the favourable cases—namely, those free from oral sepsis—may act twice daily. This, however, depends largely upon the quantity and débris-producing qualities of the food partaken, and is to this extent under the patient's control.

If we have so reduced the capacity of the sigmoid that instead of being able to hold the débris of all the four meals taken daily it is only able to retain that of three meals, it necessarily follows that when this amount of débris collects it is evacuated as a stool, while the débris of the last meal of one day is added to that of the following day, and so on. Irregularity of the bowel must result; but if the nature of the food can be so adapted that the amount of débris produced per diem is so reduced as to enable the diminished sigmoid to hold the débris of all four meals, then the one daily evacuation of the bowel is not interfered with.

CONCLUSIONS IN FAVOUR OF COLOTOMY.

We thus see that—

(1) There is ample warning of an impending stool;

(2) If there is no oral or accessory sinus sepsis there is no diarrhœa;

(3) While regulating the diet permits of control of defæcation;

(4) Skin excoriation is very greatly reduced, but as this is also dependent upon the mucus exuded from the exposed mucosa it is not entirely done away with.

REMOVAL OF SOURCES OF PUS.

Before doing a colotomy, therefore, all sources of pus likely to be swallowed must be thoroughly dealt with, and I mean thoroughly, not in the half-hearted manner so often adopted, and inevitably bound to result in disappointment. This will prove the most important of the accessory steps to the operation of colotomy, and should be carried out as soon as it is decided a colotomy is to be done, and must not be left until the time the colotomy is done, unless of course the latter is performed urgently, when, if possible, the mouth or nose should also be attended to—i.e., at the same time.

SOME POINTS IN THE OPERATION.

As regards the actual operation there are two chief points to be considered: (1) That the whole of the fæces must be passed through the colotomy, hence the spur must be effective; (2) that prolapse of the bowel in the future must not take place.

Effectiveness of Spur.

In order to be certain that the spur is effective in the operation usually performed, the mesenteric border of the sigmoid must be at or near the level of the skin. It consequently follows that the whole diameter of the gut lies above the skin, and the surest way of ensuring this is to pass a glass rod though the mesentery to sustain the bowel. This is the most effective way of making a spur; it is also much less painful than any form of stitch (the through-and-through suture is really painful) and it is the least septic also. The glass rod is 4½ in. long, ¼ in. in diameter, and over the two ends are passed ¾ in. to 1 in. of rubber tubing to prevent its accidentally slipping out of the mesentery. One of the rubber sleeves is slipped off when the glass rod is finally removed on the seventh to tenth day.

Prolapse.

With regard to future prolapse, it has always been taught that the way to prevent the proximal part of the colon from intussuscepting through the colotomy opening is to pull down the colon until it is "taut"—i.e., until there is no slack part of colon between the place where the colotomy opening is to be made in the bowel and the descending colon where it is bound down to the left kidney. This advice is quite correct, but unfortunately the method removes almost all the sigmoid reservoir and interferes with the desirable state of one daily action of the bowel.

The best method of performing colotomy, therefore, is not so easy to decide; and when it is to be a permanent thing, as in cancer of the rectum, it is still further complicated by the method now in vogue of attempting the removal of "all the lymphatic watershed, including a great deal of the sigmoid

and most of the meso-sigmoid," a proceeding which, in my opinion, neither the anatomy of the part nor clinical evidence justifies.

With regard to prolapse, it is my experience that the constant expulsive effort due to diarrhœa is the most important predisposing factor to this painful and disagreeable complication. Another is the "drawing" effect of even the best made colotomy receptacles, due, I think, chiefly to the want of an air vent, the introduction of which tends to leaking. The more the sigmoid retains its normal function of a reservoir the less the probability of prolapse, and, as I have indicated, we can prevent diarrhœa, hence we can practically remove the most important factor conducing to prolapse.

Prevention of Possible Nipping of Intestine.

In conclusion, I would like to warn you that in performing the operation of colotomy by the so-called "gridiron" method—i.e., the separation of the flat abdominal muscles in the direction of their fibres as we do in appendicectomy—it is wise after making the incision in the tendinous part of the external oblique in the direction of its fibres to notch the aponeurosis at right angles to the fibres, as I have known at least two deaths follow the operation of colotomy, from nipping of the wall of the intestine by the strong tendinous edge of the external oblique of such a severe degree as to lead to a linear band of necrosis of the bowel wall—i.e., there was no effective obstruction to the contents of the bowel, which could be and were expelled by mild laxatives or by passing a tube into the bowel, but death was due to the intense toxæmia which we now know is associated with even a linear necrosis of the bowel wall and the virtual obstruction which is produced, but which in a colotomy one could mechanically overcome. To all intents and purposes strangulation by a band occurs.

THE DIFFERENTIAL DIAGNOSIS OF SYPHILIS AND PARASYPHILIS OF THE NERVOUS SYSTEM.[1]

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FOURNIER was the first to express the opinion that tabes dorsalis is a post-syphilitic disease, and Erb in Germany and Gowers in this country have done more than any other neurologists to support this doctrine of Fournier. Esmarch and Jessen, and later Kjelberg, were the first to call attention to the fact that general paralysis occurred especially in persons who had suffered with syphilis, but it was Fournier who really put forward the doctrine that general paralysis was, like tabes, a consequence of syphilis, and that the two diseases were so similar in their etiology that they might probably be regarded as one disease affecting different parts of the nervous system. The inoculation of a number of general paralytics with no history or signs of syphilis with the virus of a hard chancre without any signs of infection resulting led Krafft-Ebing to postulate the dictum "general paralysis is the product of syphilisation and civilisation."

When I was appointed pathologist to the London County Asylums I found no mention of syphilis as a cause of this disease and comparatively little of other mental conditions in the annual reports. This struck me forcibly, for as a neurologist I had been greatly impressed in my hospital experience with the fact that of all the causes of organic disease of the nervous system syphilis easily occupied the first place. I found that careful inquiry in cases of general paralysis revealed the fact of antecedent syphilis much more than had been suspected; still, the obvious syphilitic residua of scars of gummata and other tertiary manifestations in the body were relatively infrequent. I found that cases of syphilitic brain disease with dementia were called general paralysis, also cases of Korsakoff alcoholic psychosis; but etiologically and pathologically, especially in the light of recent research, these are quite different diseases and can usually be differentiated clinically.

[1] A paper read before the Medical Society of London on Nov. 13th, 1911.

A number of causes were asserted to be the agencies capable of inducing general paralysis, and while not denying that alcoholism, sexual excesses, inherited neuropathic and psychopathic predisposition, worry and excessive mental strain—in fact, all those causes which may lead to neurasthenia, are important exciting factors, yet it is my conviction that syphilis is the essential cause.

It seemed to me that the proof would be afforded if I could collect a sufficient number of cases of juvenile general paralysis in which most of these exciting factors are absent and show that they were the subjects of congenital syphilis. From the numerous inmates in the London County Asylums I was soon able to collect a large number of cases of general paralysis occurring at puberty or early adolescence, and to demonstrate that clinically and pathologically they in no essential respect differed from cases occurring in adults the subjects of acquired syphilis.

Again later, I was able to collect 70 cases of tabo-paralysis and compare the same with 70 cases of tabes dorsalis, and I found among these that the parasyphilitic affection may begin with spinal symptoms or optic atrophy and terminate in general paralysis; or general paralytics may simultaneously with, or successively to, the onset of the cerebral symptoms develop tabes dorsalis, and I came to the conclusion from a research extending over three years that there is one tabes or wasting disease of the central nervous system from an etiological and pathological standpoint. One of the strongest arguments clinically in favour of this view is the fact that the Argyll Robertson pupil is for all practical purposes only met with in these post-syphilitic diseases of the nervous system. Researches in connexion with the examination of the blood and cerebro-spinal fluid, which will be referred to later, confirm this view.

According to some authorities—Bosc, Lesser, Hirschl, Nageotte, and others—general paralysis and tabes are quaternary syphilis; the former authority asserts, and with some degree of correctness, that there is a general similarity even in the lesions of general paralysis and tabes to other syphilitic lesions—viz., there is an endothelial and connective tissue hyperplasia with a tendency to fibrous and sclerous formation. But there is more than this, there is a primary neuronic decay which cannot be accounted for, solely by the changes in the supporting, enclosing, and nutrifying tissues the same as can be done in syphilitic lesions.

The view I take of the pathology of parasyphilitic affections is that in certain acquired or congenital syphilitic individuals the durability of the neurones is greatly curtailed, so that they decay and die prematurely, thereby giving rise to a series of symptoms which may be associated either with irritation of definite nerve structures—e.g., lightning pains, visceral crises, mania and epileptiform convulsions—or with neural destruction, e.g., ataxy, paræsthesia, anæsthesia, paresis, and dementia. The irritative phenomena may be the sign of increased neural irritability due to degeneration of neurones prior to their death and loss of function. I do not, however, affirm that the lymphatic and vascular changes play an unimportant part in the process of decay and death of the neurones especially in general paralysis. Now it may be asked, What is the evidence to show how this neural irritation and destruction are brought about?

It is a fact that the cases of syphilitic disease of the nervous system diminish in number and gravity with each succeeding year following infection, although it must be admitted there is no essential difference in the histological changes met with in early and late syphilis of the nervous system. It is, however, comparatively very rare for parasyphilitic affections to occur within four or five years of the primary infection, and the average time is at least ten years after the appearance of the primary sore. Seeing that the great bulk of persons are affected in youth or early manhood, so the curve of incidence of onset of syphilitic affections of the nervous system reaches its maximum somewhere between 25 and 30, whereas the curve of the incidence of onset of general paralysis and tabes reaches its maximum between 35 and 40. Whereas, on the one hand, syphilis of the nervous system produces more or less sudden obtrusive symptoms indicative of gross lesions due to meningeal irritation and vascular occlusion of a random kaleidoscopic character, with remissions and exacerbations causing new and variable paralytic and irritative phenomena, on the other hand, parasyphilitic

affections are usually so insidious in origin that it may be difficult to fix the date of the onset. Again, as a rule there is a continuous progress of the disease in which remissions and exacerbations are not nearly so manifest.

Whereas, on the one hand, syphilis of the nervous system, especially in the early stage, yields to all forms of treatment which would cause the destruction of the specific organism, on the other hand, parasyphilitic affections are seldom arrested, and though sometimes benefited by antisyphilitic treatment the degree of benefit is inconsiderable when compared with the effects obtained in syphilis of the nervous system. I have myself seen no disappearance of symptoms once established in tabes or general paralysis which could be associated with the treatment. Neither could we expect that mercury or arsenic in any form could restore neurones which have undergone degeneration, although when it is the syphilitic virus which is producing symptoms due to arterial and meningeal inflammation, the administration of these remedies gives relief by destroying the specific cause, thus arresting and clearing up the inflammatory process before neuronic destruction to any considerable degree has taken place. If the spirochæta be the cause of these neuronic degenerations in parasyphilis, how does it come to pass that it has never been demonstrated in general paralysis or tabes? whereas it has been demonstrated by many authorities in syphilitic meningitis and arteritis. It might be said that there is an intracellular granule form, but this has to be proved. So far the existence of an intracellular granule form rests only on the slender basis of analogy of the spirochæta to the tick fever spirillum which has been shown by Leishman to have an intracellular granule form. If we admit this premise then it must be assumed that the spirochæta pallida has passed into a resting stage and after a lapse of years, on an average ten, it has become active and caused inflammatory changes in the membranes, vessels, and connective tissues, with secondary irritation and destruction of the neural elements. The primary meningo-encephalitic theory was the old view of the parasyphilitic affections, but most authorities now consider that the diseases termed parasyphilitic are due to a primary neuronic decay with secondary changes in the membranes, vascular and neuroglial structures. This view was taken by Sir David Ferrier in his Lumleian Lectures on Tabes Dorsalis. The positive Wassermann reaction[2] given almost in all cases of general paralysis both by the blood and cerebro-spinal fluid would suggest that the disease was the result of active syphilis, but whereas a case of active syphilis giving the Wassermann reaction in the blood after treatment may no longer give it, this is not the case with general paralysis according to my experience. I shall therefore assume that until further evidence of a more definite nature is forthcoming to show that these late manifestations of a previous syphilitic infection are to be regarded as quarternary syphilis of a nature similar to glossitis, it will be better to accept the term parasyphilis or metasyphilia and to explain the symptoms by a premature and progressive decay of neural systems, localised in some cases to afferent systems, as in tabes, or generalised in others, as in general paralysis.

I have not time to discuss the possibility of there being a specific spirochæta for these parasyphilitic diseases, nor the question whether parasyphilis is a result of racial immunity by widespread syphilisation; nor another view, that of Neisser, that the late manifestations of syphilis in the form of tabes and general paralysis may be the result of a modification of the action of the specific organism by the widespread use of mercury. Nor will I discuss the question of anaphylaxis as an explanation, but come to the more practical side of the question of the differential diagnosis of parasyphilis and syphilis of the nervous system.

The Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System from other Diseases affecting the Brain, the Spinal Cord, and the Peripheral Nerves.

The neuroses and psychoses will first occupy my attention, for in my opinion they form a most important group of cases; important because of the difficulties arising in determining whether the symptoms are purely functional or whether they are the prodromal symptoms of grave organic disease. An individual may have had syphilis; or he may think he has had syphilis; in the former case he may deny the possibility. It is in all such dubious cases that the serum diagnosis is of the greatest value: if it is positive, there is a clear indication for treatment; if the result is negative it is often extremely useful, inasmuch as I have observed that the assurance given to the patient, that there is no active syphilis, goes a long way to improve his general condition, and the apprehension and mental distress being removed, the patient recovers from his neurasthenic condition.

The neurasthenia occurring in the secondary or active stage of syphilis is in no way specific in its symptoms, although it may be favoured and intensified by the action of the poison, but the effect on the mind of a sensitive person in whom the moral sense has received a profound shock by the acquirement of a loathsome and what he believes to be an incurable disease is a most important factor. He becomes morbidly apprehensive and he suffers in consequence with sleeplessness, loss of appetite, dyspepsia, and malnutrition, a combination of factors which terminate in neurasthenia. It is of importance to diagnose between the headache and other symptoms of such an induced neurasthenia and true syphilitic headache of the secondary period, or that more serious condition premonitory of the syphilitic affection of the membranes and vessels of the central nervous system. In neurasthenia there is little real pain; there are unpleasant sensations of tightness, heaviness, emptiness, muzziness of the head, but not true pain. In syphilitic disease, on the other hand, the pain is intense, lancinating, boring, tearing; pain which is so severe as to interfere with occupation. It is often worse at night, sometimes waking the patient at a particular time. Neurasthenic headache is generally diurnal and worse in the morning on arising and better at night on going to bed. Anti-syphilitic remedies give relief in syphilitic disease, but have no influence in neurasthenia unless the condition is due in the main to a grave anæmia of the secondary period. It is very rare for a syphilitic headache to last for any length of time without serious manifestations of organic disease occurring; in fact, syphilitic brain disease seldom strikes without warning; it may be ptosis, a squint, a transitory condition of aphasia, or paralysis, a girdle sensation, &c. In neurasthenia and hysteria there are many and varied subjective symptoms and very few, if any, objective signs of the disease.

It is important to distinguish the neurasthenic state, spinal and cerebral respectively, from tabes dorsalis in the early pre-ataxic stage when the knee-jerks may be present and from general paralysis in the pre-paretic stage. As regards spinal neurasthenia the knee-jerks are increased, there are no bladder troubles, there may be impotence, also attacks of giddiness, analgesia, and paræsthesia may suggest to the patient, especially if he have medical knowledge, tabes dorsalis, yet no physician would diagnose this disease in the absence of any of the characteristic pupil phenomena—viz., inequality, irregularity, and rigidity or sluggish reaction to light. Seeing the causes which lead to cerebral neurasthenia are in the subject of syphilis the very causes which predispose to paralytic dementia, it is often difficult to decide whether a neurasthenic displaying periods of depression or excitation, especially if he be the subject of chronic alcoholism, is or is not in the earliest prodromal stage of general paralysis; for the pupil phenomena may be absent in the earliest stages of the disease, or, if not altogether absent, are certainly not nearly so definite as in tabes.

These parasyphilitic affections may be definitely differentiated from neurasthenic conditions by an examination of the cerebro-spinal fluid. The existence of lymphocytes points definitely to a chronic inflammatory condition of the central nervous system, and I have found that in practically every case of general paralysis even in the earliest stages a lymphocytosis occurs. Moreover, it always occurs in tabes dorsalis, therefore this fact is of great importance in the differential diagnosis. Many conditions of organic disease, however, give a lymphocyte reaction. In about half the cases of tabes dorsalis the fluid also gives a positive Wassermann reaction. In practically every case of general paralysis we have found a positive Wassermann reaction. So that a neurasthenic with slight mental symptoms whose fluid gave this reaction may be said to be suffering with general paralysis in the early stage. Comparatively speaking, only about 25 per cent. of the cases of syphilitic disease of the central nervous system give a

[2] I have recently had a case in which the fluid and blood taken post mortem gave a negative reaction. Clinically the case was one of rapid general paralysis of the insane. Microscopic examination showed a very marked active and widespread destruction of the cortical neurons, marked proliferation and swelling of the capillary endothelial cells, and perivascular plasma cell infiltration though not very marked. Histologically it was an early case of general paralysis.

positive reaction, though most of them give a well-marked lymphocytosis. Some nervous persons may object to have lumbar puncture; in the case of a differential diagnosis of early general paralysis from neurasthenia an examination of the blood may suffice, for if the serum does not fix the complement and give the reaction neither will the cerebro-spinal fluid—that is to say, a negative serum reaction puts out of count general paralysis. If, however, a positive reaction of the blood is obtainable then it is necessary, in order to decide the diagnosis, to perform lumbar puncture and examine the cerebro-spinal fluid; for it is obvious that every individual who gives a positive serum reaction is not suffering from general paralysis, as it only means antecedent syphilis. It would be interesting to know whether those individuals who gave a Wassermann reaction after a systematic course of energetic treatment are more liable to these late manifestations of the effects of the virus than those who, when treated efficiently, failed afterwards to give it. I should not be in the least surprised if this were so.

Hysteria and Hystero-Epilepsy.

Hysterical paralysis and hystero-epilepsy, according to Fournier and Lang, sometimes occur in the secondary stage of syphilis, and the symptoms disappear under antisyphilitic treatment. The subjects of antecedent syphilis with a neuropathic predisposition are very liable to develop hysteria and hypochondriasis, and not very infrequently syphilophobia. A negative reaction of the blood will serve to allay their ungrounded fears and desire to be injected with "606." I have seen several such cases recently. If there is a positive reaction it denotes the necessity for treatment, and such a case as I shall describe illustrates the value of this serum reaction and the examination of the cerebro-spinal fluid.

Some years ago I treated a man with cerebral gummatous meningitis, and all the symptoms cleared up; a year later he came to me complaining of a slight pain in the left side. I told him that I hoped that it was nothing more than muscular pains, but he was to come and see me again if he were not better, as I could discover no anæsthesia or objective signs. A week later I was asked to see him by a practitioner who regarded his case as *functional*. He was paralysed in the lower extremities; it had come on somewhat suddenly. Knowing the history of this patient I took him into the hospital, and for the first few days he became rapidly worse and lost complete control over the bladder and rectum as well as complete loss of sensibility below the level of the seventh rib. Under antisyphilitic treatment he made a complete recovery. No doubt the case was one of gummatous syphilitic spinal meningitis. I am not so sure as I was once of the hopefulness of curability of syphilitic meningitis; I have seen necropsies in many cases that had apparently recovered under treatment, but which have relapsed, and I should advise all people who have once suffered with syphilitic disease of the central nervous system to have the Wassermann reaction of the blood made periodically with a view to renewal of treatment if the reaction is positive. Not that I would say if the patient showed any clinical signs pointing to syphilitic brain or cord disease, and yet gave a negative reaction he should not be treated, for we do not quite know all the conditions that may prevent the reaction occurring in some individuals. In illustration of this I may mention the following case.

A man of 35, who denied infection and showed no positive signs on his body, was admitted under my care to Charing Cross Hospital suffering with ophthalmoplegia interna and externa of the left eye; he was in a condition of drowsy stupor, and there was bilateral facial paresis; his blood gave a negative reaction by three independent and very competent observers. Nevertheless, I said this is clinically syphilis—energetic mercurial inunction treatment and iodide in large doses resulted in complete disappearance of all the symptoms in a month.

Arterio-sclerosis.

Seeing that syphilis is one of the most important factors in the production of sclerosis of the arteries, especially the cerebral arteries and general arterial sclerosis, causing Bright's disease, it follows that combined with nervous diseases may be uræmic symptoms, headaches, pyrexia, twitching, and epileptiform seizures. If uræmic symptoms occur in a case with antecedent syphilis, the blood may give a positive reaction. Now, the patient suffering with arterio-sclerosis is usually over 50 years of age, and if he has an inborn neuropathic tendency may suffer with an involutional melancholia; he becomes irritable, suspicious, and even dangerous to himself and others; there may be exaggerated emotivity and a partial dementia, so that not infrequently such cases are regarded as general paralysis. However, unlike general paralysis, the patient retains his notions of personality and his autocritical faculty, and he is more or less conscious of his failure of memory and mental enfeeblement. If he is the subject of various forms of coarse paralysis the diagnosis is easy. It is extremely rare to obtain ankle clonus and Babinski's sign in general paralysis. Lumbar puncture would settle the diagnosis in a doubtful case—lymphocytosis and a positive Wassermann reaction would decide in favour of general paralysis. Arterio-sclerosis may especially involve the perforating arteries and cause lesions about the basal ganglia, giving rise to mimic disturbances, increased emotivity, accompanied by dysarthria and pseudo-bulbar symptoms; such cases to my knowledge have been mistaken for general paralysis.

Chronic Alcoholism.

Chronic alcoholism and syphilis are so often associated that cases frequently present themselves of considerable difficulty of diagnosis. Absence of the serum reaction enables one in the absence of definite signs of syphilitic affection of the nervous system, and when all the symptoms accord with alcoholic poisoning, to exclude syphilis or parasyphilis—e.g., in polyneuritic psychosis; but suppose the reaction is positive and symptoms and signs exist which may possibly indicate general paralysis or syphilitic disease of the central nervous system combined with alcoholism and possibly masked by it. It is then that lumbar puncture and examination of the cerebro-spinal fluid will be of great use, as a lymphocytosis will show that there is, in addition to the alcoholism, a syphilitic affection; if in addition there is a positive reaction, it points to general paralysis. The following is a good case in illustration of this.

A man, aged about 28, was said to be suffering from general paralysis and I was asked to see him. I found that he had been drinking heavily for some time past; there were a great deal of mental confusion, loss of knowledge of time and place, personal illusions, and loss of memory of recent events. He had contracted syphilis five years previously, for which he had been treated. He had had a left-sided hemiplegic condition from which he had recovered: there were ankle clonus and Babinski's sign on this side. The pupils were equal and reacted sluggishly to light. I was told that his blood gave a negative reaction. I gave it as my opinion that it was not general paralysis and that he would recover with mercurial treatment and compulsory total abstinence from alcohol. I saw him again nine months later: he had two large gummata on his head, headache, and tenderness on percussion over the forehead; although he had been under the care of a medical man owing to his not complaining these had not been observed. A Wassermann gave a marked positive reaction. With mercury and large doses of iodide all the symptoms disappeared and he is practically well. A differential diagnosis of *mania a potu* from mania of incipient general paralysis associated with drink can be decided by lumbar puncture at once, although sometimes when objection is raised the true nature of the disease must be allowed to declare itself after the effects of the alcohol have had time to wear off before deciding.

Dementia Præcox.

The age, mode of onset, and evolution of this disease are unlike any syphilitic or parasyphilitic affection due to acquired syphilis, but occasionally there is a difficulty in the diagnosis of a juvenile paralytic or an imbecile the subject of congenital syphilis. There is usually in dementia præcox a strong hereditary history of insanity. Nearly 80 per cent. commence before 25. If there is any doubt, examination of the blood and cerebro-spinal fluid will settle the question.

Epilepsy with dementia, tubercular and other forms of meningitis, disseminated sclerosis, and cerebral tumours (non-syphilitic) are diseases which may sometimes be mistaken for syphilitic and parasyphilitic affections. Here, again, the examination of the blood and cerebro-spinal fluid will in most cases allow of a differential diagnosis.

The Differential Diagnosis of Syphilitic and Parasyphilitic Affections.

The average time between syphilitic infection and onset of symptoms is ten years in parasyphilitic affections; very seldom is it under five years, whereas the converse is the case with syphilitic affections. In the severe forms of syphilitic disease of the central nervous system the greatest number of cases occur in the first few years after infection and diminish with each succeeding year. Whereas the syphilitic history is well defined and the scars of lesions are common in syphilitic disease, they are comparatively rare in the parasyphilitic affections. The onset of symptoms and course of syphilitic disease are usually rapid and subject to regressions and remissions; the onset of symptoms and the course of para-syphilitic affections are usually insidious and slowly progressive, except in some cases of general paralysis in which there are numerous seizures, causing maybe *transitory* aphasia, paraphasia, monoplegias, and hemiplegias. The pupil and squint phenomena are common in syphilis, but Argyll Robertson pupil extremely rare. In parasyphilis pupil phenomena and strabismus are common, Argyll Robertson pupil is rarely absent especially in tabes and tabo-paralysis. Optic neuritis and post-neuritic atrophy are not uncommon in syphilis. A unilateral central scotoma, the other eye remaining healthy (an indication of a retro-bulbar neuritis affecting the papillo-macular bundle), is indicative of a gummatous meningitis. In parasyphilis primary optic atrophy occurs in about 10 per cent. of the cases. Bladder disturbances are common in syphilis and parasyphilis. Severe headache, worse at night, stiffness of the neck, coarse paralysis of cranial nerves, paralysis of limb and face with clonus and plantar extensor response are common as a result of syphilitic brain disease, but rarely if ever met with in general paralysis. Aphasias, anarthria, and dysarthria are common in brain syphilis, but not in general paralysis, in which the speech affection is characteristic. In fact, the term general paresis is much more correct for the parasyphilitic brain affection. The knee-jerks in a gummatous meningitis may be present one day, absent the next; in tabes they are in the great majority of cases absent throughout. The keee-jerks are exaggerated in the great majority of cases of general paralysis, but there is no ankle clonus or Babinski—in fact, these signs in a case of dementia to my mind indicate strongly syphilitic brain disease rather than general paralysis.

The Diagnosis of Tabo-Paralysis.

It is of very great importance to the patient and friends to be able to diagnose tabo-paralysis. Tabetic patients are apt to suffer with neurasthenia and mental depression and to resort to alcohol; moreover, to relieve the pains, the morphia habit may be acquired. Again, a potentially insane person may suffer with tabes and be the subject of delusions of persecution, putting an insane interpretation upon the lightning pains and visceral crises. Seeing that neither the Wassermann reaction of the blood and cerebro-spinal fluid, nor the lymphocyte reaction will help in such cases, for both tabes and tabo-paralysis give these reactions, it may be difficult to decide whether the patient is the subject of oncoming tabo-paralysis. Still, in my experience an abundant lymphocytosis and a marked positive Wassermann reaction of the cerebro-spinal fluid point to a widespread disease and therefore to involvement of the brain; if in addition in such a case apoplectiform, migrainous, or epileptiform seizures not causing gross paralysis have occurred, and especially if the knee-jerk is noted to be absent on one side and present on the other, tabo-paralysis is indicated. I may mention that about 10 per cent. of the cases of tabes dorsalis end in extension of the disease to the brain. The cerebral lesions in no way differ from those of general paralysis in the early stages.

The importance of a differential diagnosis of syphilis from parasyphilis of the nervous system cannot be over-estimated from the point of view of prognosis and treatment; whereas the former yields to energetic treatment sometimes in a marvellous manner, the latter does not. At one time I found no distinction was made in many asylums between gross syphilitic brain disease with dementia occurring in young people and general paralysis, and the cases being regarded as incurable treatment was either inadequate or not adopted. I show lantern slides of such cases.

I do not think in the light of pathology a place should be found in modern text-books for *syphilitic general paralysis*, and I speak in great deference to our leading authority, Dr. Savage, who, I believe, was the first authority in this country to recognise the association of syphilis with general paralysis and especially tabetic paralysis. There are cases of syphilitic brain disease in which there is general syphilitic end-arteritis without thrombosis; cases in which there may be at first no permanent coarse paralysis, only transitory seizures like those of general paralysis; the symptoms may be mainly psychical, although there may be headache, giddiness, and insomnia. The patient exhibits defective recollection of what has recently happened, mental fatigue, and incapacity for work; his actions are automatic and disturbances of consciousness are frequent; he may become semi-conscious or semi-comatose, then recover in almost a complete manner, only to relapse again. The transitory character of the phenomena before the occurrence of occlusion of the arteries by thrombosis resulting in permanent paralysis and dementing conditions is especially suggestive of this form of syphilitic disease of the brain. The recognition of this form of syphilis in its early stages is especially important. It is generally accompanied by a gummatous periarteritis and some meningitis more or less extensive, so that the cerebro-spinal fluid would give a lymphocyte reaction and possibly a Wassermann; the serum would almost certainly give the reaction, and should be tested in all doubtful cases. I have seen numerous cases of multiple gummatous tumours of the brain with generalised arteritis and meningitis, and the principal symptoms have been a drowsy stupor with progressive dementia, but without coarse paralysis for some time. I have noticed that such cases generally show well-marked syphilitic residua on the skin or mucous membranes, and I should always hesitate to diagnose general paresis in such cases.

Pseudo-tabes.

Cases occasionally occur of syphilitic cerebro-spinal meningitis which simulate the parasyphilitic affection very closely. I will narrate a typical case that came under my notice. A woman was sent into the wards under my care said to be suffering with tabes. She had lightning pains, girdle sensation, absence of the knee-jerks, paræsthesia and anæsthesia of the lower extremities, and bladder troubles. The pupils were unequal, irregular in outline, and sluggish to light and accommodation. There was a history of her having had a severe headache some time previously and squint and double vision. I found that she had had a healthy child four years prior to the onset of the cord symptoms, since then she had had several miscarriages. I found that the knee-jerk had come back, and I came to the conclusion that very probably, in view of the short time after possible infection, the severe headache, and the variable character of the knee-jerk, that this was a case of cerebro-spinal gummatous meningitis. Lumbar puncture was performed; 370 lymphocytes per c.mm. were found; the Wassermann reaction was negative, and the short interval, four years at most, between infection and onset made me sure that the case was one of gummatous meningitis or *pseudo-tabes*. One month of mercurial inunction treatment and all the symptoms had disappeared, and the fluid was free from lymphocytes. She still remains well, though it is now three years since I saw her first. This might have been thought to be a case of cured tabes.

Hitherto I have dealt mostly with the diagnosis of cerebral affections; I must now briefly refer to the diagnosis of spinal cord diseases.

The Diagnosis of Spinal Cord Diseases.

Syphilitic affections of the membranes may be more or less localised so as to cause practically only spinal symptoms, but many cases regarded as syphilitic disease of the spinal cord when the history of the illness and the symptoms are carefully inquired into will be found to have presented symptoms indicative of affection of the base of the brain—e.g., they have suffered with headache, a little stiffness of the neck, transitory double vision, ptosis, &c. Indeed, it is probable that cases of meningitis syphilitica, owing to invasion of the membranes by the spirochæta, may occur when the roseolar rash appears, and there have been a few cases which indicate such an affection of the membranes while the primary sore is yet unhealed. A patient presenting himself with symptoms pointing to affections of the spinal cord may give a history of antecedent syphilis and yet not necessarily be suffering from syphilitic disease of the spinal

cord. Still, as Dr. Buzzard long ago pointed out, it is astonishing how many cases of spinal cord affection in young men are due to comparatively recently acquired syphilis. I say comparatively recent, meaning thereby in comparison with tabes. The first thing to do, therefore, is to exclude syphilitic infection as a cause of spinal symptoms; the next thing is to show whether the symptoms have a causal relationship or are only coincidence. There is no clinical symptom or group of symptoms characteristic of syphilitic disease of the spinal cord, but there are certain symptoms which, if they occur in young adults, particularly of the male sex, should lead one to suspect their specific origin. The early symptoms are spinal irritation, severe intercostal pains worse at night, cramps and contracture of limb, with pains radiating down them, bladder disturbances, disappearance and reappearance of the knee-jerks, the Brown-Séquard phenomenon; in fact, symptoms pointing to a local or more generalised *meningitis* or *meningo-myelitis*, but usually without pyrexia unless there be some complication.

As in cerebral syphilis, so in the spinal disease the symptoms are particularly liable to remissions and regressions. One group of symptoms may improve or even disappear and another group appear, or symptoms may improve in one part of the body while progressing in another. These symptoms are due to a gummatous inflammation of the membranes associated generally with vascularitis involving veins and arteries. Consequently lumbar puncture and examination of the cerebro-spinal fluid reveal a marked lymphocytosis usually without a positive Wassermann reaction of the fluid, although the blood will almost certainly give it. Myelitis as a result of meningitis often follows the symptoms of meningitis; either may be focal or diffuse; the former is the more common; the latter is indistinguishable from an acute myelitis due to other causes—e.g., specific fevers, micro-organisms, and microbial toxins. The position and extent of the cord lesion may be inferred from the extent of the paralysis and loss of sensory function; the electrical reactions of the muscles will enable a judgment to be formed as to whether the anterior horns are affected. This leads me to say that cases have been described of polio-myelitis as a result of syphilis. I have had one such case under my care; the symptoms might resemble the acute spinal paralysis of the adult, especially if it were comparatively sudden in its onset, owing to the thrombosis of a vessel affected by endarteritis. Landry's paralysis might be mistaken for acute ascending myelitis of syphilitic origin, but in the latter sensation is affected, and if the patient survives there is a great tendency to the formation of bed-sores, and many muscles may waste, showing loss of faradic irritability. Such symptoms are not met with in Landry's paralysis. If the signs and symptoms point to a focal transverse myelitis we should seek to find whether it is primary or secondary. Myelitis in the acute form may arise from pressure due either to a growth or diseased bone. The root pains which precede usually by some days or weeks the paraplegia, and the absence of signs pointing to disease of the spinal column or malignant growth help in a differential diagnosis. Lymphocytosis of the cerebro-spinal fluid and a positive Wassermann reaction of the blood, even though the fluid is negative, would almost certainly indicate a syphilitic meningo-myelitis. As I have already pointed out, in most of these cases there is present or past evidence of some basic meningitis.

Disseminated sclerosis may result from multiple syphilitic foci due to obliterative arteritis; a positive Wassermann reaction of the blood, together with the age and history of the patient's illness, will suffice. A certain degree of lymphocytosis may occur in true disseminated sclerosis.

Hysteria and spinal neurasthenia in a syphilitic subject I have already referred to. The most important subject of differential diagnosis is between (1) tabes; (2) pseudo-tabes, a case of which I have already referred to; and (3) ataxic toxic peripheral neuritis; and the chief points in making a diagnosis I have summarised as follows:—

I.—*Tabes Dorsalis.*

1. Average time between syphilitic infection and onset of symptoms, ten years; very rarely under four years. Usually only slight sign of syphilitic residua. Onset and course usually slow, insidious, and progressive.
2. Pupil phenomena, inequality and irregularity common; Argyll-Robertson pupil rarely absent. Strabismus transitory or permanent, frequent.
3. Primary optic atrophy in about 10 per cent. of cases.
4. Bladder disturbances very frequent; visceral crises common.
5. Knee-jerks absent as a rule even in the early stages.
6. Lightning pains in limbs. No stiffness in neck and spine. Girdle sensation and anæsthesia to light touch in the thoracic region may be an early symptom.
7. Lymphocyte reaction as a rule not marked in the early stages. Positive Wassermann reaction in about half the cases in the cerebro-spinal fluid. Blood serum always.

II.—*Pseudo-tabes Syphilitica.*

1. Average time between syphilitic infection and most of symptoms 18 months to two years, rarely after five years. Generally signs on the body of old syphilitic residua. Onset and course usually rapid and subject to regressions and remissions.
2. Various oculo-motor paralyses common. Argyll Robertson pupil very rare.
3. Optic neuritis and post-neuritic atrophy not uncommon. Unilateral central scotoma due to affection of the papillo-macular bundle by the gummatous meningitis may occur. Headache, worse at night, often.
4. Bladder disturbances common.
5. Knee-jerks variable, one day absent and then returning.
6. Spinal pain, tenderness, and stiffness, the pains lancinating and radiating from the spine down the limbs. Girdle sensation and thoracic anæsthesia very frequently present.
7. Marked lymphocytosis of cerebro-spinal fluid. Wassermann reaction less frequent. Blood reaction always present.

III.—*Ataxic Toxic Peripheral Neuritis.*

1. A history of some toxic condition—e.g., diphtheria, typhoid, lead, arsenic, diabetes, and especially alcohol.
2. There are pain and tenderness of the limbs and paraplegia or ataxia; there may be paræsthesia; the muscles are usually wasted, and there may be reaction of degeneration. Usually there is foot-drop and wrist-drop. There is no oculo-motor paralysis as a rule, and the pupils are not affected. There are no changes in the fundus; in diphtheria there is frequently paralysis of accommodation. As a rule there is no bladder trouble unless there is an accompanying dementia. The knee-jerks may be present or absent, or exaggerated. If there be any doubt, the cerebro-spinal fluid should be withdrawn and examined. The reaction is negative and there is no lymphocytosis.

Finally, it is necessary for me to refer briefly to Erb's spastic spinal paralysis; according to my experience I am inclined to the belief of Oppenheim and Marie that these cases are really due to a syphilitic meningo-myelitis. The symptoms are a gradually developing spastic paresis of the leg, with increase of the deep reflexes; although the gait is extremely spastic the muscular contraction is but slight; the bladder is early and almost constantly affected; slight sensory disturbances are usually present. The course is chronic in most cases, and there is a tendency to improvement and even to complete arrest. Erb regarded the anatomical basis of this disease to be a primary degeneration.

The Histological Diagnosis.

Medico-legal cases may arise where a histological diagnosis is required. There have been in the London county asylums since the Workmen's Compensation Act a good few cases of patients dying in the asylums from general paralysis following injury. In some cases the injury has been slight and quite insufficient to cause the onset of the disease; in others it has been severe, and the question has arisen whether the patient was not already the subject of the disease when he met with the accident, or, indeed, whether it was not owing to a sudden lapse of consciousness the result of the disease which directly or indirectly occasioned the injury or accident. The naked-eye appearances of a well-marked case are characteristic, and I need not refer to them. The blood and cerebro-spinal fluid both give a positive reaction after death. For a considerable time past at Claybury the blood and cerebro-spinal fluid of every case that dies have been examined by the Wassermann method and the reaction is compared with the result obtained during life; all cases in which the brains are not undoubtedly to the naked eye general paralytic brains are microscoped, and we have come to the conclusion that practically every case of general paralysis gives a positive lymphocyte and a positive Wassermann reaction. A man was admitted to Claybury and died ten days after admission. He was said to have been run over by a motor 'bus three months previously and to have sustained a fracture of the thigh. He was in an acute maniacal condition, and he was certified as dying from acute delirious mania which accorded with his symptoms. I found that his blood and fluid both gave a positive reaction and there was an abundant lymphocytosis of the fluid. There were scarcely any naked-eye signs of general paralysis; in fact, there was nothing which could be asserted positively as evidence of the disease. A circumstance which accorded well with the history was that just prior to the accident he had been discharged from the navy and had passed as a taxi-driver. I found a definite scar of a chancre on the penis. Examination

of several regions of the brain was made, but only in one region examined were there the histological appearances characteristic of the disease—viz., increased vascularity, well-marked infiltration of the small vessels of the cortex with plasma cells and lymphocytes, also the membranes, proliferation of the glia cells, absence of the tangential fibres, distortion of Meynert's columns and atrophy of the constituent ganglion cells; lastly, the existence of the "rod cells of Alzheimer." All these conditions showed that this man was suffering with acute mania of general paralysis in its earliest stage; it is therefore highly probable that the severe injury had been the exciting factor in the production of the disease. We are able to decide two points by this examination—viz., that the man had general paralysis, a disease that is invariably fatal; that he had syphilis, which is an essential cause. That the evidence post mortem was to the effect that it was in its earliest stage and might therefore never have occurred if he had not had the severe accident. The fact of the existence of the scar of the chancre and antecedent syphilis should not weigh in the minds of the jury if they were satisfied that the man in all probability was not suffering with general paralysis prior to the accident, for only a very few syphilitic subjects die from general paralysis.

Another case has recently occurred which from a medico-legal point of view is of interest in showing how necessary it is to examine *various* parts of the brain histologically to confirm the diagnosis of general paralysis. Dr. C. H. Bond, of Long Grove Asylum, recently gave evidence in a trial in which the wife of one of his patients alleged that traumatism was the cause of her husband's mental breakdown. Dr. Bond considered that the case was clinically one of general paralysis of the tabetic variety, although he said there were certain anomalous bodily symptoms. He sent me the central nervous system of this patient when he died. I found a typical tabetic lesion of the posterior columns of the spinal cord. Examination of the prefrontal and central convolutions did not show the typical lesion of general paralysis. The tip of the first temporal convolution, especially on one side, showed all the characteristic lesions which I have just described.

In conclusion, I beg to thank you for so kindly listening to me so long, and yet I feel there are many things left unsaid which I might have said. However, many eminent authorities are about to follow who will be able to fill up the gaps and very probably also from their wide experience modify and correct some of the statements I have made. Finally, I wish to acknowledge my indebtedness to my assistants, Dr. J. P. Candler and Mr. Sydney Mann, who have carried out researches on the blood and cerebro-spinal fluid to which I have referred and upon which I have based my opinion as to the value of the reaction. These researches have been fully detailed by Dr. Candler in THE LANCET of Nov. 11th, p. 1320.

Nottingham-place, W.

A SPHYGMOGRAPHIC METHOD FOR THE ESTIMATION OF SYSTOLIC AND DIASTOLIC BLOOD PRESSURE.

BY J. DAVENPORT WINDLE, M.D. VICT.

THE instrumental methods in use for the clinical estimation of diastolic blood pressure are based on Marey's observation, that the maximal pulse wave occurs when the pressure about an organ is equal to the pressure within the artery supplying it. To determine the arterial pressure he devised a hand plethysmograph connected with a bottle for raising the pressure, and recorded the size of the pulse wave by means of a sphygmoscope tambour. He found that the maximal pressure corresponded with the disappearance of the pulse wave, and the minimal—i.e., the diastolic—with its largest oscillation.[1]

A similar means for estimating systolic and diastolic pressures is available by using the Mackenzie ink polygraph, and an ordinary Riva-Rocci blood pressure apparatus. The armlet is first fixed up in the usual way and connected to the manometer. The radial tambour is then applied and the pressure of the spring button carefully adjusted so that the maximal pulsation of the artery is obtained. While a tracing is being taken air is gently pumped into the bag, so that the pulse becomes progressively smaller until it ceases to be recorded; at this moment the systolic pressure is read off. Air is then released very slowly from the armlet, when the pulse wave gradually grows more ample until full pulsation is again reached. The escape of air is then stopped and the diastolic pressure read off.

This method is very convenient in the routine use of the polygraph, and sufficiently accurate for general purposes. It is a far more reliable index of actual pressure than that obtained by timing the obliteration, or moment of reappearance of the pulse by the finger. It will be found that the systolic reading is usually from 10 to 15 mm. higher than with the ordinary method, due to the fact that escape imperceptible to the finger may take place near the obliteration point. I have checked the diastolic readings by the auscultatory method devised by Korotkoff,[2] taking the diastolic pressure by this method at the moment when the sound ceases to be heard on releasing air from the bag. The maximal oscillation of the pulse curve with the sphygmographic method is true, as a rule, within 5 mm. of the auscultatory reading.

Southall, W.

[1] E. J. Marey: Nouvelles Recherches sur la mésure manométrique de la pression du sang chez l'homme Travaux du Laboratoire de M. Marey, Paris, 1878, iv., 126.

PRELIMINARY REPORT ON THE TREATMENT OF THE VACCINATION SITE WITH PICRIC ACID SOLUTIONS.

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THE influence of vaccination as a protective measure against small-pox is a fact proven beyond cavil. The opponents of vaccination who deny this proposition are clearly in error. The only genuine argument of the anti-vaccinists is that vaccination is not unattended with risk. The individual risk, of course, is minute, and doubtless much less than the peril of remaining unvaccinated. But in the aggregate a considerable number of undesirable complications occur. These are in many instances due to infection of the vaccinal lesion or site subsequent to the introduction of the virus. Any procedure, therefore, which would aid in lessening wound infections should be welcomed. The best possible protection to the vaccinal ulceration is afforded by the formation of a hard, concrete crust due to desiccation of the contents of the vaccine vesicle and pustule. Such a crust will form, unless there is undue inflammation and suppuration and unless the crust is subjected to mechanical violence calculated to loosen or to detach it.

Constricting shields which make peripheral pressure about the vaccinal site lead to the formation of a friable crust easily detached by various trauma. The adhesion of the crust to the sleeve or to a piece of protective gauze will often lead to forcible decrustation when the sleeve or gauze is removed. There does not seem to be an ideal dressing for the vaccinal lesion—i.e., one that will lessen the liability of the vesicle to rupture, and one that of itself will act as an antiseptic.

In view of the property of solutions of picric acid of entering into chemical union with the keratin of epithelial tissue and thus hardening the roof of the vesicle, and in view of our experience with this drug in certain vesicular skin affections, we determined to try it as a dressing after vaccination. Synchronously with our clinical trials on vaccinated children we endeavoured to determine the germicidal value of picric acid *in vitro* and *in vivo*, as well as its penetrative qualities.

The laboratory investigations of the germicidal properties

[2] This method is described in an address by Sir Lauder Brunton, Brit. Med. Jour., Nov. 5th, 1910, p. 1390.

of solutions of picric acid were conducted in the following manner:—

Part 1.—The germicidal value of a 4 per cent. alcoholic and a 1 per cent. aqueous solution of picric acid was tested with bacillus typhosus and staphylococcus albus, and the result expressed in comparison with solutions of pure phenol, the result being known as the "phenol coefficient."

Part 2.—The germicidal power of an alcoholic solution of picric acid was then tried by applying it directly to living skin and determining the results by cultural methods.

Part 3.—An effort was made to determine the penetrating and hardening properties of picric acid in 4 per cent. alcoholic solution when applied to living skin.

Part 1.

The methods for determining the germicidal value of a substance are not entirely satisfactory. It is practically impossible to conduct a test in an ideal manner. The Rideal-Walker[1] and THE LANCET methods[2] have been employed for some years and both marked an important advance in the efficiency of such tests. Lately Anderson and McClintic[3] have modified these tests, and after an experience with all three we have decided to express the results of our experiments according to their technique, the "Hygienic Laboratory Phenol Coefficient." Considerable practice and dexterity is necessary before satisfactory and uniform results are obtained. All of the following experiments have been repeated several times. Ehrenfried,[4] assisted by Overlander, found "a 1 per cent. aqueous solution of picric acid about 50 times more active as an antiseptic than the 1 per cent. phenol." Our experiments did not show picric acid to possess anything near so high an efficiency.

Technique.—As test organisms the bacillus typhosus and staphylococcus albus were employed; the former because the Hygienic Laboratory recommends it, and the latter because it is an almost constant inhabitant of the skin. The culture of bacillus typhosus was secured from the laboratory of the Philadelphia Bureau of Health and the culture of staphylococcus albus was isolated from the nose of a patient. Both were subcultured in bouillon at least three times before being used. Twenty-four-hour-old cultures were well shaken and filtered through sterile filter paper, and one-tenth of a cubic centimetre of each was used as a dose. The disinfectant solutions were made up according to weight to assure accuracy and amounts of 5 c.c. placed in sterile test-tubes. These tubes and the tube containing the culture were cooled to 20° C. When all is in readiness the culture is added and subcultures made in extract broth with exact titration to + 1·5 — 10 c.c. in each tube, by means of platinum wire loops with a diameter of 4 mm., at intervals of 2½, 5, 7½, 10, 12½, and 15 minutes. These subcultures or seed tubes are placed in the incubator at 37° C. for 48 hours, and then examined and results noted. (See Tables I., II., III., and IV.)

These experiments show the following results. 1. With bacillus typhosus picric acid is a little over four times as efficient as phenol. 2. With staphylococcus albus picric acid is a little over three and a half times as efficient as phenol. 3. The alcoholic solution of picric acid is more efficient than the watery solution.

TABLE I.—*4 Per Cent. Alcoholic Solution of Picric Acid. Bacillus Typhosus.*

4 per cent. picric acid in 95 per cent. alcohol. Temperature of medication, 20° C. Culture used, bacillus typhosus, 24 hour extract broth, filtered. Proportion of culture and disinfectant, 0·1 c.c. + 5 c.c. Organic matter, none. Kind, none. Amount, none. Subculture media, standard extract broth, reaction + 1·5, quantity 10 c.c.

—	Dilution.	Culture exposure in minutes. 2½	5	7½	10	12½	15	Phenol coefficient.	Remarks.
Phenol...	1 : 100	—	—	—	—	—	—	$\frac{600}{100} = 6$	
	1 : 125	+	—	—	—	—	—		
	1 : 150	+	+	—	—	—	—		
	1 : 200	+	+	+	+	—	—		
	1 : 225	+	+	+	+	+	—		
	1 : 250	+	+	+	+	+	+		
	1 : 300	+	+	+	+	+	+		
Picric acid...	1 : 500	—	—	—	—	—	—	$\frac{900}{225} = \frac{4}{\frac{10}{2} = 5}$	coefficient.
	1 : 550	—	—	—	—	—	—		
	1 : 600	—	—	—	—	—	—		
	1 : 650	+	—	—	—	—	—		
	1 : 700	+	+	—	—	—	—		
	1 : 800	+	+	+	—	—	—		
	1 : 900	+	+	+	+	+	—		
	1 : 950	+	+	+	+	+	+		

TABLE II.—*4 Per Cent. Alcoholic Solution of Picric Acid. Staphylococcus Albus.*

4 per cent. picric acid in 95 per cent. alcohol.

—	Dilution.	Culture exposure in minutes. 2½	5	7½	10	12½	15	Phenol coefficient.	Remarks.
Phenol...	1 : 40	—	—	—	—	—	—	$\frac{300}{40} = 7·5$	
	1 : 50	+	—	—	—	—	—		
	1 : 100	+	+	—	—	—	—		
	1 : 125	+	+	+	—	—	—		
	1 : 150	+	+	+	+	+	—		
	1 : 200	+	+	+	+	+	+		
	1 : 225	+	+	+	+	+	+		
Picric acid...	1 : 200	—	—	—	—	—	—	$\frac{400}{150} = \frac{2·67}{\frac{10·17}{2} = 5·08}$	coefficient.
	1 : 250	—	—	—	—	—	—		
	1 : 300	—	—	—	—	—	—		
	1 : 325	+	—	—	—	—	—		
	1 : 350	+	+	—	—	—	—		
	1 : 375	+	+	+	—	—	—		
	1 : 400	+	+	+	+	+	—		
	1 : 450	+	+	+	+	+	+		
	1 : 500	+	+	+	+	+	+		

TABLE III.—*1 Per Cent. Aqueous Solution of Picric Acid. Bacillus Typhosus.*

1 per cent. picric acid in distilled water.

—	Dilution.	Culture exposure in minutes. 2½	5	7½	10	12½	15	Phenol coefficient.	Remarks.
Phenol...	1 : 100	—	—	—	—	—	—	$\frac{450}{100} = 4·5$	
	1 : 120	+	—	—	—	—	—		
	1 : 140	+	+	—	—	—	—		
	1 : 160	+	+	+	—	—	—		
	1 : 200	+	+	+	+	—	—		
	1 : 225	+	+	+	+	+	+		
	1 : 250	+	+	+	+	+	+		
	1 : 300	+	+	+	+	+	+		
Picric acid...	1 : 300	—	—	—	—	—	—	$\frac{600}{200} = \frac{3}{\frac{7·5}{2} = 3·75}$	
	1 : 350	—	—	—	—	—	—		
	1 : 400	—	—	—	—	—	—		
	1 : 450	—	—	—	—	—	—		
	1 : 500	+	—	—	—	—	—		
	1 : 550	+	+	+	—	—	—		
	1 : 600	+	+	+	+	+	—		
	1 : 700	+	+	+	+	+	+		

Part 2.

To ascertain the germicidal power of picric acid in solution when applied directly to the skin 42 children were cultured.

[1] S. Rideal and J. S. A. Walker: Journal of the Royal Sanitary Institute, London, 1903, 24, p. 424.

[2] THE LANCET, Nov. 13th (p. 1454), 20th (p. 1516), and 27th (p. 1612), 1909.

[3] J. F. Anderson and T. B. McClintic: Bacteriological Standardisation of Disinfectants, Journal of Infectious Diseases, vol. viii., No. 1, p. 1.

[4] A. Ehrenfried: Picric Acid and Its Surgical Applications, Journal of the American Medical Association, vol. lvi., No. 6, p. 412.

TABLE IV.—*1 Per Cent. Aqueous Solution of Picric Acid. Staphylococcus Albus.*

1 per cent. picric acid in distilled water.

—	Dilution.	Culture exposure in minutes.						Phenol coefficient.	Remarks.
		2½	5	7½	10	12½	15		
Phenol...	1 : 100	−	−	−	−	−	−	$\frac{250}{100}$ = 2·5	
	1 : 120	+	−	−	−	−	−		
	1 : 140	+	+	−	−	−	−		
	1 : 160	+	+	+	−	−	−		
	1 : 180	+	+	+	+	−	−		
	1 : 200	+	+	+	+	−	−		
	1 : 250	+	+	+	+	+	+		
Picric acid...	1 : 200	−	−	−	−	−	−	$\frac{350}{200}$ = 1·75	$\frac{4·25}{2}$ = 2·12
	1 : 225	−	−	−	−	−	−		
	1 : 250	+	−	−	−	−	−		
	1 : 275	+	+	+	−	−	−		
	1 : 300	+	+	+	+	−	−		
	1 : 350	+	+	+	+	+	−		
	1 : 400	+	+	+	+	+	+		

Such methods are far from being satisfactory, but with care some interesting data may be obtained.

Technique.—A 4 per cent. alcoholic solution of picric acid was employed, the same solution as used in the preceding experiments. The work was done during the early hours of the night when the children were in bed and asleep. In this way the danger of contamination was decreased. All cultures were taken by thoroughly rubbing an area of skin about 2½ centimetres in diameter over the upper arm with a stout platinum loop sterilised at the bedside. Inoculations were made in extract broth, + 1·5, and grown for two to four days at 37° C., when all were examined for growth. After taking a culture the picric acid solution was applied by means of sterile swabs and the part covered with sterile gauze and bound with a bandage. At intervals of 15, 30, and 60 minutes the bandage was carefully undone, a nurse lifted the gauze, and cultures were made from the same area in like manner. The skin was always scraped enough to secure a considerable portion of the superficial epithelium.

Results.—Of the primary cultures from the 42 children taken before the application of the picric acid 83 per cent. yielded growths, although it would appear that a growth should be secured under such circumstances in 100 per cent. of cases. Fifteen minutes after the application of the 4 per cent. solution of picric acid in 95 per cent. alcohol growths were secured in 22 per cent. of cases; 30 minutes after the application 33 per cent. yielded growths; 60 minutes later 51 per cent. of cases gave growths. From these results it appears that picric acid killed the organisms present in the skin in about 50 per cent. of cases in 15 minutes after application. However, if we wished to keep the skin relatively sterile it would be necessary to apply the solution at least every hour.

Part 3.

All attempts made to determine the depth of penetration of an alcoholic solution of picric acid when applied to the skin were unsuccessful. It is necessary to use fresh skin, and this we did, the solution being applied shortly before death and the specimen removed at autopsy. The same 4 per cent. alcoholic solution was used. The reason why our experiments were unsuccessful was because picric acid is soluble in all fixing, hardening, and clearing reagents. Sections of skin were frozen with ethyl chloride and carbon dioxide with unsatisfactory results; an attempt was then made to change the picric acid into a practically insoluble picrate of lead by immersing the skin in a solution of lead acetate prior to hardening and cutting, but this gave unsatisfactory results because the picric acid would dissolve into the lead solution before the picrate was formed in sufficient quantities to be of use; sections were then treated with a solution of an alkaloid (morphia and strychnia) with equally disappointing results.

Clinical Results.

The clinical trials were carried out under circumstances that were far from ideal and that were calculated to severely test the value of the method. Owing to the admission of several cases of small-pox into our hospital for contagious diseases all of the children in the neighbouring buildings were vaccinated. Among these was a number of scarlet fever cases, for the most part convalescent.

A 4 per cent. solution of picric acid in 95 per cent. alcohol was painted over and around the vaccinal site 48 hours after the insertion of the lymph. The paintings were then continued daily. Glycerinated lymph in capillary tubes manufactured by the New York Board of Health was used.

The treatment was used on 22 children varying from 1½ to 6 years of age. Of these, 20 vaccinations were successful and 2 unsuccessful. In another series of 9 cases in which the treatment was not used 7 were successful and 2 unsuccessful.

Many of the children had complications, such as nephritis, discharging ears, discharging nose, cervical adenitis, &c., prior to their vaccinations. Despite this fact, the results of the vaccinations were most satisfactory. The vaccinal course was in some cases unaccompanied by any fever or other constitutional disturbance. In several cases, on the eighth day, an evanescent rise of temperature to 101° F. occurred. The local reaction, as evidenced by œdema and the formation of an areola, varied in the different cases, but was in general less than in the untreated cases. Some of the children made no complaint of their arms at all. In most cases a firm, adherent, centrally depressed crust was formed by the fourteenth day. What impressed us most was the similarity in the course and appearance of the lesion in some cases to that of the old humanised vaccinations. One patient developed a vaccinal roseola, but there were no constitutional symptoms. In another case a little pus formed beneath the crust, but this dried up soon under antiseptic cleansing. Of the nine cases not treated with the picric acid solution one developed a severely inflamed arm with necrosis of the vaccinal site, and another had a mild pus infection of the vaccinal region.

We recognise that the number of cases in which we have employed this treatment is too small to permit of any sweeping deductions, cognisant as we are of differences in reaction from different sources of virus. We have received, however, a very strong impression that the use of picric acid solution is a valuable method of treating the vaccine site, and we trust that others will employ the method with a view to confirming or negativing our findings. We are convinced that a 4 per cent. alcoholic solution of the drug is preferable to a 1 per cent. aqueous solution. We have recently, with an idea of increasing the antiseptic properties of the solution, added 1 per cent. of iodine to it, but we have not had the opportunity of trying this out. This combination doubtless forms a trinitro-iodo-phenol which should possess strong antiseptic virtues.

We acknowledge herewith our indebtedness to Dr. A. W. Bowker, resident physician of the Philadelphia Hospital for Contagious Diseases, for valuable aid in noting and recording clinical observations.

Conclusions.

1. The use of a 4 per cent. alcoholic solution of picric acid upon the vaccinated area 48 hours after the insertion of the lymph does not interfere with the success of the vaccination.

2. We believe that this treatment lessens the degree of the local inflammatory reaction.

3. We believe that the patients are not so apt to exhibit constitutional disturbance.

4. The epithelial covering of the vaccine lesion is hardened, and there is a decreased liability of extraneous bacterial infection. This is doubtless due in part to the antiseptic properties of the solution applied.

5. We have determined by laboratory investigation that picric acid is about four times as efficient as phenol as a local antiseptic.

6. The common organisms on the skin are lessened in number by the application of solutions of picric acid.

LIVERPOOL ROYAL INFIRMARY.—The election committee at its meeting on Nov. 8th elected Dr. Frederick P. Wilson as honorary surgeon to the department for specific diseases.

A NOTE ON THE CEREBRO-SPINAL FLUID IN ACUTE POLIOMYELITIS.

BY J. GRAHAM FORBES, M.D., D.P.H. CANTAB., M.R.C.P. LOND.,
CLINICAL PATHOLOGIST AND BACTERIOLOGIST TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, W.C.

IN view of the existence of an erroneous idea that certain outbreaks of acute poliomyelitis are due to the action of the meningococcus, and on account of the difficulty which may occur in distinguishing acute cerebro-spinal meningitis from the meningeal type of poliomyelitis in certain cases, it may be of interest to state the results of the examination of 33 specimens of cerebro-spinal fluid withdrawn by lumbar puncture from 30 cases of poliomyelitis at the Hospital for Sick Children, Great Ormond-street. The interval between the onset of illness in these cases and the date of lumbar puncture varied from three days to six weeks.

In 24 specimens the fluid was quite clear and free from clot. In 8 traces of blood were present in varying amount, and clot formation occurred according to the degree of blood contamination. In one specimen, clear on withdrawal, a very fine web of clot formed on standing. The presence of albumin was recorded in 24 specimens, but its amount was not established by means of the albuminometer. The fluid, when boiled with a few drops of acetic acid, yielded the normal faint haze in 7 specimens, a definite cloud in 3, a fine precipitate in 5, and a heavy precipitate in 6. The amount of albumin, as a rule, varied with the duration of the illness, being usually, but not invariably, more marked, either as a fine or heavy precipitate, during the first two or three weeks of illness. In one case on the third or fourth day there was only a slight haze.

Every specimen tested for sugar showed the normal trace (0·05 per cent.).

Cytological examination of the centrifugalised deposit showed usually the presence of lymphocytes slightly in excess of the normal (1–5 per c.mm.), but in six specimens there was a definite increase above the normal, and in another six no cells or only the normal very few cells were present. Very few polymorphonuclears were ever found except where blood traces occurred, when there was no evidence of leucocytosis, except in two specimens.

The relation between an increase in amount of albumin and the presence of lymphocytes in excess appears to be fairly constant, and may reasonably be taken as evidence of tissue reaction in the presence of the hitherto unrecognised virus—a reaction shown in sections, by the perivascular lymphocytic infiltration in the substance of the cord, and also seen in the spinal meninges.

Bacteriological examinations were made in nearly every case, both of film preparations of the centrifugation deposit and by culture. In no instance were organisms found in the stained films of the cells. In 23 specimens cultures proved sterile; a variety of media were tried in several—e.g., serum, serum agar, blood agar, glucose agar, glycerine agar, ordinary agar, and broth, inoculations being made both from the fluid and the centrifugation deposit, but all with negative result. In seven specimens obvious contaminations were present.

Post-mortem examinations were made of two fatal cases. In one, in which the cerebro-spinal fluid six weeks previously had been normal and sterile, a streptococcus was obtained from the spinal fluid, but films and cultures from the cord itself proved negative. In the other the cerebro-spinal fluid, which had been normal and sterile during life, yielded no growth. There was, however, early mitral valvulitis and a small infarct was found in the kidney. The heart's blood proved sterile. In these two cases there was, therefore, evidence of a secondary terminal infection.

In 10 cases Widal's serum reaction was applied to B. typhosus and B. enteritidis (Gärtner), but in all it proved negative. This was done in view of an article on "The Etiology of Poliomyelitis," by A. E. Vipond, who obtained a positive reaction in 6 out of 16 cases occurring in Montreal and attributed the disease to the action of B. typhosus.[1] Blood films have also been examined for the Dixon-Fox-Rucher organisms in several cases without success.[2]

[1] Brit. Med. Jour., March 18th, 1911.
[2] Brit. Med. Jour., Epitome, p. 44, March 18th, 1911.

Leucocyte counts in three cases gave 10,750, 11,000, and 12,000 per c.mm. respectively. Differential counts: Polymorphs, 56 per cent.; lymphocytes, 41 per cent.; and large mononuclears, 3 per cent.

There can be little doubt of the value of lumbar puncture as an aid to diagnosis between cases of acute cerebro-spinal meningitis and acute poliomyelitis of the meningeal type. In the former the fluid shows very unmistakeable characters, marked turbidity, frequently coarse, purulent clot formation, a great excess of albumin, absence of dextrose, a copious cell deposit of polymorphonuclears, and easy recognition of the meningococcus both in the film preparations and cultures on serum—characters which I have verified in some 200 examinations.

Mill Hill, N.W.

RUPTURE OF THE POPLITEAL ARTERY AND VEIN; DIFFUSE HÆMATOMA.

BY DOUGLAS DREW, B.S. LOND., F.R.C.S. ENG.,
SENIOR SURGEON TO THE QUEEN'S HOSPITAL FOR CHILDREN, BETHNAL GREEN, E.; CONSULTING SURGEON TO THE HOUNSLOW HOSPITAL.

THE following is a brief account of the case, which I saw in consultation with Dr. L. de B. Christian of Hounslow on May 19th, 1911.

The patient, aged 28 years, was admitted to the Hounslow Hospital on April 25th, having been run over by a waggon, the wheel of which passed over the thigh just above the knee. There was a lacerated wound to the inner side of the patella, as well as considerable swelling around the knee, accompanied by much pain in the leg. The wound was cleansed and dressings were applied. On the sixteenth day after the injury the wound, which was granulating, was drawn together with a few sutures. At the end of three weeks the pain in the limb, which had persisted, became suddenly very severe and the swelling around the knee increased in size and œdema of the leg developed, but at no time had there been any coldness or cyanosis of the limb.

When I saw the patient for the first time on the twenty-fourth day after the injury he was very anæmic and was enduring very severe pain, which had to be relieved by morphia. The whole limb was greatly swollen, and below the knee there was marked œdema, which rendered it impossible to determine whether there was any pulsation in the tibial vessels. The region of the knee was enormously swollen, particularly posteriorly, where the swelling, which was hard, felt hot, the temperature being 101° F. No pulsation or thrill could be made out. It was quite clear that operative treatment was needed, as from the inflamed condition it was suggestive that the hæmatoma in the popliteal space had become infected, and the history was suggestive of rupture of the popliteal artery.

The operation was performed on May 21st. A tourniquet was applied to the groin and an incision about 10 inches in extent was made on the inner side of the knee and thigh. 1¾ lb. of blood clot were turned out of the popliteal space, and after the cavity had been sponged clear of it the popliteal vein was seen hanging across the space as a thick thrombosed cord. The upper end of the artery was at once discovered as it emerged from Hunter's canal, where it had evidently been crushed against the shaft of the femur; at this spot it was found that the popliteal vein was also partially torn through. Some little difficulty was experienced in finding the lower end of the artery, which had retracted about 4 inches to the lower part of the space. Both ends were ligatured with fine thread without division of the coats, the upper end being drawn down before the ligature was applied, so that it might retract into Hunter's canal. The wound was closed and free drainage was provided. At the end of a week, as had been anticipated, some suppuration in the cavity occurred, possibly from infection spreading from the adjacent wound at the inner side of the patella, but things went well until June 11th—i.e., 21 days after the operation, when the temperature rose and the patient complained of severe pain in the knee-joint, which became very hot and swollen, and was evidently infected. The joint was freely laid open by lateral incisions and drained. A few days later, as the temperature still remained high, a tube was inserted into the joint from the posterior aspect; it was then discovered that the infection of the joint had arisen through

sloughing of the posterior part of the capsule over the internal condyle of the femur. From this date the patient made steady progress towards recovery, and is now walking about with good but somewhat limited movement of the knee joint.

Apart from the comparative rarity of subcutaneous rupture of a main artery and vein, the case under consideration presents several points of interest. From the history it is clear that although a certain amount of bleeding into the tissues occurred at, or shortly after, the injury, yet the very severe hæmorrhage did not come on until three weeks later, as is evidenced by the sudden increase of the swelling and of the pain. It must, I think, be a very unusual occurrence for a clot to become displaced at so late a date while a patient is lying quietly in bed. Injury of this nature, particularly when the vessel affected is in the lower limb, is usually followed by threatened gangrene, and when it is the popliteal that is injured gangrene almost invariably follows. Schorong collected 45 cases of injuries of this nature to the main arteries. Of this number the popliteal was affected in 20, and in all of them gangrene supervened; in 11 the femoral was injured, and gangrene followed in 7; and in 2 the iliac, and both terminated in gangrene. The remaining 12 occurred in the arteries of the upper limb. It is difficult to offer any explanation why our patient was so fortunate as to escape, unless it was due to the absence of severe hæmorrhage into the tissues at the time of the accident. In this connexion it is interesting to note that there was not even coldness or cyanosis of the limb.

Doubtless the fact that the severe hæmorrhage did not occur until the end of three weeks, by which time the collateral circulation was well established, accounts for the fact that gangrene did not threaten after its occurrence. If it had been possible to diagnose the condition at the time of the accident one might have tried to restore the continuity of the artery by suture, but at the time of the operation it was clearly unnecessary, as the collateral circulation was well established. It is probable that the hæmorrhage came from the distal end of the artery, as the proximal end was found to contain a decolourised clot; the distal end was not examined as it lay in the depth of the wound, and was difficult to reach to apply the ligature.

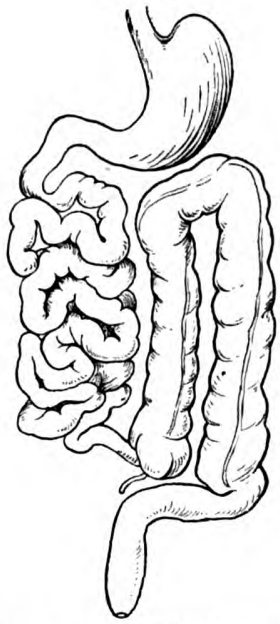
Wimpole-street, W.

TWO RARE ABNORMALITIES OBSERVED IN THE COURSE OF OPERATIONS.

BY JOHN D. MALCOLM, F.R.C.S. EDIN.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

CASE 1. *Operation for removal of the vermiform appendix; the colon all on one side.*—A woman, aged 43, who was admitted to the Samaritan Free Hospital, had suffered recently from an illness attributed to appendicitis and complained of persistent pain in the cæcal region. Chronic appendicitis was diagnosed, but when the abdomen was opened the cæcum was not in its usual place. On the supposition that it had not descended a second incision over the liver edge was made, and still neither cæcum nor colon was discovered. The gall-bladder and ducts were bound down to the stomach and liver by inflammatory adhesions, but no stone was felt and the bile could be squeezed out of the bladder, proving that the cystic duct was not occluded. Coils of small intestine, which were not adherent, filled the space where the colon should have been. The second portion of the duodenum was apparently normal. Its last part was provided with a mesentery and lay in the right hypochondriac region. A short omentum was seen attached to the stomach. By a further examination through the first-made incision the cæcum was found on the left side of the body, as low in the abdomen as usual, and so mobile that it could be brought well into view. The small intestine entered it from its right side and the appendix sprang from just below the ileo-cæcal valve. The appendix was bound to the cæcum by adhesions which did not appear to be recent. After removal of the appendix the sigmoid flexure was found to the left of the cæcum. Thus all the small intestine was to the right of all the colon. The conditions are diagrammatically represented in Fig. 1, but the height of the colon in the abdominal cavity was not determined. Sections of the appendix showed that its mucous and submucous coats were inflamed, but it is not proposed to discuss the question whether inflammation of the appendix lying on the left side of the body or inflammation of the bile-ducts could have been the cause of the symptoms attributed to appendicitis. The patient was in good health for about 18 months after the operation, and then came back complaining of vague abdominal pains, which were relieved by simple remedies. A proposal to have the abdomen photographed by X rays after a bismuth meal was declined and she did not return. It is obvious that in this patient the half-twist of the alimentary

FIG. 1.



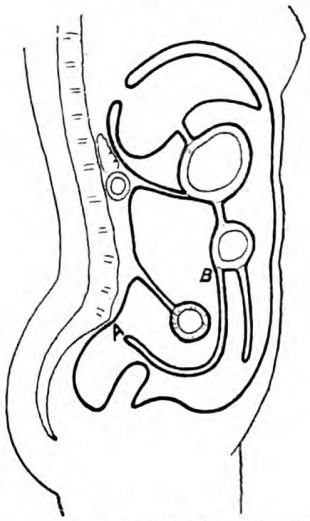
canal by which in the course of development the ascending colon passes over to the right side of the abdomen did not take place. I am not aware that this malformation has been described before.

CASE 2. *Gastro-jejunal anastomosis for secondary cancer involving the stomach; small intestine shut off from the general peritoneal cavity by a peritoneal membrane.*—In 1905 I removed the cancerous left mamma of a woman who was then 55 years of age, and she apparently made a complete recovery. About June, 1910, she began to suffer from pain in the back of the chest which extended towards the throat and was accompanied after a time by vomiting and a formation of two large swellings lying side by side in the upper two-thirds of the abdomen. These were resonant on percussion and varied in size with the food taken and the material ejected by vomiting. The patient was under the care of Mr. R. Capes of Denmark Hill, who kindly wrote to me about her, but she refused to see me again until February, 1911, when in consultation a diagnosis was made of secondary malignant growth involving and obstructing some portion or portions of the upper part of the alimentary canal. Surgical treatment was not thought desirable unless the conditions became intolerable, in which case it might be wise to attempt to short-circuit the intestine past the obstruction.

After a few days the patient was determined at all hazards to get any relief that was possible at once. Accordingly, on Feb. 15th Mr. Capes administered an anæsthetic, and I operated with the assistance of Dr. Andrew Elliot. Immediately before the patient was placed upon the table a large quantity of fluid was washed out of her stomach, so that this viscus when exposed was small and flaccid. It had a somewhat hour-glass shape, and the two swellings observed before the operation had been its distended right and left portions which had doubled down from the narrow part so as to make a valve-like division between them. Behind there was a diffuse new growth, apparently of retroperitoneal origin, which fixed the upper narrow part of the stomach to the posterior wall

of the lesser peritoneal sac, and which just showed itself on the surface of the greater cavity of the peritoneum above the lesser curvature of the stomach. The ascending, transverse, and descending colons appeared normal, but when the omentum was turned up there were no small intestines visible anywhere. In their place there was a soft elongated oval mass lying more or less parallel with the long axis of the body. When its lower end which dipped into the pelvis was brought through the incision this mass assumed a rounded shape. It consisted of a thin membrane of peritoneum covering the whole of the small intestines and bulged by them into all parts of the peritoneal sac which they usually occupy. The membrane (A, B, Fig. 2) was attached to the posterior

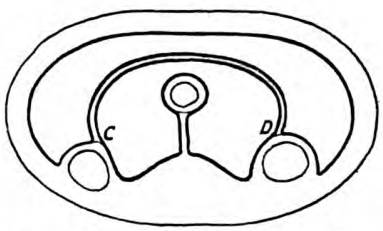
FIG. 2.



Abnormal membrane. A B, In longitudinal section; A marks the nearly central round opening in the membrane.

abdominal wall transversely above the sacral promontory, and close to this attachment there was a gap in it at A, Fig. 2, through which the small bowel passed just before it joined the colon. This opening had a diameter of about an inch and its edge was thickened. The abnormal membrane was incised and afterwards cut away and then the small intestines were exposed and appeared to be in all respects normal. The relations of the upper end of the jejunum were those usually found. The membrane which had been incised extended up to the transverse colon, to the back of which it was attached. Above the colon another or the same membrane was continued to the stomach across a space of quite 2 inches. From the stomach a membrane passed to the posterior abdominal wall in the usual position of the lower limiting boundary of the lesser sac of the peritoneum. The abnormal membrane was attached at the sides (C, D, Fig. 3) to the

FIG. 3.



Abnormal membrane. C D, In cross section.

posterior wall of the abdomen inside the attachments of the ascending and descending colons, which were rather more loosely fixed than usual. Figs. 2 and 3 show the relations of the parts diagrammatically in longitudinal and in cross sections as well as it was possible to define them in the living body.

A short circuit was made between the left portion of the stomach and the jejunum, and as the gastric wall was fixed posteriorly an anterior anastomosis was made, the small gut being brought through the thin membrane between the stomach and the colon. Shock was severe towards the end of the operation and the administration of the anæsthetic had to be discontinued, but Mr. Capes kept the patient going and she rallied. In spite of frequent vomiting for a few days progress was rapid, and after a fortnight the patient was able to be up and about. She became so well that she expressed the belief that she was cured. But on July 7th she again consulted Mr. Capes because she had become deeply jaundiced. He found a large irregular mass occupying the greater part of the abdominal cavity, the left iliac fossa being most free from growth. The tumour increased in size and the patient soon had to take to bed, becoming gradually weaker until she died, on Sept. 2nd. During the last fortnight of her life there was almost incessant diarrhœa, but apart from this there were no fresh symptoms. There was no pain and no vomiting. The results of the operation were therefore very gratifying, for the patient had quite four months of active life and she died a much easier death than that accompanied by obstructive vomiting.

Dr. J. W. Walker, of Peckham Rye, who first sent this patient to me, and under whose care she was for many years, has kindly told me that she had never suffered from any illness attributable to an inactivity of, or obstruction to, intestinal peristalsis, and, of course, the abnormality found, apart from the new growth, would not cause symptoms of any kind.

Professor Cleland in 1868[1] described a condition observed post mortem which very closely resembled that above described. When the abdomen was opened "the entire mass of the small intestine remained concealed from view, being lodged within a secondary sac bounded by omentum and mesocolon and communicating with the general sac by means of a small aperture at the upper margin of the ileo-cæcal junction only large enough to admit the passage of a finger." On making incisions from this natural inlet to the arch of the colon "the normal arrangement of peritoneum may be said to have been produced."

Another example of a somewhat similar abnormality was found in the post-mortem rooms of the University of Manchester by Dr. J. D. Hickley and Dr. J. Cameron.[2] In this case the enveloping membrane did not have any opening and it was quite separate from the colon. It contained in its upper anterior part the lower portion of the duodenum, which lay in front of the superior mesenteric artery. The relations of the abnormal membrane to the colon and duodenum in this case appear to have been quite different from those found in the other two.

Wimpole-street, W.

[1] Journal of Anatomy and Physiology, 1868, vol. ii., p. 201.
[2] Ibid., 1902, No. 41, p. 88.

ROYAL SOCIETY MEDAL.—A Royal Medal has been awarded by the president and council of the Royal Society, with the approval of the King, to Dr. William M. Bayliss, F.R.S., &c., for his researches in physiology.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about $180, will be made on July 14th, 1912, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and if written in a language other than English should be accompanied by an English translation, and must be received by the secretary of the College on or before May 1st, 1912. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1911 has been awarded to Dr. Francis D. Patterson, of Philadelphia, Pa., for his Essay entitled "The Parathyroid Glandules."

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Treatment of Cholera.

A MEETING of this section was held on Nov. 10th, with Sir WILLIAM OSLER in the chair.

Major LEONARD ROGERS, I.M.S., read a paper entitled "Further Experience of the Treatment of Cholera by Injections of Hypertonic Salines and Permanganates Internally among Europeans at Palermo." He said that in Calcutta he had found cholera to be more severe and more difficult to treat successfully in Europeans than in natives of India, so he had spent most of last August studying the question in the lazaretto at Palermo, with the kind permission of the Italian sanitary authorities and of the director, Professor Romano. Major Rogers claimed that his researches on the blood changes in cholera had shown that the death-rate was in proportion to the loss of fluid from the blood, which amounted in the collapse stage to from one-half to two-thirds of the entire fluid of the serum, while the salts might be lost to a still further degree. About four pints of hypertonic solution must be injected intravenously to replace these losses. Normal saline solutions had been found to be of little use, as they rapidly escaped again through the bowel with return of the collapse. By using a hypertonic solution containing at least half as much chlorides again as a normal solution (120 gr. of sodium chloride to one pint), the fluid was retained in the body, and the diarrhœa was usually checked. By that simple means the death-rate in Calcutta was reduced from 60 to 33 per cent. Still the worst cases died from toxæmia, so Major Rogers experimented further and found that cholera toxins were readily destroyed by oxidising agents. He therefore gave large quantities of permanganates internally, with the result of still further reducing the death-rate to only 23 per cent. in native patients. Still more striking was the fact that whereas there was evidence to show that not more than 10 per cent. of seriously collapsed cases used to recover, no less than 68 per cent. of such cases had been saved by the new methods of treatment. With Europeans at Calcutta the recovery-rate for 13 years under the old treatment was only 18·4 per cent., while with the new methods it rose to between 50 and 60 per cent., a great advance, yet one still leaving room for further improvement. During the reaction stage which followed recovery from collapse, the great dangers were high temperature and deficient renal secretion leading to uræmia. The latter Major Rogers showed to be due to deficient blood pressure and continued concentration of the blood, which could nearly always be prevented, if the kidneys were previously healthy, by removing those conditions by additional isotonic saline injections and blood-pressure raising drugs. The proportion of uræmic deaths after cholera in Calcutta had been reduced to one-half by these measures. During the three weeks Major Rogers lived continuously at the cholera hospital at Palermo 84 intravenous injections were given in 67 patients, at nearly all of which he was present. During the first ten days, when the difficulties were exceptionally great and time only permitted the more severely collapsed patients to be transfused, 51·8 per cent. of 27 cases were saved from almost certain death. This series included four very old patients who were hopeless from the first, an unusually large proportion. During the last 12 days, when the medical staff had learnt his methods and were able to give him most valuable assistance, the recovery-rate among 40 very serious cases treated by intravenous injections was just 60 per cent., which was distinctly better than had previously been obtained in collapse cases among Europeans in Calcutta, and represented a six-fold reduction in the mortality among that grave class of case. Further, with more time and help and the English system of nursing several more cases might, he was sure, have been saved. The death-rate among the total admissions during his stay, he was informed by the director, was under 20 per cent., but as this included some doubtful suspected cases Major Rogers did not lay so much stress on it as on the rate in the very serious intravenous cases. Gratifying as these results were, he was convinced by his probably unique experience at Palermo that they would be improved on in the future. Hitherto, he had gone on the principle of only giving intravenous injections when the blood pressure had fallen as low as 70 mm. or less in natives of India, or 80 mm. or under in Europeans, unless the blood was found to be extremely concentrated, as shown by a very high specific gravity. Experience showed that a fair proportion of cases not requiring an intravenous injection on admission subsequently collapsed, and might be ultimately lost in spite of intravenous saline solutions being then administered. He had thus often had to regret abstaining from giving an intravenous saline solution on admission in a not very serious condition. On the other hand, he had never regretted having given an injection, so it was evident he had not yet used them as often as was advisable, and earlier and more frequent intravenous injections were clearly indicated. Fortunately there was in the specific gravity of the blood a safe guide, for if it was raised from the normal of 1056 to over 1062 he had always found it safe to give three or four pints of hypertonic saline solution intravenously in adults. In future in cholera he intended to use these injections in all patients in the acute diarrhœal stage with a specific gravity of the blood over 1062 and a blood pressure below 100 mm. in an adult in order to anticipate and prevent the onset of collapse, and he was sure that by this means many of the deaths from late complications, such as uræmia, asthenia, and lung complications, would be averted. In patients coming fairly early under treatment, and who were neither old (over 50) nor very young, and whose kidneys were healthy, he was convinced that the mortality might be reduced to an extremely low figure, probably to under 20 per cent. In very young children subcutaneous injections of hypertonic salines were frequently successful in preventing or even removing collapse, while a number of children between the ages of 6 and 11 years in a collapsed condition were saved by the same solution given intravenously. His hypertonic solution would therefore appear to be worthy of trial in infantile diarrhœa, especially if the quantities given were regulated by estimations of the specific gravity of the blood by means of glycerine and water solutions as used by him in cholera.

Dr. F. M. SANDWITH said that for Major Rogers to have brought down the mortality of cholera from its usual 60 per cent. to 23 per cent. or even 20 per cent. in India was a great achievement. Dr. Sandwith was glad to hear of a ready means of getting the specific gravity of the blood, because it must be remembered that the majority of cases of cholera had to be treated in cholera camps and villages without any of the resources of the laboratory.

Surgeon-Major WILLIAM DUNCAN, I.M.S., said that when he was in India his mortality from cholera was 60 per cent. of the cases, so it seemed to him almost incredible that it could have been brought so low as had been stated, but in many epidemics there was a low percentage of recovery following on a higher percentage. Moreover, Dr. Rogers's experience rendered his figures trustworthy.

After Mr. E. C. HORT had spoken Major ROGERS replied.

LARYNGOLOGICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on Nov. 3rd, Dr. STCLAIR THOMSON, the President, being in the chair.

The PRESIDENT showed a case of Epithelioma of the Larynx in a man, aged 23, which had been exhibited at a previous meeting of the section and in which the appearances suggested a simple rather than a malignant growth. The subsequent course of the case, together with the microscopic examination, however, had rendered the diagnosis certain.

Mr. J. EVERIDGE exhibited a Pedunculated Intrinsic Growth of Larynx in a man, aged 41, attached to the free margin of the posterior fourth of the right vocal cord, and freely moveable during respiration.—Various opinions were expressed by the members as to the nature of the growth, and it was agreed that microscopic examination alone could be relied upon for certainty.

Mr. HERBERT TILLEY showed two cases illustrating Unusual Complications of Chronic Empyema of the Nasal Accessory Sinuses. In one, a fluctuating swelling at the inner margin of the orbit had induced displacement of the

eyeball downwards and outwards; operation revealed destruction of the roof of the orbit and of the posterior wall of the frontal sinus. The second case presented proptosis of the right eye with œdema of the upper eyelid and cheek. A fistula, discharging pus, led to carious bone in the inner and posterior region of the orbit. The parts having been opened up from the orbit the ethmoidal wall was found to be diseased, and a sequestrum was removed from the region of the posterior cells. Operation on the antrum showed this cavity to be full of thick caseous pus.—Discussing the second case several members remarked that the presence of thick pus in the antrum was probably induced by the sequestrum, since it had been remarked that the condition known as rhinitis caseosa was often found in conjunction with a foreign body in the nose.

Mr. TILLEY also showed a patient with Nasal Polypi, in whom there was an erosion or deficiency of both nasal bones.

Mr. G. WILKINSON exhibited a case of Melanotic Sarcoma of the Nose. The patient was a man, aged 51, and the sarcoma consisted of a rounded projection growing from the vestibule and lateral nasal wall, and a polypus of sooty-black colour attached to the middle turbinal. The soft tissues of the side of the nose, cheek, and upper lip were infiltrated by the growth, and the septum showed melanotic infection at the spot where the growth came into contact with it. This extensive involvement had necessitated complete removal of the left upper jaw, together with the soft parts covering the left side of the nose externally, as well as the skin of the ala and a portion of the upper lip and cheek. The gap thus left was subsequently closed by a plastic operation. The operation, performed a year ago, had not so far been followed by any recurrence.—Members drew attention to the extreme rarity of melanotic sarcoma of the nose.

Mr. WILKINSON also showed a Fibro-angioma Growing from the Inferior Turbinal, of the same type as that which was commonly termed "bleeding polypus of the septum."—Several members agreed that this and other cases, however, should lead to the adoption of the expression "bleeding polypus of the nose" as a more accurate title of this variety of neoplasm.

Dr. H. LAMBERT LACK showed a case of Papilloma of the Palate in an old man, with microscopical section of the tumour, the clinical aspect of which had aroused suspicion of malignancy, a suspicion which was, however, removed by the microscopical examination.

Dr. W. H. KELSON exhibited a case of Ulceration at the Base of the Tongue. He was disposed to regard it as tuberculous, although several members raised the question of malignancy.

Dr. KELSON also showed a case in which the appearance of the tonsils and fauces bore some resemblance to the appearances seen in secondary syphilis affecting those parts.—Several members had seen similar cases, and the suggestion was made that the habit of drinking strong alcoholic liquors might be responsible for the inflammatory exudation present.

Dr. DAN MCKENZIE and Mr. HENNING JAMES showed a case undergoing Rapid Expansion of the Jaw by means of dental plates and screws, for nasal obstruction due to narrowed nasal passages, a method which has been used in America with considerable success according to the reports.

Dr. JAMES DONELAN exhibited a case of Laryngeal Tuberculosis (shown also in May, 1909, and June, 1910) in which repeated applications of the galvano-cautery had been of considerable service.

Dr. DONELAN also showed a woman suffering from Multiple Sinusitis in whom the frontal sinus had been opened three times. On the third occasion the sinus was found to have become filled with bone.

Dr. ANDREW WYLIE showed a case of Paralysis of the Right Vocal Cord, with an affection of the third, sixth, and tenth motor cranial nerves, with a negative Wassermann reaction. The causation of the nerve lesions was problematical.

Mr. GEORGE W. BADGEROW showed a girl with a Lingual Thyroid and a patient with Cyst of the Ary-epiglottic Fold. In neither case was operation advised.

Mr. BADGEROW also exhibited a Swelling in the Neck of a Child, aged 4½ years, which seemed to members to be a cystic hygroma.

Dr. W. JOBSON HORNE showed a case of Ulceration of One Ala and Vestibule of the Nose, which reminded the PRESIDENT of a class of pernicious ulcers in this situation described by McBride, and not amenable to treatment.

Dr. G. WILLIAM HILL and Mr. C. HOPE showed two cases of Cancer of the Œsophagus, in which arrest of food took place in the deep pharynx, although the site of the growth lay well below the bifurcation of the trachea.—A discussion upon the question of œsophageal spasm followed the exhibition of these cases.

Dr. HILL also showed a child in whom Laryngo-tracheostomy had been performed.

Dr. J. DUNDAS GRANT exhibited a case of Early Epithelioma of the Ventricular Band in a man aged 30, in which both the clinical appearances and the microscopic section gave rise to some differences of opinion.

Mr. W. D. HARMER showed a patient, aged 46, with Superficial Ulceration of the Fauces, Palate, Tonsils, Pharynx, Cheeks and Lips, suggestive of pemphigus for streptococcal infection. The skin was not affected, but one eye had been destroyed.

OPHTHALMOLOGICAL SOCIETY.

Dust-like Opacities.—Ocular Conditions found in Mongolian Idiots.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 9th, Mr. J. B. LAWFORD, the President, being in the chair.

The PRESIDENT announced that some time ago the Council determined to propose three names of gentlemen for honorary membership: the late Dr. Hughlings Jackson, Sir Jonathan Hutchinson, and Dr. Landolt, the Bowman lecturer of last summer. The result of the ballot was the unanimous election of Sir Jonathan Hutchinson and Dr. Landolt.

Professor STRAUB read a communication on the Pathology of Dust-like Opacities in the Vitreous Body and of Descemet's Dots, and it was supplemented by an epidiascope demonstration. He said that among the diseases of the eye there should be recognised an inflammation of the vitreous body which he proposed to name "hyalitis." He injected into the vitreous body of the rabbit some pathogenic microbes. Those microbes made the culture there and only there, and attracted to the vitreous body serum and leucocytes. The serum and leucocytes were produced by the vessels of the ciliary body, but that was not a reason to talk of cyclitis in cases of inflammation of the vitreous body. He likewise injected into the ciliary body pathogenic microbes, and to those went serum and leucocytes, and there was produced a real cyclitis, quite different from the hyalitis which he had in the first experiment. In the laboratory hyalitis could be distinguished from cyclitis, and the same distinction should be made in practical work. But that had not yet been done. The two diseases were mixed up in the text-books. The books said the ciliary body poured out its exudate into the vitreous body, but that was a mistake, as leucocytes did not allow themselves to be poured out. Metchnikoff said that leucocytes only went where they were attracted by chemotactic substances. When there were microbes in the vitreous body those substances went towards the vitreous body; when microbes were in the ciliary body the leucocytes went to the ciliary body. He had, in order to test the matter, tried to produce inflammation of the ciliary body by infecting the ciliary body with tubercle bacilli, causing in that way granuloma. He then made sections to see whether the vitreous was clear. He thought it was clear, with the exception of a few leucocytes here and there. But when making sections through the eye he found that the optic nerve was somewhat swollen, and that in its cup there were many leucocytes, and those were projected on to the immediately adjacent retina. So he concluded that tubercular granuloma in the ciliary body had the power to cause a very slight inflammation of the optic nerve on the other side of the eye. The lymph stream in the eye went from the ciliary body to the optic nerve, and took with it some toxins which were produced by the granuloma. Those experiments were made 20 years ago. He did not feel satisfied with his method of infecting the ciliary body, therefore eight years ago he recommenced, with a colleague, a new series of experiments, in which a thread charged with tubercle bacilli was passed through the ciliary body, through the sclerotic, and through the superficial layer of the ciliary body, and brought out into the sclerotic again. The thread was cut at the points of entrance and exit, so that there remained in the ciliary body a piece of thread 3 mm. long, and after 10 to 14 days a granuloma commenced. Some

weeks later the eye was extirpated and sections made, and he found the same things as in his experiments 20 years ago. He showed colour photographs exhibiting the points he had mentioned. The dots were caused by groups or heaps of leucocytes. Among 14 cases of dust-like opacities only one was syphilitic, nine were tubercular, and the remainder he did not know the nature of. It was quite clear that Descemet's dots were groups of leucocytes. The vitreous body, he felt sure, obtained no leucocytes from the cornea; in inflammation of the vitreous body the leucocytes came from the vitreous body.—The PRESIDENT thanked Professor Straub for his able exposition, based upon prolonged and numerous experiments.—Mr. E. TREACHER COLLINS asked how the leucocytes which died got to the back of the cornea in the first place.—Mr. J. HERBERT PARSONS said he understood Professor Straub's contention to be that the leucocytes were carried forward in the lymph stream, and his explanation of the formation of the dots was a very ingenious one. But the speaker criticised the use of the terms "hyalitis" and "descemetitis," as he regarded their use as backward steps in pathology. The tissue under discussion was non-vascular and apparently passive, whereas inflammation was pre-eminently an active process. He had hoped Professor Straub would have supported the view which he, Mr. Parsons, had hypothesized, that where there were dust-opacities in the vitreous associated perhaps with choroidal change there was really a low grade of cyclitis going on to account for the presence of those opacities, and that they were not due to any inflammation present in the vitreous *per se*. Supporting that view was the fact that in cases of choroidal inflammation there was no transference of leucocytes or organisms directly from the choroid into the vitreous until the membrane was burst through.—Mr. W. H. JESSOP said Professor Straub did not appear to have made quite clear what he understood to be the difference between hyalitis and cyclitis. He had been much interested in the demonstration of leucocytes in the cup of the optic nerve and the slight degree of papillitis. That was particularly interesting because one often felt there must be some papillitis because of the degree of swelling.—Professor STRAUB replied, affirming his belief in his ultimate power to convince ophthalmic surgeons of the truth of his thesis when he came to publish the full results of his work. He relied for the acceptance of his views upon a combination of the histological and clinical material which he had collected.

Mr. A. W. ORMOND read a paper on Ocular Conditions found in Mongolian Idiots. He had examined a number of these cases at Earlswood and Darenth Asylums, at the Evelina Hospital, and elsewhere, in all 43 cases. He described the facial and physical traits. They had a certain liability to particular diseases. Over 50 per cent. had a defect in their lenses, and almost all had some ocular defect. Sometimes Mongolians could be recognised as early as the second year. When seen later they were short of stature, due mainly to the shortness of the limbs. The head was round and the occipital protuberance of the skull ill-developed. The hands were small and the thumbs squat, the little finger being incurved. The foot was flat, and the subjects often sat tailor-fashion. They had a difficulty in pronouncing certain consonants. They were imitative, fond of music, and affectionate. Most of them died from tuberculosis, and they did not often attain adult life. There was almost constantly some ocular trouble present—blepharitis, ectropion, squint, nystagmus, or lens opacity. Blepharitis and conjunctivitis might be primarily due to dirty habits, and might be kept up by uncorrected errors of refraction. A more certain cause of the inflammatory condition of the lids was a dry, glazed condition of the skin of the lower lids, which by its contraction caused a slight degree of ectropion. In more than 50 per cent. of his cases some form of lens opacity was present, and with such a high proportion it might be regarded as an aid to diagnosis. The cataracts were of the incomplete form, and most of them of the "dot" variety in the position common for lamellar cataract. These dots when slight were often translucent, and so could not be seen by transmitted light. The opacities did not reach to the periphery of the lens in any direction, and consisted of numerous small discrete dots. The posterior pole of the cataract was often marked by a star-shaped opacity. Though the teeth of these people were defective they did not show the honey-combed condition so frequent in cases of lamellar cataract. Mr. Ormond could not record accurately the visual acuity, as the children were not sufficiently controllable to be trusted with glasses. The youngest of the patients showing cataract was aged 6½ years and the oldest 43, the average being 14¾ years. Mongolian imbeciles were in many cases the children of old parents or the last child in a large family. Of his 42 cases, 32 were males and 10 females. 23 had the interpalpebral fissure directed upwards and outwards, five had nystagmus, nine had squint, 18 had either blepharitis or ectropion, or both, 11 had epicanthus, and 25 had some lens opacity.

The following cases and specimens were shown:—

Mr. R. FOSTER MOORE showed a case of Bilateral Angioma of the Retina.

Dr. A. HUGH THOMPSON showed a second Orbital Endothelioma occurring 11 years after removal of the first. He said he regarded it rather as a fresh growth than as a recurrence of the former one.

Mr. J. COLE MITCHELL showed three cases of Rodent Ulcer which had been successfully treated by means of carbon dioxide snow

Mr. N. BISHOP HARMAN showed a case with Dislocation of the Lens in the Posterior Chamber due to an accident 18 months before. The vision had remained excellent.

Mr. C. WRAY showed a new model of a Placido's Disc and Retinoscopic Lenses.

HARVEIAN SOCIETY OF LONDON.

Discussion on the Diagnosis and Treatment of Tuberculosis of the Urinary Tract.

A MEETING of this society was held on Oct. 26th, Mr. J. ERNEST LANE, the President, being in the chair.

Dr. SAMUEL WEST opened the discussion on the medical aspect, as already reported in THE LANCET of Nov. 11th, p. 1318.

Mr. HURRY FENWICK, in opening from the surgical side, said that pure urinary tuberculosis was of hæmic origin, descending and progressive, and rarely spontaneously cured. It started in a single kidney, the bladder was only affected secondarily, therefore the earlier the disease was attacked the greater was the chance of cure, and the bladder should be left alone to avoid implicating the sound kidney. He emphasised the importance of expert bacteriology, tubercle bacilli being rarely missed, and expert cystoscopy by which early B. coli cystitis and tuberculous cystitis could be distinguished. The ureteric orifice was the clue. Frequently the diseased kidney could be detected thereby. Radiography was rarely of value. He thought that the practitioner could discover 80 per cent. of the cases at the onset of symptoms of cystitis by reference to a bacteriologist. The cystoscopist could detect 45 per cent. of the cases, and frequently localised the kidney. He objected to the Luys separator and perferred the ureteric catheter, though even this involved risk, and the cystoscope was generally sufficient by itself. The death-rate from nephrectomy was from 2 to 4 per cent., and the relief was very great. He had used tuberculin for 18 years with great confidence, and good results, but he did not regard it as a cure. He thought that in many cases nephrectomy should be preceded by tuberculin. He advocated clean removal of the kidney without exploring the cortex, nicking the pelvis, or allowing any leakage from the cut ureter. He had contended for 20 years that washing out the bladder was dangerous from unavoidable risk of added infection. He advocated nephrectomy: (1) when the ureter was much thickened; (2) in advanced cases of unilateral tuberculosis; and (3) together with nephrostomy or ureterostomy on the opposite side in incurable cystitis. The bladder should only be operated upon in primary single tuberculous ulcer.

Captain S. R. DOUGLAS, I.M.S., said that his province of work involved the diagnosis of urinary tuberculosis by bacteriological methods and the treatment of the disease by a specific inoculation. Diagnosis was made by finding tubercle bacilli in the urinary deposit or by the inoculation of guinea-pigs with urinary sediment and subsequent examination. He gave technical details. He objected to inoculation of old tuberculin for diagnosis as being likely to cause a spread of the disease, to inhibit the excreting mechanism of the

kidney, or block the ureter by swelling. Von Pirquet's and Calmette's reactions only indicated the presence of tubercle and not necessarily urinary tubercle, and the same was true of observations on the opsonic index unless some interference with the urinary system, such as cystoscopic examination, induced fluctuation of the index. Treatment by tuberculin was markedly successful in urinary cases. In advanced cases improvement though marked was slow and the treatment must be long continued. Infection with other organisms added to the difficulty and required special vaccines. He mentioned the principles governing the administration of tuberculin and drew attention to the negative phase following inoculation and its importance in renal conditions. He advocated very small doses. The largest dose which he could find in records of 30 cases at St. Mary's Hospital was 1/4000th of a milligramme of bacillary emulsion and the smallest 1/400,000th of a milligramme. He advocated the use of the opsonic index for the regulation of the dose, but when that was impossible the following were clinical manifestations of a negative phase: (1) increased frequency of micturition; (2) increase of pain; (3) lassitude within a few hours of inoculation; and (4) rise of temperature. No dose should be increased which produced a satisfactory positive phase. Treatment should be continued for weeks or months after symptoms had disappeared.

Mr. W. H. CLAYTON-GREENE said that he felt assured of the rarity of primary tuberculous disease of the bladder. Tuberculous disease of the kidney was a primary lesion confined to one kidney only and amenable to complete extirpation. The tuberculous bladder should be left alone. He was convinced of the value of the use of tuberculin, the clinical symptoms being a sufficient guide to the size of the dose. He advocated large doses and had seen great improvement with 1/500th of a milligramme T.R.

Mr. J. W. THOMSON WALKER said that he should confine himself to the practical questions raised by Mr. Fenwick. The early detection of the disease meant diagnosis of tuberculosis of the kidney and of which kidney, that being the starting-point of the disease. The clinical symptoms were slight and misleading, even in advanced cases, and might be absent until fatal anuria set in. The symptoms when present were those of cystitis. There might be an enlarged and tender kidney, a source of difficulty in diagnosis, since it might be hypertrophied and active, the other being destroyed by tuberculosis. He quoted a case in which cystoscopy showed an active, inflamed ureter on the tender side and a blocked ureter on the opposite. The tender side might be affected, but to a less degree than the opposite. Examination of the urine usually enabled the diagnosis to be made, but not always, since the ureter might be closed. He quoted a case. Tubercle bacilli in the urine were not a certain sign of urinary tuberculosis in the absence of other signs, since the bacilli could be demonstrated in the urine in many cases of phthisis. A surgeon required to know if the kidney were affected and the condition of the second kidney. The cystoscope and the ureteric catheter were required. With regard to the use of this catheter the crux of the matter was: Was it possible to make a diagnosis of early renal tuberculosis by examining the orifice of the ureter? In early cases he thought this was not so, and that the ureteric catheter was, therefore, necessary in these cases. With regard to removal of the kidney, he urged immediate nephrectomy in unilateral tuberculosis, since the chances of spontaneous recovery were negligible. Among those who advocated waiting were those who recommended tuberculin. He had used this for eight years and had observed great improvement in symptoms in many cases, but very rarely a cure. The danger of waiting was that unilateral tuberculosis might become bilateral. When cases were first met with 14 to 20 per cent. were bilateral, in late stages 55 per cent. were bilateral. The mortality in operations was 2·8 per cent., and in 230 cases there had been no death from tuberculosis within two years of nephrectomy. There was no means of telling when infection of the second kidney was about to take place, he therefore urged operative treatment in unilateral tuberculosis, and he advocated tuberculin in early unilateral tuberculosis when nephrectomy was refused, in bilateral tuberculosis, in vesical tuberculosis, after nephrectomy, and in the combination of renal and extra-urinary tuberculosis.

Dr. WEST, Mr. FENWICK, and Captain DOUGLAS replied.

MANCHESTER MEDICAL SOCIETY.

Auricular Fibrillation.—Headache in Children.—Salvarsan.

A MEETING of this society was held on Nov. 1st, Dr. A. M. EDGE being in the chair.

Dr. C. E. LEA communicated a paper on Auricular Fibrillation, in which he said: The degree of practical importance of the arrhythmia associated with the fibrillary tremor of the auricle is proportionate to the amount of strain thrown upon the cardiac musculature by its incidence. The arrhythmia of auricular fibrillation is characterised by the continuous irregularity of the ventricular rhythm, the absence of auricular contraction, and the dilatation which, if the arrhythmia is long continued, occurs. In animals auricular fibrillation can be produced by (1) direct faradic stimulation of the auricle, (2) toxic doses of digitalis, and (3) in some cases by stimulation of the vagus. In man fibrillation has not been observed in the absence of some pre-existing cardiac lesion. Most lesions may lead to fibrillation, not only those associated with gross muscular change, but also in cases where the rhythm is markedly disturbed. Cases of the latter are exemplified by the fibrillation which, in some cases, follows directly upon paroxysmal tachycardia. A case is reported by the writer in which it succeeded heart-block. The exciting causes of fibrillation are variable. It is sudden in its onset and offset. The ventricular frequency induced by fibrillation is variable. It may be associated with very rapid frequency; moderate, as in many cases of cardio-sclerosis; or with bradycardia. The pathology of the latter class is obscure. The degree of cardiac dilatation is greatest where there is a rapid frequency. No method of treatment has, so far, been found to check the fibrillation. Digitalis acts beneficially because it probably induces lessened *a.-v.* conductivity, and so diminishes the number of supra-ventricular or auricular impulses. Auricular fibrillation may be associated with complete heart-block. The diagnosis of auricular fibrillation was discussed, and its significance emphasised.

Dr. HUGH T. ASHBY read a paper on Headache in Children. He said: There is probably no symptom of ill-health more commonly met with than headache, and it is on account of its being so common and at the same time so obscure in its origin in some cases that the subject is of real importance. A complaint of headache in a child should always receive attention, especially if it is at all repeatedly complained of. Headache is not easily recognisable until about the age of 4 to 5 years, but it is quite certain that infants and young children do suffer from headache by the way they will bang and beat their heads—e.g., in ear disease. The locality of a headache is not of much importance except in a few instances like the ocular headaches, which are nearly always frontal. Headache is an almost constant, and certainly the most frequent, symptom of cerebral tumour and meningitis, and in 16 cases of cerebral tumour in children 15 had severe headache. The one case without headache was a tumour of the pons, where there was also no optic neuritis. The neurotic headache is a very distinct type; it occurs frequently in girls over 10 years of age, and it is very difficult to treat. Decayed teeth predispose to ill-health, and in this way make a headache more liable to be noticed, but they do not in themselves often cause a headache in children. Anæmia is nearly always accompanied by headache and is due to a lowering of the blood pressure, together with the poor quality of the blood.

Dr. G. H. LANCASHIRE read a paper on Salvarsan, giving the result of intra-muscular injections in a series of 28 selected cases, including primary, secondary, and tertiary stages of syphilis. The results had been good except in the last case tried, a severe tertiary case which showed no improvement. He had observed no untoward symptoms, either general or local. He regarded salvarsan as a valuable aid, used in conjunction with mercury, in certain cases of syphilis.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Nov. 10th, Dr. A. Bostock Hill, the President, being in the chair.—In introducing a discussion on the National Insurance Bill Dr. H. Meredith Richards confined his remarks entirely to the public health aspects of the measure. The purpose of the

Bill was to provide material aid in time of sickness and to prevent and cure disease. The latter object, he considered, was in the main the more important. In practice it was probable that the immediate effect of the insurance scheme on preventive medicine would be proportional to the initial bias of the Insurance Committees and to the extent to which their work was harmoniously coördinated with existing public health organisations. In most districts it would be an advantage if the chairman of the public health committee and hospital committee of the county or borough councils and the chairman of the education committee were nominated to represent the county or borough councils. Referring to the provision in the Bill which requires reports and returns as to sickness, &c., to be made by the Insurance Committee to the Insurance Commissioners, he expressed the opinion that this most important duty would require much expert knowledge and administrative skill if the central and local authorities were to have the information in a form which they could assimilate and use for practical ends. He suggested that the sickness returns should be furnished to the medical officer of health at weekly or monthly intervals, and that it should be made obligatory on him to report upon the returns to the Commissioners, the Local Government Board, and to the local sanitary authority concerned. The proposed extension of the sanatorium benefits to the dependents of insured persons would give an immense impetus to the provision of sanatoriums and to other specialised methods both for detecting and for treating phthisis. The relation of the pre-tuberculous school child to the phthisical adult; the importance of securing early treatment for adenoids and enlarged tonsils which were often the portal selected by the tubercle bacillus; the relation of dental defects to malnutrition and of malnutrition to phthisis—these would become very practical problems when the comprehensive treatment of phthisis was actually undertaken.—Dr. E. W. Hope was convinced that the Bill would give facilities for the advancement of preventive medicine in the future. He agreed that it would be a distinct advantage to have on the Local Insurance Committees the chairmen of the health and education committees. He considered that a large amount of the information which the Insurance Committees were empowered to obtain was already in the hands of medical officers of health.—Mr. F. E. Fremantle spoke in approving terms of the alteration of the name of the Local Health Committee to that of Insurance Committee. He doubted very much whether it would be practicable to put in force the penalising clauses with respect to excessive sickness.—Dr. E. H. Snell pointed out that there was no provision in the Bill for putting official information at the disposal of the Insurance Committee. He feared there would be too many overlapping authorities.—Dr. R. Dudfield spoke in general approval of the Bill, but regretted there was no reference in it to the metropolis as such. He thought that the penalising clause (46) should have been postponed for five years.—Dr. W. Butler deplored the fact that under the Bill there would be a supersession of existing public health authorities. He considered it would be utterly impossible to bring home to sanitary authorities the fact of maladministration.—Surgeon-General G. J. H. Evatt considered that medical men would have to be much better trained than at present if they had to give reports on sickness. Those in general practice would be compelled to go through a post-graduate training.—Mr. Herbert Jones anticipated that Clause 46 would have a good effect in stimulating rural authorities into more activity.—The President agreed that rural districts were most largely affected by the clause, and he pointed out that before any penalty could be enforced an inquiry would have to be made by a competent person, who, in his opinion, ought to be a medical man.—Mr. J. G. Gibbon, Dr. A. Ashkenny, Dr. J. Howard-Jones, Mr. C. Randle Harper, Dr. W. A. Bond, and Mr. Montague Harris also took part in the discussion.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 3rd, Dr. John Brownlee, Vice-President, being in the chair.—Dr. David Newman reported a small series of cured cases of Primary Vesical Tuberculosis, and discussed the questions of early diagnosis, prevention, and treatment of primary and secondary tuberculosis of the bladder, illustrating the cystoscopic appearances by the opaque projector. He said that for practical purposes the disease might be divided into five stages: (1) The stage when tubercle bacilli were present in the urine prior to obvious infection of the bladder; (2) stage of isolated submucous nodules; (3) stage of tuberculous infiltration prior to ulceration and erosion; (4) stage of superficial ulceration; and (5) stage of widespread infiltration of the surrounding structures and deep ulceration of the bladder. Two cases of early vesical tuberculosis, one operated on lately, another treated five years ago by curetting the bladder, were described. The latter has been in perfect health and the urine free from tubercle bacilli since the operation. Other two cases, one man operated on in February, 1911, the other operated on in February, 1904, were cited as complete cures, all the symptoms having disappeared and tubercle bacilli being absent from the urine. The treatment employed was suprapubic drainage and curetting the tuberculous area, together with the employment of tuberculin R. and general constitutional treatment. The relationship of tuberculous cystitis to renal, prostatic, and testicular tuberculosis was discussed, and statistics of 25 cases treated during the last seven years were given.—Dr. John Guy gave an account of his experience in the treatment of pulmonary tuberculosis by means of tuberculin in the sanatorium at Bridge-of-Weir. He had treated recently a series of 75 cases, and stated the results of treatment in 41 of these who had been under treatment for periods varying from four to 11 months, showing the effects of the remedy on the sputum, the tubercle bacilli and the lung condition. The tuberculin was given by subcutaneous injection in doses beginning with 0·001 milligramme and gradually increasing to the equivalent of 10 milligrammes of tubercle bacilli. In many cases doses much smaller than 10 milligrammes produced a febrile reaction and could not be exceeded. The estimation of the opsonic index was found to be of no practical use in tuberculin treatment. The conclusion reached was that tuberculin could be administered with comparative safety if the dosage were carefully regulated and the temperature watched; that from a clinical standpoint one variety of tuberculin appeared as good as another, but that the bacillary emulsion sometimes caused unexpected reactions. A comparison between the results obtained by the tuberculin treatment of these 41 patient and those obtained in the treatment without tuberculin of an equal number of patients in similar stages of the disease seemed to show a balance in favour of tuberculin, though the number of cases was too small to warrant a definite conclusion.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — A meeting of this society was held on Nov. 8th, Mr. C. A. Morton, the President, being in the chair.—Dr. J. R. Charles showed a boy aged 6, the subject of Myatonia (Amyotonia) Congenita, and read a paper on the disease.—Dr. J. M. Fortescue-Brickdale discussed the two types of this disease, in one of which changes in the anterior horn cells were found constituting a spinal paralysis, while in the other only muscular lesions existed—a true myopathy.—Dr. F. Carey Coombs referred to a case he had described five years ago, the first reported in the United Kingdom. In that case the trunk muscles had suffered more than the limbs, whereas in Dr. Charles's case the peripheral muscles were chiefly affected. In the case under Dr. Coombs the face muscles were affected in the late stages of the disease. He was not sure whether amyotonia congenita was a true myopathy. Myopathies were always progressive, whereas arrest of the wasting and even improvement might occur in this disease.—Dr. A. L. Flemming showed: 1. A case (an adult woman) in which Filaria Loa had been Removed from the Subconjunctival Tissue of the Orbit. The disease had previously been diagnosed from the presence of an abscess in the back which proved to be a "Calabar swelling," a marked eosinophilia, and the discovery of diurnal filaria in the blood. 2. A case of a Rapidly Growing Endothelioma of the Cheek, which recurred after erosion in both the scars and pre-auricular gland, treated by radium with apparently complete disappearance of the growth. 3. A young woman in whom an Adrenal Adenoma of the Liver had been removed by laparotomy. Her symptoms had been sudden amenorrhœa, headache, lassitude, increasing bronzing, growth of hair on the face and loss of scalp hair, and marked unsociability. Deep jaundice suddenly developed with colic; at the operation two nodules were found on the liver, one of which was compressing the common duct. Microscopically they had the structure of adrenal adenoma. A similar case had been reported in the *British Medical*

Journal, Sept. 2nd, 1911, Epitome, p. 35.—Dr. Watson Williams read a paper on Cardio-vascular Nasal Reflexes and their Clinical Import.—Dr. Newman Neild read a paper on Tea-poisoning, in which he described a series of clinical signs and symptoms which in his opinion were characteristic of, and peculiar to, chronic excessive tea-drinking. He claimed for tea-poisoning a distinct and definite entity.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 2nd, Mr. T. H. Ionides, the President, being in the chair.—Dr. F. Hinds showed a mass of Lymphadenomatous Glands removed from the right side of the neck of a female aged 23. The glands were extremely adherent to the surrounding parts, and the sterno-mastoid was thinned out over its surface and partly removed with it. On section the mass was very firm and fibrous, and in the centre were patches of broken-down caseating material. The enlargement of the glands had existed for more than four years, and was on both sides of the neck and in the axillæ. The spleen within the last six weeks had become palpable, though only to a small extent. The patient had no anæmia or other symptoms of ill-health. The growth was removed on account of the deformity which it produced, being as large as a cocoa-nut, and also because the skin over it was getting red and œdematous. A blood examination showed some excess of white corpuscles and eosinophiles. There was no pyrexia. Recovery from the operation was uneventful. Microscopic specimens showed the structure of lymphadenoma. The indurated and caseating condition is very unusual and gave to the specimen the appearance of tubercle.—Dr. R. J. Ryle showed a boy and his two sisters all suffering from Bilateral Congenital Cataract. He was treating them by needling and hoped to give them useful vision.—Mr. H. H. Taylor showed, for Dr. J. R. Steinhaeuser, a case of Sarcoma of the Choroid in a man about 50 years of age. The ophthalmoscope revealed a detachment of the retina at the lower and outer part of the field, which Mr. Taylor thought was caused by a growth behind it.—The President delivered the annual address and selected as his subject Uterine Fibroids. He described their frequency, classification, symptoms, diagnosis, prognosis, and treatment. He considered that hysterectomy was in the majority of instances the proper operation, the mortality of which should not be above 3 per cent. in all cases. As regards after-treatment, he advocated Fowler's position, early movement of the bowels, hot saline injections, and avoidance of starvation. The period of convalescence was much longer than was usually given.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Nov. 8th.—Dr. Ralph Vincent (London) read a short paper on the Development of Acidity in Milk and its Relation to Time and Temperature. This was based upon a series of recent observations and experiments in the research laboratory of the Vincent-square Infants' Hospital, London, and demonstrated the constancy of the influence of both the length of time and the variation of the temperature to which milk is exposed in increasing its acidity. As commercial milk even of good quality was contrasted with the milk brought from the hospital farm to the advantage of the latter, this paper carried its own practical lesson as to the precautions necessary for a pure milk-supply in the prevention of bacterial contamination, the chilling and keeping of the milk cool, and the rapidity of transit to the consumer.—Dr. Vincent then delivered an address on the Substitute Feeding of Infants, and gave a detailed account of the principles and practice of milk modification for this purpose. He began by contrasting the state of matters 100 years ago and now as to maternal nursing, and blamed the modern education and increasing stress and rush and mental strain imposed on women for the gradual failure of lactation. A study of the work of Dr. Rotch in America has helped him in the development of the methods of milk modification which have now been elaborated in the present Infants' Hospital and the associated hospital farm and well-equipped laboratory. Lantern slides illustrating all these places were shown, and their methods of cooling and keeping cool the milk, and of separating its elements for fresh combinations according to the special prescription of the physician. Dr. Vincent concluded by describing cases, throwing on the screen a copy of the diet chart showing the variations in the modification of the milk prescribed and of the weight chart. Among the cases described were congenital syphilis, congenital defect, pyloric stenosis, atrophy, fat intoxication, and rickets. In concluding he recommended the study of biological chemistry as likely to yield the best results in the future.

BATH CLINICAL SOCIETY.—A meeting of this society was held on Nov. 3rd, Mr. F. Lace being in the chair.—Dr. Rupert Waterhouse showed a woman, aged 37 years, suffering from Splenic Anæmia. She was mother of five children; each of her pregnancies had been complicated by "dropsy." After the last confinement, three years ago, her abdomen again swelled, and when seven gallons of fluid had been removed by tapping the enlarged spleen was detected. The edge of the liver was just palpable and the blood showed—erythrocytes, 3,000,000 per c.mm.; hæmoglobin, 30 per cent.; leucocytes, 1500 per c.mm. A few normoblasts were present, but the differential count of leucocytes was normal.—Dr. James Lindsay showed a man, aged 55 years, suffering from Multiple Neuro-fibromata; the original appearance of the disease was 30 years ago.—Dr. V. Wiley showed a large specimen of an Innominate Aneurysm removed from a woman, aged 59 years; the ascending aorta showed another dilatation and the thoracic aorta a fusiform aneurysm.—Mr. A. L. Fuller read notes of two cases of Carcinoma of the Small Intestine. One case was that of a woman, aged 55 years, who had suffered from mucous colitis for three years, and who developed symptoms of obstruction. An annular carcinomatous stricture of the upper part of the ileum together with 3 feet of the small intestine and mesentery were removed, and end-to-end anastomosis was performed. Rapid improvement in health and weight took place with no further return of the colitis. Death occurred 4½ years later from recurrence. The second case was that of a woman, aged 38 years, who had a Carcinomatous Stricture of the Middle of the Transverse Colon. Owing to the mesentery being full of growth, removal was impossible, so lateral anastomosis was performed. A year later, when operating to relieve further obstruction, multiple carcinomatous strictures of the small intestine were found; lateral anastomosis to relieve urgent symptoms was again performed. The patient died six months later.

Reviews and Notices of Books.

A Practical Handbook on Diseases of the Ear, for Senior Students and Practitioners. By WILLIAM MILLIGAN, M.D. Aberd., Aurist and Laryngologist to the Royal Infirmary, Manchester; Surgeon to the Manchester Ear Hospital; Lecturer upon Diseases of the Ear to the Victoria University of Manchester; President of the Otological Section of the Royal Society of Medicine; and WYATT WINGRAVE, M.D. Durh., Pathologist (late Physician) to the Central Throat and Ear Hospital, London, and to the Polyclinic, London. With 293 illustrations and 6 coloured Plates. London: Macmillan and Co., Limited. 1911. Pp. 596. Price 15*s.* net.

THE first two chapters, which are brief, deal with the development of the ear and the anatomy of the external ear; the third gives a short *résumé* of the physiology of the ear. The fourth chapter deals briefly with the causation of aural disease, whilst that following, of rather over 40 pages, gives detailed instruction as to the examination of the ear, nose, naso-pharynx, and pharynx, with numerous illustrations of the appropriate instruments, and including the methods of the tests for hearing. The tuning forks recommended are those of Hartmann. The description of the various tests is clear and concise, not going too deeply into the theory of sound, which is beyond the average medical student or medical man. A useful piece of information, which is not given in many works at present, is the formula recommended for use in testing deaf people at the last Otological Congress in 1909. The authors give very careful directions as to the use of the Weber-Liel intra-tympanic tube as a

means of passing fluid into the middle-ear, and of Hay's pharyngoscope, of which the use is advocated.

Deformities of the external ear, followed by injuries of the auricle and external auditory meatus, form the subject of the next two chapters. Chapter VIII., on diseases of the auricle, is well illustrated by figures of sections of various new growths, and also contains lucid descriptions of diseases affecting the auricle, with their appropriate treatment. Foreign bodies in the ear and diseases of the external auditory meatus occupy the next two chapters. One of the plates shows three forms of parasite occasionally found growing in the ear. This illustration is extremely well executed.

The anatomy of the middle-ear is fully described and illustrated in Chapter XI. Catarrhal otitis media in its acute and chronic forms, with their complications and sequelæ, is ably dealt with in the fourteenth and fifteenth chapters. Acute and chronic suppurative otitis media and the appropriate treatment occupy the succeeding two chapters. In Chapter XIX. one finds a mine of information in reference to the Bacteriological Examination of Discharges. This is a branch of the subject with which both the writers' names are intimately associated, and not only does the account contain all the information that has gradually been made known, but, coming as it does from the source of the information itself, it is particularly valuable and interesting. Aural polypi, cholesteatoma, and tuberculous diseases of the middle ear form the subjects of the next two chapters. Of these, the last has been associated with the name of Dr. Milligan as one of its earliest and most earnest investigators, for many years.

In Chapter XX. disease of the mastoid process with all its accompanying sequelæ, and the proper methods of dealing therewith, are carefully and clearly enumerated. Tinnitus, its differential diagnosis and treatment, forms the subject matter of Chapter XXVIII. The next three chapters are devoted to intracranial lesions secondary to aural diseases, both the text and the illustrations being extremely clear, and the descriptions, especially of the operations, leaving nothing to be desired.

The thirty-second chapter deals with the anatomy of the internal ear. Disease of the labyrinth is dealt with in Chapter XXXIII., and all that is known at present on this matter is given. Oto-sclerosis is ably dealt with in a subsequent chapter, which is followed by one on inflammatory diseases of the labyrinth. Amongst the later interesting chapters one finds references to diseases of the ear in relation to general medicine, deaf-mutism, and aural disease and life insurance, while diseases of the nose, naso-pharynx, and pharynx, especially liable to involve the organ of hearing, fittingly occupy the concluding chapters.

This book is one the perusal of which has proved a source of great pleasure. Although it is no small work, yet there is nothing we would wish omitted, and we have not discovered the omission of anything which should have been included. The diction is easy and the descriptions are plain; the illustrations are excellent and the printing is good. Dr. Milligan and Dr. Wingrave have given us the most comprehensive work on diseases of the ear which has been published in the British Isles, and it is one which, although professedly for senior students and practitioners, will doubtless be found equally welcome by those who deal more especially with aural surgery. It is extremeley gratifying that the authors have been able to quote so freely from the work of their British colleagues, while they themselves give a practical demonstration of the progress of British otology.

JOURNALS AND MAGAZINES.

The Journal of Physiology. Edited by J. N. LANGLEY, Sc.D., F.R.S. Vol. XLIII., Nos. 1 and 2. Cambridge University Press: C. F. Clay. Sept. 11th and Oct. 20th, 1911. Price 6*s.* 6*d.* and 7*s.*—The first paper, by Harriette Chick and C. J. Martin, on Heat Coagulation of Proteins, is a continuation of a previous paper (*Journal of Physiology*, vol. xl., 1910). "Heat coagulation" of egg-albumin consists of two processes: (1) the reaction between the protein and hot water ("denaturation"), and (2) the separation of the altered protein in a particulate form (agglutination). The rate of (2) was arranged to be greatly in excess of that of (1) in the experiments, so that (1) is the limiting factor in the process. During the process, as protein is precipitated, free acid is progressively removed from the solution. The extra amount of acid fixed by egg-albumin in coagulation was determined and its cause explained. The coagulate rate is lowered by the presence of salts, e.g., NaCl and Am_2SO_4. The short paper by F. O'B. Ellison, The Relation between the Physical, Chemical, and Electrical Properties of the Nerves, Part V., The Action of Cinchonamine Hydrochloride on Frog's Nerve, is the fifth of the series, and is chiefly interesting to physiologists, as it deals with the specifically different action of cinchonamine hydrochloride on the injury current and on the negative variation of frog's nerve. Arthur Harden and Hugh Maclean's paper on the Oxidation of Isolated Animal Tissues is a continuation of a previous paper on that abstruse question. Minced organs and tissues of animals have no more power of producing carbonic dioxide from sugar when incubated in an atmosphere of oxygen than they have in an atmosphere of nitrogen or hydrogen. Tissue juices obtained either by the kieselguhr, the aqueous, or the saline method possess little or no respiratory action. Antiseptics and grinding the tissues with sand materially lower the oxidation processes.

The long communication, over 40 pages, of Keith Lucas on the Transference of the Propagated Disturbance from Nerve to Muscle, with special reference to the apparent inhibition described by Wedensky, is an elaborate investigation of the Wedensky effect (1885)—i.e., the "apparent inhibition" observed in a muscle excited from its motor nerve. The author's endeavour is to show that this effect depends for its possibility on a simple property known to be possessed in high degree by the synapse of the central nervous system—namely, a resistance to conduction greater than that of the continuous axon. The paper is especially interesting to physiologists. In a short paper on the Effect of Stimulation of the Eighth and Ninth Spinal Nerve-roots upon the Bladder of the Toad, Frank P. Knowlton finds that the arrangement of the autonomic system in the toad is similar to that of the frog; that stimulation of the eighth nerve-root produces no effect on the bladder. No evidence of efferent fibres in the posterior roots was found. H. M. Vernon gives an account of his further investigations on the Indophenol Oxidase of Mammalian and Avian Tissues. He finds it to be most abundant in the heart muscle, whilst the liver, with one exception, is poorest. The amount of oxidase in various tissues of the rabbit, cat, and dog roughly corresponds with their degree of oxygen saturation, as determined by Ehrlich by his *intra vitam* staining methods. In birds there is a close parallel between the oxidasic power of the tissues and the respiratory exchange. The canary has eight times the CO_2 output of the goose. The oxidasic power of a tissue depends largely on its power of sustained activity—e.g., the pectoral muscle in vigorous flying birds is as rich in oxidase as the heart, and three times as rich as limb muscle, while in the tame duck pectoral muscle contains scarcely any

oxidase. In mammals red muscles contain much more oxidase than white, and tongue and diaphragm most of all next to the heart. Cold-blooded animals have very little, while in small embryos it is at a minimum, and rapidly increases with embryonic development, and for the first fortnight of post-natal existence. The liver for a week or two after birth is richer in oxidase than the adult liver.

In Vol. XLIII., No. 2, the paper of Mutch and Pembrey on the Influences of Tetrahydro-B-Naphthaline upon the Temperature and Respiratory Change deals chiefly with the relation of the rise of temperature to muscular activity. The drug, the action of which was first investigated by Stern, causes extreme dilatation of the pupil, constriction of the vessels of the ear, rapid respiration, restlessness, greatly increased muscular activity, spasms, and even convulsions. In fatal cases death may be due to either hyperthermia, paralysis, or cyanosis with cardiac failure. The increased heat appears to bear a definite relation to the muscular activity, and is accompanied by an adequate increase in the intake of oxygen and the output of carbon dioxide. The action of the drug is upon the central nervous system, upon the higher more than the lower, the increased excitability being accompanied by increased muscular movement, spasms, and even convulsions. The rise of temperature, at any rate in the non-fatal cases, can be explained by the increased muscular activity. Convulsions were present in each case when death occurred from hyperthermia, a condition favoured by the cyanosis present. The processes of oxidation and heat production are increased when the temperature of an animal is raised above its optimum, so that it is unnecessary to expect a persistence of vigorous muscular movements during the whole time the temperature is rising. There is a marked antagonism between the drug and anæsthetics; in suitable doses it prevents chloral narcosis, and chloral or chloroform will arrest the rise of temperature produced by the drug.

Professor Langley's paper on the Effect of Various Poisons upon the Response to Nervous Stimuli, chiefly in Relation to the Bladder, is the largest contribution. The experiments were made on anæsthetised cats. Starting from his own observations on the antagonistic action of curari and nicotine upon peripheral nerve cells, the author discusses the nature of that action. The nerves to the bladder were exposed—the bladder itself being previously filled with a mixture of normal urine and warm salt solution, so that the bladder could contract under nearly isotonic conditions. The sacral nerves were stimulated in pairs; the alkaloids were injected into a vein and faradic stimuli were increased. Numerous tracings are given to show the effects or responses obtained. Stimulation of the sacral autonomic fibres affects nerve fibres, nerve cells, and the smooth muscle of the bladder. The author concludes that it is the nerve cells which are affected by the drug. Stimulation of the sacral nerves, which contain vesico-motor fibres, caused strong contraction of the bladder, as shown by the curves taken of variations of the internal volume of the bladder. If the stimulus is brief relaxation soon sets in; if the stimulus is prolonged relaxation sets in more slowly. No clear evidence was obtained of the presence of inhibitory fibres in the normal condition. After injection of nicotine the first effect of stimulating the sacral nerve is inhibition. Nicotine stimulates the peripheral nerve cells. There is antagonism between nicotine and curari and both act on the peripheral nerve cells. When curari or nicotine has been injected stimulation of any branch of the pelvic plexus, which has pre-ganglionic fibres, causes after-contraction, but stimulation of post-ganglionic fibres on the bladder causes a normal contraction with no after-contraction. We must refer to the original paper for the remarks of the author, more especially when he himself says: "I do not think any final conclusions can be drawn as to the cause of the various phenomena described in the paper." The paper of H. H. Dale and P. P. Laidlaw (Wellcome Research Laboratory) on the Action of Iminazolylethylamine is a continuation of a previous paper (*Journal of Physiology*, vol. xli., 1910). The drug causes a vaso-dilator fall of blood pressure in carnivora and in the monkey and fowl, and this is due to a direct action of the base and not to the liberation of a vaso-dilator substance in the body. It is independent of the integrity of the peripheral sympathetic neurons, but is not due to direct action on the smooth muscle. It also causes a large and rapid fall of rectal temperature. The note by the same authors on reversed action of the chorda tympani on salivary secretion is interesting. Under certain conditions—after nicotine, curari, hordenine, tropine—a reversed action of the vagus is possible—i.e., the cat's heart may be accelerated during, and inhibited between the periods of, stimulation. On using cytisine, the alkaloid of laburnum seeds, the authors obtained a secreto-inhibitory action, instead of the usual excito-secretory effect.

In the short paper communicated by the late Dr. F. W. Pavy and W. Godden on Some Recently Elicited Facts Relating to Carbohydrate Metabolism and Glycosuria, experiments are given to support Pavy's contention that sugar is taken from view by the incorporating agency of bioplasm, what is not so dealt with being discharged from the system with the urine. The paper by T. Graham Brown and C. S. Sherrington—Observations on the Localisation in the Motor Cortex of the Baboon (Papio anubis)—is illustrated with elaborate charts of the cerebral motor areas. The localisation in the motor cortex of the baboon agrees closely with that found in other simian types examined. As regards specialisation, it lies between macacus and the anthropoid types. On the pre-central gyrus from below up the successive areas are for lower face, upper face, neck, arm, chest, abdomen, leg, and perineum. Face movements are particularly clearly demonstrated. Overlapping of individual representatives in each of these main areas is very marked. The following are some of the titles in the Proceedings of the Physiological Society for July 22nd, 1911:—P. G. Ward: The Study of the Action of Various Salts on Isolated Muscle; I., Sodium, Potassium, and Ammonium Salts. B. R. Macmillan: A New Form of Perfusion Stopcock. Casimir Funk: Note on the Probable Formation of Adrenaline in the Animal Body. L. Bull: On the Simultaneous Record of the Phono- and Electro-cardiogram. F. W. Edridge-Green: Lantern for the Quantitative Estimation of Defects of Colour Perception.

The Archives of the Roentgen Ray under the energetic editorship of Mr. W. Deane Butcher is a most valuable periodical. The outstanding feature of the October number is that of the X ray treatment of malignant disease. The point of view taken by Professor S. Leduc, of Nantes, is one that has much to recommend it, and should be widely read. Dr. Reginald Morton treats the same subject in a very temperate spirit; he makes a plea for the more general use of post-operative attention, and points out the feasibility of treating the operation area before the wound is closed. The plates in this number are taken from some made in the General Hospital of Birmingham by Mr. J. Hall-Edwards and Mr. F. Emrys-Jones. Those showing disease and injury about the skull are very fine.—The November number, just issued, is also of unusual interest, and contains articles contributed from France, Germany, and Austria. Professor Leduc's article on Molecular Physics contains some interesting studies on the phenomena of solution, in continuance of his fascinating investigations on osmotic growth,

which excited so much interest at the Royal and other learned societies last winter. Professor Albers Schonberg contributes an article on the new Lindeman focus tube, of lithium glass, which promises to be a great advance in X ray tube construction. The most interesting paper, however, is that by Dr. Guido Holzknecht on the Roentgen Diagnosis of the Stomach. This is admirably illustrated and contains very definite and practical suggestions for the diagnosis of gastric diseases, as well as a description of Haudek's simplified method for the Roentgen examination of the stomach by means of a double bismuth meal. The "Notes and Abstracts" found in each issue are judiciously selected to form a guide to the current literature dealing with the subjects of the journal itself. The change in size and arrangement of the "Archives," on which we commented about a year ago, has rendered this journal much more handy and convenient.

The Medical Chronicle.—In the October issue is published a thesis by Dr. P. Moran on the Pharmacological Action of Tincture of Digitalis, with special reference to the mode of its preparation and to the effects of age. He concludes that the drug deteriorates with keeping; possibly the digitoxin is decomposed. But a reliable preparation made with 90 per cent. alcohol should remain useful for two or three years. A second thesis, by Dr. Herbert Tomlin, deals with miners' nystagmus, which the author attributes to the rhythmical swaying action of using a pickaxe, aided by the bad illumination and by the optical effects of the crystalline fracture of the coal.

Edinburgh Medical Journal.—A paper by Dr. A. Logan Turner on the Spread of Bacterial Infections from the Nasal and Naso-pharyngeal Cavities by Way of the Lymphatic Channels appears in the November number of this magazine. The author considers that the assumption of a flow of lymph from the nose to the brain is improbable, the current, if any, being presumably in the opposite direction. On the other hand, tubercular infection may be conveyed from the nose to the cervical lymphatic system. Dr. G. Duncan Whyte discusses the causes of the prevalence of pulmonary tuberculosis in South-east China, and Dr. James Oliver writes on Utero-sclerosis and Sclerosis of the Recto-utero-vesical Fascia.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

(1) ALCOHOLIC EXTRACT OF GUINEA-PIG'S HEART; (2) HÆMOLYTIC SERUM FOR SHEEP'S CORPUSCLES; AND (3) EPININE FOR OPHTHALMIC USE.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

1. THE alcoholic extract of guinea-pig's heart is for use as an antigen in the Wassermann reaction, replacing the extract of syphilitic fœtal liver originally used by Wassermann. It is an obviously convenient preparation for the modern diagnosis of syphilis, and is obtained by digesting the finely minced hearts in alcohol and, finally, filtering the fluid. 2. The hæmolytic serum for sheep's corpuscles is prepared by inoculating an animal with sheep's red corpuscles. Ultimately the serum of the inoculated animal acquires the property of hæmolysing sheep's corpuscles. As a dilution it can thus be used as a hæmolytic serum in the Wassermann and other complement deviation tests. 3. Epinine, the synthetic substance having a pharmaceutical action similar to that of the suprarenal active principle, is now prepared in tabloid form for ophthalmic use. Each tabloid contains 0·006 gramme of epinine. In this form this valuable hæmostatic can be easily applied to the eye.

VITTEL WATER (GRANDE SOURCE).

(E. DEL MAR, 12, MARK-LANE, LONDON, E.C.)

Vittel water has enjoyed a reputation in the treatment of gout and kidney troubles. It affords the centre of attraction to the health resort Vittel, an interesting old town situated to the south-east of Paris and about 70 kilometres from the German frontier. Recently Vittel has developed considerably and a new colony has sprung up about half a mile from the old town, where hotels and the usual appurtenances of a health resort have been erected in view of increasing demands. The environment of New Vittel is attractive and there are facilities for open-air recreations. The waters appear to be most beneficial in the treatment of gout and allied disorders, but, like so many other waters, a mere chemical analysis does not seem to supply an explanation of the practical good obtained by their use. According to our analysis, Vittel water from the Grande Source contains about 1·836 grammes per litre of mineral salts, and the principal constituents are the sulphates of lime, magnesia, and soda in approximately equal quantities. Generally speaking, a water that contains sulphates shows radio-activity, and this may have something to do with the valuable medicinal properties of Vittel water. Then, of course, a strict *régime* of a course of water is an advantage in many of the cases which treatment at Vittel benefits. The water is, further, alkaline by reason of the carbonates of the alkaline earths present. Apart from the value of the waters in the treatment of disease, there are provided at Vittel all the essentials of hydro-therapeutic practice.

PEPTO-MANGAN (GUDE).

(AGENCY, THOS. CHRISTY AND CO., 4-12, OLD SWAN-LANE, LONDON, E.C.)

The important ingredients of this preparation are, according to our analysis, iron and manganese, both of which are in organic combination. The addition of ammonia produces no precipitate, but the addition of caustic soda does. The presence of peptones was confirmed, and the inference is that iron and manganese occur as peptonates, an admittedly useful form of administering these metals where a hæmatinic is indicated (chlorosis, anæmia). There is present also ammonia, for on heating with soda a strong smell of ammonia was evolved. The same result is obtained when the ammonium citrate of these metals is similarly treated. The preparation is a clear brown fluid and palatable. According to some clinical reports which have been submitted to us its administration distinctly effects an increase in the number of red corpuscles and in the amount of hæmoglobin. Our analysis gave the following figures:—Alcohol by volume, 18·25 per cent.; total solid matters, 4·39 per cent.; mineral matter, 0·83 per cent., containing 0·44 of ferric oxide (Fe_2O_3) and 0·13 per cent. of manganic oxide (Mn_2O_3).

ORIENTAL TOOTH PASTE.

(JEWSBURY AND BROWN, ARDWICK GREEN, MANCHESTER.)

This tooth paste satisfies the requirements of an application intended to keep the teeth scientifically clean. It contains a polishing agent, an antacid substance, and agreeable antiseptics chiefly in the form of aromatics. It is quite pleasant to use, is free from grittiness, and leaves a pleasant impression in the mouth. Further, it has mild astringent properties.

MARVIS FLAKES.

(MARVIS AND CO., 4, STARR-YARD, CAREY-STREET, LONDON, W.C.)

We have examined this food preparation previously, but recently a further improvement has been made, inasmuch as the flakes are now prepared from fresh instead of salted fish. The flakes are clean and white and contain all that is

nourishing in the fish itself. They are free from diagreeable odour or taste. According to our examination starch is an important adjunct in the drying process. We found just over 50 per cent. of proteins present. The flakes are a cheap source of protein food and, when cooked properly, can be made the foundation of an appetising dish.

FORMITROL.

(A. WANDER, LIMITED, 1 AND 3, LEONARD-STREET, LONDON, E.C.)

These formalin pastilles show evidence of improvement on their former production. The active constituent is formaldehyde, with which are associated menthol, citric acid, and milk sugar for convenience of administration. The tablet is firm and is grooved with lines which enable it to be broken into definite fractions, which is convenient in cases when smaller doses are required. The pastilles are designed for the bactericidal treatment of the throat. Each individual tablet is wrapped in tin-foil, which tends to preserve the standard strength of the pastille as regards formaldehyde.

APONAL.

(WIDENMANN, BROICHER AND CO., 33, LIME-STREET, LONDON, E.C.)

Several synthetic hypnotics have fallen out of favour of recent years owing to the fatalities which have resulted from their use. There has been uncertainty in regard to their action, and on the whole it would appear that some of them possess an action in some cases which is too intense for the purpose. Aponal is regarded as a mild hypnotic which is useful in the treatment of insomnia and which, so far as the clinical evidences of its use have gone, is without undesirable effects. Chemically it is amylene hydrate carbamate prepared by the action of chloride of urea on amylene hydrate. Its hypnotic action is ascribed to the presence of amylene hydrate (tertiary amyl alcohol), but on account of its penetrating odour and objectionable taste the administration of this without further combination was inexpedient. By converting the hydrate into a salt of carbaminic acid, amylene hydrate is now presented in a solid form with pleasant properties and the resulting compound is known as aponal. A series of physiological experiments is quoted which show that this compound in suitable doses produces healthy sleep, and the patients upon whom it has been tried are stated to experience a feeling of relief and freshness which follow natural sleep. All new hypnotics, however, should be tried with caution.

New Inventions.

A "CORNEAL CURETTE."

THE general practitioner frequently has to treat cases of a foreign body in the eye. When it is situated in the usual position, on the palpebral conjunctiva of the upper lid, he usually has no difficulty in dealing with the case. Not infrequently, however, the particles of cinder or steel alight upon the cornea and may have become embedded in it by the time the practitioner sees the case. Unaccustomed to the operative treatment of eye cases, he has some diffidence in attacking the cornea with a sharp instrument. In such cases a little corneal curette which has been devised by Dr. John M. Wheeler of New York will be of service. It resembles an ordinary discission needle, the point of which has been bent on the flat into a semicircle. It is impossible with ordinary care to penetrate deeply into the cornea with this instrument, whereas it is easy by a rotatory movement around the long axis to gouge out a foreign body.



A SALINE DROP REGULATOR.

WITH all the existing forms of continuous infusion and proctoclysis apparatus there is a certain amount of difficulty in regulating the flow of the saline fluid. To overcome this, Messrs. Allen and Hanburys, Limited, of Wigmore-street, London, W., have made to my instructions a simple drop regulator, as shown in the accompanying illustration. The barrel is made from toughened annealed glass, and the nickel-plated metal mounts at either end for attaching the indiarubber tubing are securely cemented on with metallic solder, thus allowing the regulator to be efficiently sterilised either by boiling or steam. The stopcock of the regulator can be adjusted by the surgeon before leaving the patient, so that any required number of drops may be administered during a given period. The glass barrel then readily allows the dropping rate of the solution to be kept under observation, and the nurse in charge of the case can easily check the rate of flow by counting the number of drops passing through the extremity of the inner indicating tube, altering the rate of flow, if necessary, by the use of the stopcock. This simple device obviates the need for spring clips, and in practice will be found extremely efficient for proctoclysis when used in conjunction with a simple apparatus consisting of a Thermos flask, fitted with a length of rubber tubing and a rectal pipe or catheter. It will be noticed from the illustration that the inner metal indicating tube is fitted with a bulbous extremity, thus enabling the drop regulator to be employed in an emergency as an intravenous cannula.



Harley-street, W. E. CANNY RYALL, F.R.C.S. Irel.

THE EJECTOR VACCINATOR.

THIS is an ingenious arrangement, finally perfected after many years' trial, for supplying all the material for efficient vaccination in a portable form ready for use. It consists essentially of the ordinary capillary tube which contains, besides the lymph, a new steel scarifier. The tube is hermetically sealed at both ends. After properly cleansing the arm with clean water but without antiseptics the tube is broken. In order to break the tube neatly and without waste, the upper side of the tube (see illustration) is nicked in two places; the one at the drop end close above the charge of vaccine, the other at the other end of the tube at about half an inch from the charge of vaccine. The broken parts are removed, then by gently pressing on the protruding end of the scarifier with the first finger the beads of vaccine are ejected on the arm as required. The sharp end of the scarifier can then be further protruded so as to scratch through the vaccine without causing bleeding. One tube will sometimes suffice for two vaccinations if the scarifier be withdrawn and heated for a few moments in a flame. The quality of the vaccine is stated to be tested weekly by actual use as in the case of the "C.P.P." In the course of the 12¼ years ending March 31st, 1911, during which the primitive forerunners of this simplified apparatus were in use, out of 28,851 insertions there have been 91·5 per cent. of typical vesicles and 8·5 per cent. of second class. The tubes can be obtained from Mr. Edward Darke, 167, King's-road, Kingston Hill, Surrey.



Professor Anderson Stuart, Dean of the Faculty of Medicine in the University of Sydney, Professor Warren, Dean of the Faculty of Engineering, and Mr. H. E. Barff, the Registrar, will with Earl Beauchamp, formerly visitor of the University, represent Sydney University at the Imperial Congress of Universities which will be held in London in July, 1912. This congress will be an important event in the educational history of the empire.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 18, 1911.

The National Insurance Bill.

OUR correspondence columns again contain communications which prove in unmistakeable manner the resentment aroused in the medical profession by the progress of the National Insurance Bill in committee of the House of Commons. There can be no doubt that the view of the majority of the medical profession is that the position of the profession under the Bill has not been sufficiently studied. Added to the deep feeling against contract practice that has at last found expression there is real anger at the alterations which have been made in the constitution of the Insurance Committees, tending to reduce medical representation upon these bodies to a negligible point. In these circumstances to force legislation upon the lines now indicated may bring about a struggle between the medical profession and the public, unedifying in character and all the sadder because it might have been avoided. We commend to the attention of our readers the letter of Sir ALFRED PEARCE GOULD, which appears on p. 1427 and which is strongly in confirmation of our own view that lack of time in which to consider the first principles of medical service is likely to lead to disaster. The great evil of hasty legislation is the risk of bringing about results other than those primarily intended, and indeed sometimes utterly opposed to them. When the National Insurance Bill was introduced amidst the plaudits of all parties, numberless difficulties connected with it had received but little consideration even by those responsible for it; only the broad suggestion had been laid down that pecuniary relief and medical attendance should be provided for the working classes in sickness, and that the money required for this should be provided in certain proportions by the worker himself, the employer, and the State. With all this we were in accord, but it soon appeared that those responsible for the measure had not grasped the medical side of their proposed administration in any certain manner, and were unwilling to take the needful time to arrive at the truth.

The important question of the administration of medical benefits is not the only one where haste has led to misunderstanding. Consider now the hospital question in connexion with the Bill. The claim of the Chancellor of the Exchequer has been that the Bill will provide efficient medical treatment for the working classes. An essential part of the medical treatment of the working classes is the treatment given at hospitals, almost entirely voluntary hospitals. For patients who are not confined to bed it may be possible under the Bill to provide efficient treatment—here the reasonable views of the medical profession as to the terms of medical service will have to be met. But what about the treatment in hospital of those who must be received in hospital wards? How is this treatment to be justly arranged for? For the minor affections which compel a man to keep to his bed he may be treated at home, but in the more serious conditions, and especially in those which need operative treatment, it is well-nigh impossible, as everyone knows who has any acquaintance with the subject, to treat cases among the poor satisfactorily except in the hospital. Now, it is true that nearly all of those who are to come under the scheme of National Insurance are being treated in the hospitals at the present time, and treated without any cost to the State, but under the Bill the conditions of admission will be altered. A voluntary charity will become a sort of adjunct to Government machinery, and it is quite impossible to say how far independent action will be possible. There can be no doubt that great changes will occur, and many of those who are connected with hospitals are gravely concerned at the probable and possible results to the institutions under their charge. The British Hospitals Association has through its council on two occasions expressed the opinion that the National Insurance Bill will be incomplete unless it provides for the hospital treatment which insured persons must have if their medical needs are to be covered by the Bill, and the matter has also engaged the attention of the Central Hospital Council, which represents all the chief hospitals of London. There are two aspects of the matter which have to be taken into account while we are discussing the admission of in-patients to voluntary hospitals. In the first place, we must consider the effect on the revenues of the hospitals of the fact that the employers of labour are compelled to contribute no small amount yearly to the insurance fund; secondly, we must consider the conditions under which those who are insured under the scheme can be admitted to the voluntary hospitals. There can be no doubt that there will be, at any rate at first, a grave falling off in the subscriptions from employers to the hospitals. On this point all hospital managers are practically in agreement; moreover, it does not depend on the mere opinion of the hospital authorities, for many large employers of labour have declared their intention of reducing their donations and subscriptions to hospitals when the Insurance Bill becomes law, saying that the enforced contribution to the fund will be so severe a tax on their profits that, however willing, they are unable to pay twice over for the medical treatment of their workmen. This loss in the income of the voluntary hospitals seems sure to occur—all those who are best qualified to judge are in agreement on the matter—and it will follow that the hospitals will have to close some of their wards. It was estimated in a valuable leading article in the *Hospital* last week that in London alone, for the sole use and treatment of those insured under the scheme, some 5000 beds in hospitals will be required. The figure is accounted for by reasonable calculation, and means, if it is right, that nearly half the beds in the voluntary hospitals of London would be taken up by cases occurring among the insured under the working of the Bill. It is true that some—perhaps the majority—of these cases would have reached the wards of a voluntary hospital in any case, but if the income of the hospitals is reduced, and at the same time the number of patients under the Bill is kept steadily up or is steadily increased, it must follow

either that a new source of income must be obtained for hospitals or that they must fail to discharge their liabilities.

As a matter of fact, it is not at all clear that the voluntary hospitals ought to undertake to provide treatment for insured persons, who are supposed to be insured against sickness. It is doubtful to our mind whether such a departure in administration is not an abuse of charity. If so, the solution appears to be that the State must pay the voluntary hospitals for the work they do. Yet to this there are several serious objections. In the first place, the mere amount of money required would seriously deplete the funds set apart for medical service, and in the second place the receipt of State contributions would almost certainly lead to the appointment of departmental representatives on the governing bodies of the hospitals. Some may regard such a change as necessary, but its tendency would almost certainly lead to an undesirable uniformity in the methods of the hospitals which would not work for progress. In Paris, for instance, the central administration of the hospitals has cast certain difficulties in the way of progress, for any deviations from the prescribed methods are not looked upon with approval. Even the surveillance of King Edward's Hospital Fund, excellent though it is in many ways, is tending to lead to a stereotyping of methods which may be undesirable. Further, it will have to be considered whether the medical staffs of hospitals will be willing to treat gratuitously patients for whom the hospitals are receiving payment: either a share of the money received from the State subsidy will have to go to the medical men attached to the hospitals or an additional paid staff will in each hospital have charge of the patients who are admitted under the Insurance Fund. Whichever of these schemes may be adopted, if any State funds are received by the hospitals, the very nature of the hospitals will be changed; they will be no longer voluntary charitable institutions. And if the voluntary character of these institutions be taken away it will not be long before the voluntary subscriptions and the voluntary management will disappear also. And with them much of the real life of hospitals will go. Has sufficient time been given to the consideration either of the advisability of this grave revolution or of methods to promote it or prevent it? We say, No.

A School of Preventive Medicine for Social Workers.

THAT the medicine of the future will be mainly preventive there can be no manner of doubt. Not that the reparative side of medicine can be entirely done away with, for accidents will happen, and some people at least will continue to transgress the laws of health, even though perfectly well acquainted with them and aware of the inevitable consequences of their infraction. But now that the State has come to a realisation of its vested interest in the general health, prevention must continue to come more and more to the fore; and, as in the case of other economic requirements whose infringement reacts injuriously on the body politic, so in preventive medicine conformity to the better way will necessarily be supported by legislation. Before legislation in these days, however, can become generally effective the sustaining force of public opinion must be behind it, and to arouse this the education of the public to intelligent ideals becomes of the first necessity.

Dr. NORMAN DITMAN, in an admirable paper on Education and Preventive Medicine,[1] emphasises the importance of such education, and pleads for the formation of a school of preventive medicine, so planned as to give instruction to medical men and students, health officers of all grades, sanitary engineers, school teachers and inspectors, nurses, theological students, legislators, charity society officers, social workers, and the general public. He puts forward a scheme of the various subjects of study, indicating in parallel columns to which of the several groups they are respectively applicable. The public is to be educated at the hands of all the other groups, in conjunction with the press and public exhibitions. To the educational aims of the school should be added those of research, both that of the laboratory and that into social and scientific methods. Students should be brought face to face with the conditions requiring improvements and be shown in action existing departments pertaining to health problems—e.g., tenement houses, offensive and dangerous occupations, child labour and factories, sweatshops, slaughter-houses, dairies, markets, watersheds, accident-preventing appliances, municipal methods relating to water-supply, sewage and refuse disposal, street cleaning, and the health department. The earlier part of Dr. DITMAN'S paper deals with the statistical and economic aspects of disease and injury, and describes in an admirable manner the brilliant successes that have already attended preventive medicine in regard to infectious diseases. Other diseases, of more or less unknown causation, such as cancer, diabetes, heart disease, and Bright's disease, challenge our best efforts at prevention, and illustrate the important connexion between a school of preventive medicine on one hand and hospital laboratories on the other. Finally, he deals with the class of disease and disability resulting from social evils, the control of which lies in the hands not only of the physician, but also in those of the economist, the clergyman, and the legislator—e.g., physical defects in children, preventable accidents, occupational diseases, insanity, alcoholism, and other relations of disease to poverty and crime. "Disease, crime, pauperism, insanity, and preventable accidents," says the author, "are the greatest blots on the modern civilised State, and the responsibility for the amelioration of these causes must be faced, upon the last analysis, by the medical profession. But the education of the physician in the past, while fitting him for the overcoming of isolated problems, has absolutely lacked that comprehensiveness needed to enable him to obtain a mastery of the broader economic and social problems of our modern life. For example, such a man should not only be able to cure, but should understand the problem of the prevention of disease and the investigation of its causes; he should be familiar with the methods of public health administration involving the health of the city, the State, and the country, which bear upon the purity of

[1] Education and Preventive Medicine. By Norman Edward Ditman, Ph.D., M.D. New York: The Columbia University Press. 1911. Pp. 75. Price 1s. 6d. net.

food and water-supplies, the existence of dangerous occupations, and the occurrence of epidemics. He should be a master of sociological questions involving the habits of the people and the evils of tenement house existence. He should be familiar with methods of municipal finance and government, questions of commerce, economics, and medical jurisprudence. He should be conversant with the mental, moral, and physical aspects of educational questions." But it is certain that if so much is asked of the exponents of medicine intelligent help must be demanded of the public.

It would be hard to find a more comprehensive statement of the legitimate—and inevitable—field of modern medicine. An ingenious illustration of public education in such matters is recorded in the *Boston Medical and Surgical Journal* of Oct. 26th. At the City Budget Exhibit in Boston recently a play, written by a twelve-year-old girl who is one of the "little mothers" that the Health Department has recently been organising into leagues and instructing in the care of babies, was performed by her child companions. It represented a tenement house in which an infant was suddenly taken ill. Well-meaning but ignorant neighbours rush in with unsought and absurd advice, and all is confusion. Presently one of the "little mothers" comes in and takes charge. At her direction one neighbour ministers to the baby, another telephones for a medical man, a third is sent to the nearest milk station, and so forth. Such an incident demonstrates not only that effective public education can be given, but how it can be given. The medical man must first lead the way.

Medical Men and Municipal Honours.

THE Lord Mayor's Show—the traditional civic pageant which astonishes us annually by the extraordinary attraction that it exercises for the London crowd, but which demonstrates no less the respect of Londoners both within and without the historic boundaries for the corporation of the greatest city in the world and for its appointed head—has come and gone. This year, as all are aware, the Chief Magistrate has been found in the person of Sir THOMAS CROSBY. Whatever Sir THOMAS CROSBY'S other claims may be to fill the office associated with the names of London's merchant princes and commercial magnates, and no doubt they are many and good, for the medical profession the chief interest in his election lies in the fact that he is one of our own calling, who has connected himself intimately with the municipal life of the City of London, and who has proved that a successful physician can secure for himself the highest civic honours by bringing to bear upon the problems of social administration the virtues of honesty, industry, and accuracy that make for distinction in the pursuit of our science. If, however, this is the first occasion upon which a member of the medical profession has assumed mayoral duties in the City of London, it has been often otherwise in provincial boroughs. Many of our towns, great and small, in the provinces may claim by this method to have set an example of progress which for our part we hope to see followed more widely in every coming year. A list of the medical men who have now taken their seats as mayors for the ensuing year will be found upon p. 1447. We wish them every success in their high office, and we congratulate them no less because they have achieved positions honourable to themselves than because their having done so will, we feel sure, act as an incentive to many of their professional colleagues, who will endeavour to combine participation in municipal life with the pursuit of a profession in itself arduous and charged with grave responsibilities for its members.

Four years ago[1] we wrote of medical men in connexion with municipal life, for in that year recognition had been accorded to several by election to the office of mayor. Among them we congratulated Mr. N. W. FAIRLES-HUMPHREYS, who had already been mayor of Montgomery on eight occasions. We are glad to observe that he now enters into his thirteenth year of office. Wimbledon had then elected Dr. S. R. COLLIER; it now places another medical man in the chair of office in the person of Surgeon-General E. L. MCSHEEHY. Saffron Waldon in re-electing Dr. J. P. ATKINSON has been true to its past precedents, established not only during the present century but by the election of 17 medical mayors in the nineteenth century, and of six during the latter part of the eighteenth. A feature in the current list to which reference may be made is the presence of medical men as mayors in the south and west of England not observable in the list of 1907. Barnstaple, Exeter, and Lewes are the boroughs to which we refer in congratulating respectively Mr. J. R. HARPER, Dr. C. J. VLIELAND, and Mr. H. STOTT. These, with their medical colleagues who have attained the office of mayor in other boroughs, or who perhaps occupy less exalted seats upon municipal councils, will certainly have no less onerous duties to perform in the future than they have had in the past. On the contrary, the tasks of all who are undertaking local administration to-day, whether as members of urban or of rural authorities, are constantly being rendered more exacting, more complex, and more responsible, while it is upon the man with medical training that the increased responsibility falls most heavily, for it is he whose sphere of influence is constantly being enlarged by the new functions imposed by recent legislature. The advent of medical men to boards of local administration is a healthful sign of the progress of preventive medicine. During the last four or five years measures for the promotion of the public health have been passed of far-reaching significance, and while the field of preventive effort has been widened the development of measures to cope with the troubles so ascertained has been gradual. When the National Insurance Bill, now making its forceful way through the House of Commons in the hands of the Chancellor of the Exchequer, commences its effective existence as an Act of Parliament, whether that be now or later, the medical man in municipal life will, indeed, to use a popular phrase, "find his work cut out for him."

The administration of the Act will be in the hands of

[1] THE LANCET, Nov. 27th, 1907, p. 1473.

Insurance Committees upon which the insured persons will be very fully represented, whether members of the approved societies or not. They will have a numerical majority of at least one-third as compared with the other members of the committee, and of the minority only two, or in certain events three, will be elected by the medical men of every locality covered by the committee. Of the rest of the minority, as we have termed it, the measure enacts that "one-half shall be appointed by the council of the county or county borough," and the rest "shall be appointed by the Insurance Commissioners." The sources from which these members of the committees (exclusive of the two members to be elected by the medical men of the locality) are to be drawn are thus defined: "The members appointed by the council of the county or county borough shall consist wholly or in part of members of the local sanitary authorities, and two at least shall be women, and of the members appointed by the Insurance Commissioners one at least shall be a duly qualified medical practitioner and two at least shall be women." It is therefore obligatory that there shall be one medical practitioner upon every Insurance Committee, and it is intended, but not in terms rendered obligatory, that two more shall be elected to it by their medical colleagues, which constitutes a representation of three medical men out of a possible 80, which, regarded numerically, is very small. A most practical and important manner of increasing medical representation will be the availability for appointment by the county or borough councils of medical men who as members of the sanitary authority have impressed upon their neighbours their fitness for selection. Moreover, there is no reason why the Insurance Commissioners should not appoint more than the one member of the medical profession whom they are obliged to nominate if there are suitable men available for the purpose. In these circumstances the inference which we draw from the provisions of the National Insurance Bill, so far as they are practically settled, considered side by side with the mayoral elections, to which we have called attention, is that it is becoming more and more valuable to a community to be able to impress medical men into active municipal life. Now that sanitary matters are receiving so much attention, the medical local councillor must necessarily have opportunities to make his influence felt among his lay colleagues, quite apart from such questions as the administration of medical benefits under the National Insurance Bill or the consideration of the interests of his profession and of its members. It is for this reason that we welcome such proof of the successful adoption of civic life by medical men, as we have called attention to in connexion with the assumption of mayoral duties by medical practitioners.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.—The annual dinner of the Hospital and School will be held at the Trocadéro Restaurant, Piccadilly-circus, W., on Wednesday, Dec. 13th, at 6.45 for 7.15 P.M. Mr. Stanley Boyd will take the chair. Applications for dinner tickets, price 7*s.* 6*d.*, should be sent not later than Dec. 1st to the honorary secretaries, Dr. A. G. Pnear, 47, Weymouth-street, W., or Mr. T. P. Legg, 139, Harley-street, W.

Annotations.

"Ne quid nimis."

THE PRESIDENCY OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AS we announced last week, a special meeting of the Council of the Royal College of Surgeons of England was held on Thursday, Nov. 9th, to receive the resignation of Sir Henry Butlin of his office as President of the College owing to ill-health. The whole medical profession will join in the regret which was expressed by the Council at Sir Henry Butlin's retirement and at the cause thereof, will trust that that cause will soon disappear, and will endorse the warm tribute which was then paid to him by a unanimous resolution of the Council. The late President held his important post with the greatest distinction and ability, and his services to the profession and the College will long be remembered. His tenure of office was remarkable for the fact that during a large part of it he discharged also the duties of President of the British Medical Association, and in both capacities earned the highest regard of those whom he led. Sir Henry Butlin's industry, his courtesy and fairness, and his gift of oratory, quite apart from his eminence as a surgeon, peculiarly fitted him for the position of titular surgical head of the profession, and it is greatly to be regretted that his physical powers have not proved equal to the heavy and continuous strain which his public duties have thrown upon them. All will unite in wishing him improved health now that he is free from the cares of office. His successor has been well chosen, and the Council of the College may be congratulated upon electing to the chair Mr. Rickman J. Godlee. The new President, as is well known to our readers, is surgeon to University College Hospital, Holme Professor of Clinical Surgery in the medical school of that hospital, and an honorary surgeon to the King. He has already done good work upon the Council of the College.

THE NEW MEDICAL OFFICER FOR THE COUNTY OF LONDON.

THE London County Council, on Nov. 14th, had before it the question of appointing a successor to Sir Shirley F. Murphy as head of the public health service of London, which, as reorganised, is to include the superintendence of the medical inspection and treatment of school children hitherto under the control of the education department, in circumstances which have been the subject of frequent comment in THE LANCET. The General Purposes Committee reported to the Council that 33 applications for the position of medical officer had been received, and these had been referred to a special subcommittee, on which the Public Health and Education Committees were represented. The subcommittee made a preliminary selection of 14 candidates whom they interviewed, and finally six candidates, chosen from these, attended before the General Purposes Committee. The committee had also seen Dr. James Kerr, the medical officer (education). After careful consideration of the merits of each candidate, the General Purposes Committee recommended: "That William Heaton Hamer, M.A., M.D., D.P.H. Cantab., B.Sc. Lond., M.R.C.S. Eng., F.R.C.P. Lond., be promoted, as from Jan. 1st, 1912, to be medical officer of health, and be appointed also school medical officer

for the County of London, at the commencing salary of £1250 a year." At the same time, to comply with a standing order that requires more than one name to be submitted to the Council, the Committee also mentioned the names of William James Howarth, M.D., Ch.B., D.P.H. Vict., medical officer of health for the County of Kent, and Harold Scurfield, M.D., C.M. Edin., D.P.H. Cantab., medical officer of health of the city of Sheffield. Mr. H. J. Greenwood, chairman of the General Purposes Committee, in moving the appointment of Dr. Hamer, said the committee and a special subcommittee had given to the question of this appointment the careful consideration its importance warranted. Whilst possibly there might have been some disappointment at the comparatively small number of applications for the post, it was generally felt that out of the 33 applications received there was certainly not a small number of gentlemen who were quite worthy by reason of their experience and attainments to be considered for the position. He was very glad heartily to commend to the Council the recommendation of the committee. Dr. Hamer's services were so well known that it would be almost an impertinence to go into them in detail. He had been in the service of the Council for almost 20 years, and the position he had held under the late medical officer of health, Sir Shirley Murphy, had afforded him experience in all the wide and intricate branches of the work that came within the scope of the Public Health Department. At the same time, under Standing Orders, the committee submitted the names of two other gentlemen, both candidates of the greatest ability and well known for their services, in one case to the city of Sheffield, and in the other to the county of Kent. Although it was true that both these gentlemen had had active experience in the new duties which it was proposed to cast in future upon the London County Council Public Health Department—viz., the superintendence of the medical inspection and treatment of school children—yet the General Purposes Committee felt that that experience, though valuable, was limited as compared with the natural needs of London, and had been gained in circumstances which to a large extent would not obtain in the metropolis. Naturally, Dr. Hamer had not had the opportunity of showing his ability in the particular direction of school medical work, but his many other attainments and enormously superior position in almost every other detail of his work left no doubt in the mind of the committee that of the three candidates he was the one the Council should appoint. Mr. Greenwood expressed the conviction that in appointing Dr. Hamer the Council would be selecting a gentleman who would not only fill the position to the very utmost of his ability, but to the greatest credit of the Council and of the County of London. The proposal was accepted without further debate and amid a general chorus of approval, to which chorus we take the liberty of adding our own voice.

LATE OR RETROGRADE INFANTILISM OF THE ADULT.

SOME five years ago M. Ch. Gandy, at a meeting of the Société Médicale des Hôpitaux de Paris, showed two patients presenting a peculiar dystrophic syndrome, which concerned more particularly the sexual system. Each of the patients had attained the full normal development of the adult, but some time after the age of 30 a gradual and striking change set in, consisting of a regression of primary and secondary sexual characteristics. The genitalia atrophied and lost their functional capacity; the hair of the moustache, the chin, the axillæ, and the pubes began to fall out. From a state of virility the patients sank into a sort of infantilism such as is found in the pre-pubescent period. On June 23rd of this year M. Gandy exhibited another still more striking case of retrograde infantilism at a meeting of the same society. The patient was a man aged 42, who had been married twice, and had had three children. Some 12 years previously, at about the age of 30, certain somatic alterations had very gradually made their appearance, without obvious cause. The parts usually covered with hair (the scalp not included) had become bare, sexual impotence and atrophy of the genitalia had set in, and the face, hands, and feet had become puffy. On examination it was noted that the face had a curious waxy pallor, and was smooth like that of a child, with the exception of a few short hairs on the chin; the skin was dry and showed very fine folds, especially on the forehead and on the lower parts of the cheeks. The skin of the trunk and limbs was equally pale, smooth, fine, and soft; there was little or no subcutaneous fat; the nipples were small and devoid of all pigment. A very few short, fine hairs were left on the pubes. The external genitalia resembled those of a child; the penis, scrotum, and testicles were all small. No trace of the thyroid gland was discoverable by palpation. There was no alteration of the visual fields, no polyuria or glycosuria. The only previous illness of any significance was a left gonorrhœal orchitis of about 14 days' duration, which had developed about the same time as the commencement of the general symptoms. Some 18 cases of the condition, of which only two concern the female sex, are now on record. It is quite possible that at least some of the cases described as degeneratio adiposo-genitalis of hypophyseal origin (Fröhlich) ought to be regarded as closely associated to the syndrome under discussion. The main features of the condition are (1) its development after puberty is established in subjects who have all the normal secondary sexual characteristics; and (2) its selective dystrophic action on all that pertains to the sexual sphere. Apart from this, the changes in the skin are specially noteworthy, for they are certainly closely akin to what obtains in myxœdema. The puffiness, smoothness, pallor, and the finely folded, finely wrinkled skin are just such as are met with in that disease. The whole appearance of the patient affected with retrograde infantilism is unmistakeable, but sometimes other symptoms are present and may be considered part of the syndrome. Mental apathy and indifference may be noted; muscular enfeeblement is frequent; the pulse is small and the arterial tension low. Occasionally a sort of diabetes insipidus occurs, with polyuria and polydipsia. Once the condition is established no further change ensues, as a rule, and the patients may remain as it were immobilised in this infantilism for years. M. Gandy is of the opinion that the pathogenic basis of the disease is the combination of thyroid and testicular impairment. In three cases where a pathological examination was made the thyroid was markedly atrophic and showed unmistakeable inflammatory and sclerotic changes, whereas the appearance of the testicles suggested rather a simple regressive atrophy. It is difficult to say whether the pituitary plays any part in the development of the condition, and equally difficult to adjudicate on the relative importance of what seem to be the more definite pathogenic factors. In fact, though a general pathological agent may act on several of the glands concerned with internal secretion, producing recognisable lesions in them, it does not follow that these are a proof of the participation of the glands in the genesis of the syndrome; such lesions cannot by themselves be held to demonstrate a pathogenic rôle on the part of the glands concerned, as Brissaud maintained. Not a few cases of testicular atrophy are on record where no symptoms that might be ascribed to testicular insufficiency developed. Karakascheff has published a case of this type of infantilism where the main pathological lesion was atrophy of the suprarenal glands. Where definite signs of feminism

(hypertrophied mammary glands, &c.) supervene on the establishment of retrograde infantilism, as in cases reported by Lereboullet and Josserand, the problem becomes still more complex.

THE NATIONAL INSURANCE BILL: AN IMPORTANT MEETING.

A MASS meeting of the medical profession in Lancashire and Cheshire has been called for to-day (Saturday, Nov. 18th), at 3.30 P.M., in the Midland Hotel, Manchester, to discuss the medical clauses of the National Insurance Bill, and to pass a resolution stating that as at present framed the Bill does not embody the demands of the medical profession, that it is unworkable, and dangerous to the public health. All members of the medical profession in Lancashire and Cheshire are earnestly requested to attend.

SOME OBSERVATIONS ON THE DECOMPOSITION PRODUCTS OF SUGARS.

IN spite of the large amount of research which has been devoted to the elucidation of the problems of the metabolism of sugar in the animal organism, it must be confessed, as Abderhalden has stated, that exact details of the processes of oxidation of glucose, the sugar chiefly concerned, are wanting. Some interesting observations, made from a chemical standpoint by Professor Adolf Jolles, of Vienna, and published in the *Wiener Medizinische Wochenschrift* of Nov. 4th, seem calculated to throw considerable light on this subject and to stimulate further research from a physiological aspect. He has investigated the action of various oxidising agents upon a number of different sugars, including arabinose, rhamnose, dextrose, lævulose, invert sugar, mannose, galactose, cane sugar, maltose, and lactose in weak alkaline solutions at 37 °C. In general the strength of the solutions was 1 per cent. of sugar made N/100 alkaline with sodium hydrate. In every case with the exception of cane sugar a diminution in the rotating power of the solution occurs together with the formation of acids. The alteration in the rotating power had been demonstrated previously by Lobry de Bruyn and van Ekenstein. Professor Jolles has devoted his experiments chiefly to the determination of the acids formed. He finds that neutralisation of the alkali produces marked slowing in the formation of the acids, while with glucose in N/100 acid solution acid formation does not occur and the sugar remains unaltered. By means of the addition to the solutions of hydrogen peroxide the oxidation processes were accelerated, occurring more quickly than when the oxygen in the air was used as the oxidising agent. Lævulose was found to produce more acid than dextrose, and therefore to be more easily oxidisable. The oxidation products obtained comprised ethyl alcohol, acetaldehyd, acetone, formic, acetic, butyric, lactic, glycolic, oxalic, succinic, aceto-acetic, and glycuronic acids. With most sugars the chief product was formic acid, a very small quantity of acetaldehyd and an acid which gave Tollen's naphtho-resorcin reaction for glycuronic acid. Lactic acid was only obtained in alkaline solutions of dextrose without the addition of hydrogen peroxide. The use of oxide of silver as an oxidising reagent gave similar results to those obtained with hydrogen peroxide. Ammonia and sodium carbonate do not influence the decomposition of sugar as strongly as sodium hydrate. Professor Jolles has developed his researches in several ways. Since cane sugar does not undergo the same decomposition in alkaline solution as the other sugars, he has utilised this property to develop a method for the quantitative estimation of cane sugar in the presence of other optically active sugars. He makes the mixture alkaline, keeps it for 24 hours at 37° C., by which time the other sugars have become optically inactive, and hence the cane sugar can be determined from the difference in the rotating power of the solution at the beginning and the end of the experiment. He has also devoted much attention to the formation of glycuronic acid. This acid has been found in the urine and the blood and in the liver, but always in combination, usually with phenol, indol, or skatol. The usual quantity is small, but is increased by the administration of certain substances such as chloral hydrate, camphor, and menthol. The composition of this acid suggests its probable origin in the body from glucose, but according to Professor Jolles the direct demonstration of this was wanting before his own experiments. He describes in detail the method of obtaining glycuronic acid from sugar and the tests he employed for its identification. He proceeds to apply his observations upon the decomposition of sugars *in vitro* to the elucidation of the problems of glycolysis in the organism. Lépine has regarded the breaking up of glucose in the body as due to a glycolytic ferment present in the blood and tissues. Cohnheim has isolated from the pancreas a substance which can activate the glycolytic ferment present in the muscles. Professor Jolles is of opinion that the conditions of his experiments approximate to those in the body. The blood with its definite alkalinity permeates the tissues, and the peroxidases, catalases, and other oxidising ferments can be regarded as exerting a similar action to the hydrogen peroxide in his chemical experiments. He suggests that the sugar in the tissues is oxidised to acids of low molecular weight, such as formic acid, which are further oxidised in the blood to carbon-dioxide and water. He also shows how his observations can be adapted to explain glycolysis in muscle, the formation of sarcolactic acid, of glycuronic acid, and even some of the features of diabetes and pentosuria. He is careful to state, however, that these speculations are hypothetical and are not supported by physiological experiments. His observations are certainly suggestive and are worthy of careful consideration. They should form the basis of further physiological work upon this question of glycolysis in the body.

BACTERIOLOGY OF CONJUNCTIVITIS.

THE differentiation of various forms of conjunctivitis by an investigation of their bacteriology has been of the greatest clinical value. Progress in medicine is associated with the subdivision of large groups of cases having broad clinical resemblances into smaller groups separated from one another on etiological grounds, and ophthalmic practice furnishes good examples of this process. By simple smear preparations of ocular secretions results of great practical importance are quickly and readily obtained, as the various organisms associated with varieties of conjunctivitis can be recognised with some certainty by their morphology, and appropriate treatment may be at once commenced. Axenfeld is indeed inclined to consider that cultural methods rarely yield better results than simple examination, and may indeed lead to mistakes owing to the growth of saprophytes which may mask the more important pathogenic organisms which are often of difficult culture. An interesting paper [1] by Dr. J. P. McGowan and Mr. W. Macrae Taylor shows, however, that the examination by culture of the organisms present may lead to a further differentiation of cases which would otherwise be confused. They record a school epidemic, involving from first to last some 49 patients, which would have been regarded as an outbreak of pneumococcal conjunctivitis had the diagnosis been made on the examination of simple smear preparations. In all the cases examined, five in number, an

[1] THE LANCET, Nov. 11th, 1911, p. 1324.

organism was isolated which, while morphologically identical with the pneumococcus, nevertheless differed from that organism, as usually described, in its fermentative activity, the character of its growth in rabbit serum, and especially in its complete non-pathogenicity for those animals which are usually highly susceptible to the pneumococcus. The organism thus separated and carefully studied certainly differs in important respects from the typical pneumococcus, though opinions may possibly differ as to whether these variations could be regarded as of specific value in such a notoriously variable member of that highly variable group, the streptococci. It is, however, by such accurate and careful investigations that we hope for advance.

THE RAG FLOCK BILL.

THE Rag Flock Bill was read a third time and passed in the House of Commons on Tuesday last, and was introduced into the House of Lords on the following day. The measure, an unquestionably important piece of sanitary legislation which has been demanded for a long time, will undoubtedly receive the Royal assent in the course of a few weeks. Our own practical inquiries have shown that when uncontrolled in regard to the cleansing of the rags by thorough washing, the rag flock business may easily be a menace to the public health. When it is remembered how filthy the raw materials can be, it is evident that the public need some efficient protection in this matter. We believe that when the provisions of the measure are thoroughly enforced the reproach that has long hung over the industry will be removed, and further that the interests of the trade will gain rather than suffer.

THE PHYSIOLOGICAL STANDARDISATION OF ERGOT.

THE latest contribution to our knowledge of ergot comes in the form of a Bulletin[1] by Dr. C. W. Edmunds, of the University of Michigan, and Dr. Worth Hale, of the Hygienic Laboratory, Washington, D.C. The investigation was undertaken with a view of ascertaining which of the many methods of standardising ergot is best suited for the purpose. Kobert, whose labours have thrown considerable light on the composition of the active principles of ergot, described this drug as one of the most important medicines, but one of the hardest to estimate. The authors of the Bulletin preface their own work by an illuminating historical summary of the methods now in use for standardising ergot, with full abstracts of many important recent papers that are not accessible to the majority of readers. The importance of establishing a standard method of assay is well illustrated by an incident that occurred in England in 1909. A specimen of a fluid extract of ergot was submitted to three different physiological experts, one of whom condemned the sample, while the other two considered it satisfactory. The cock's-comb, uterine, and blood pressure methods were tried with a series of fluid extracts and special preparations of ergot, and the results were compared with those derived from the chemical determination of the cornutin of Keller and the amount of benzol extractive. These chemical methods showed but little relation to the biological methods, and the authors consider that the latter should be used as a means of insuring to those who require the drug a remedy both potent and of uniform strength. For this purpose the cock's-comb method is recommended on practical grounds in preference to the uterus method. These two methods yielded almost identical results, and they may therefore be taken as indicating the true relative strengths of the different specimens. It was found that an absolute parallelism does not exist between the uterine and the blood pressure action of ergot. This may possibly be accounted for by the probability that in the process of manufacture an unusually large amount of putrefactive amines may have been formed, which would have the tendency to raise the blood pressure value without increasing the strength of the preparation as measured by its action on the uterus. These results are interesting, inasmuch as the cock's-comb method has been unfavourably reported upon whenever it has been mentioned in the literature of the past few years, doubt having been thrown on its value as a criterion of the therapeutic activity of preparations of ergot when applied to the human uterus. The examination of many leading pharmaceutical preparations of ergot by these different methods led to the conclusion that such preparations should be marked with the date of manufacture, as they deteriorate quite rapidly. From the standpoint of both physician and patient an interesting part of the research relates to the varying activity of the leading American preparations of ergot. The fluid extracts examined differed greatly in strength, some being only about one-fourth as strong as a preparation freshly made from Spanish ergot. Non-pharmacopœial preparations showed even greater discrepancies between the strengths claimed and those actually found. For example, one proprietary preparation, stated to be two and a half times as strong as a fluid extract, was found by experiment to be only one-third the strength of a fluid extract. Indeed, it was 50 per cent. weaker than a fluid extract made by the same firm. It is suggested that makers of preparations of ergot should refrain from using such phrases as "ergot in permanent solution" in their advertising literature until more reliable methods of manufacture are devised. The practical application of this valuable research into the literature and physiological action of ergot and its preparations is obvious. Physicians will do well to employ only reasonably fresh preparations of the drug, made with care so that putrefactive changes may be avoided as far as possible. Needless to say, the drug itself should be not more than one year old, free from mould and sound in every way.

[1] Bulletin No. 76, Hygienic Laboratory, United States Public Health and Marine Hospital Service, Washington, 1911, pp. 58.

THE SENSE OF PRESSURE IN THE FACE, EYE, AND TONGUE.

IN the current issue of *Brain* there is an article by Dr. W. J. Maloney, of Fordham University, New York, and Dr. Foster Kennedy, of Cornell University, New York, on the sense of pressure in the face, eye, and tongue, that contains a record of original investigations which may prove to be important. Notwithstanding the large amount of attention that has been directed to the question of the sensory innervation of the face, there are still certain points on which our knowledge is very incomplete. One of these is the problem as to whether the fifth or the seventh cranial nerve, or both, or neither, but some other quite different nerve, conveys afferent impressions from the deeper parts of the facial tissues. The evidence drawn from an examination of cases in which the Gasserian ganglion had been removed for trigeminal neuralgia has been so contradictory that Dr. Maloney and Dr. Kennedy determined to reinvestigate the matter for themselves. Their material comprised eight cases of removal of the Gasserian ganglion and ten cases of complete peripheral seventh nerve palsy from lesions at various levels, arising from several causes, in addition to certain cases of fifth or seventh nerve palsy from central lesions. Pressure-touch, pressure-pain, and the localisation of these were carefully tested on the affected face, eye, and tongue. With the pressure-sense of the tongue the peripheral hypoglossal nerve appears to have nothing to do, for in two cases of

facio-hypoglossal anastomosis for facial palsy, in which the twelfth nerve had been cut across and re-establishment of continuity rendered impossible, there was no alteration of that sense whatever. Nor do the fibres underlying it run in the chorda tympani, since three cases of facial palsy in which there was clear indication that the latter was implicated showed no defect of pressure-sense either. On the other hand, the Gasserian ganglion cases established the fact that the pressure-pain fibres for the eye are invariably affected by removal of the ganglion. The loss on the cheek to pressure-pain is always less than on the forehead, and on the lips than on the cheek. A critical consideration of their results leads Dr. Maloney and Dr. Kennedy to conclude that the fibres conveying impulses from pressure-touch probably run in the peripheral branches of the fifth nerve and certainly enter the Gasserian ganglion, but there is evidence to show that there are alternative courses for certain impulses connected with deep sensibility. These alternative nerve mechanisms are the seventh nerve and the sympathetic. Some of the cases examined make it clear that certain at least of the pressure-pain fibres from the face are associated with the facial nerve in the Fallopian canal, but they must pass through the region of the fifth nerve roots before entering the canal. Dr. Maloney and Dr. Kennedy suppose they run by way of Meckel's ganglion and the Vidian nerve to the geniculate ganglion. After the seventh nerve leaves the canal it is purely motor in function. It is possible that the sympathetic system conveys certain pressure-sense fibres associated with a general crude sensibility to pressure-pain, and that the intactness of this system explains the conservation of pressure-pain in the tongue under the circumstances described above. On the other hand, the involvement of the system from injury to carotid and cavernous plexus fibres at the time of operation may explain the permanent loss of pressure-pain in the eye and forehead on the affected side in the gasseriectomy cases.

CEREBRAL ABSCESS COMPLICATING AMŒBIC DYSENTERY.

IT is not surprising that the amœba coli, which so often infects the liver by way of the portal vein, should occasionally reach other organs and tissues through the systemic circulation. Indeed, a general dysenteric pyæmia might be expected to occur more frequently than is actually the case. An occasional and important consequence of diffusion of the amœbic infection is suppuration within the brain. Professor O. Jacob, writing in the *Revue de Chirurgie* for October, has collected records of nine cases from the literature, mostly by French authors, to which he adds a very full description of two cases under his own care. The first record was made by Julien in 1864, and, as in all the others, concerned a case of cerebral abscess complicating dysentery, in which hepatic suppuration had already occurred. The amœbic nature of the lesion was proved in four cases only, including the two reported by Jacob himself; in the others it was possible or probable that suppuration was provoked by other and secondary infective agents. Cerebral abscess occurs, according to Kartulis's observations in Alexandria, in over 3 per cent. of all cases of purulent dysenteric hepatitis; and though this is higher than the usual experience of tropical clinicians would indicate, it is probable that a routine examination of the cranial contents in all necropsies, such as Kartulis practised, would yield a similar result. Men are affected much oftener than women, and the age of the patient always lies between 20 and 50 years. Suppuration within the skull appears more likely to occur if the hepatic abscess communicate with the respiratory tract. No part of the brain is specially liable, but so far no case has occurred within the cerebellum. The abscess is usually single, and attains the size of a large egg. Meningitis is the exception, and consequently lumbar puncture yields a clear fluid. There is no encysting membrane, the abscess being in actual fact a necrotic area, softening to the consistence of pus in the middle and delimited by an inflammatory zone. Microscopic examination will discover the presence of amœbæ in this limiting area. The symptoms are not different from those of cerebral abscess in general; there is headache, which may or may not be localised in the region affected, the toxic evidences of suppuration are not conspicuous, and there is almost no proof of increased intracranial tension. Localising phenomena may or may not be present, according to the site of the lesion. Jacob in one of his cases was enabled to trephine over an abscess in the right temporal lobe and drain it, by the discovery of left bilateral homonymous hemianopsia and paresis of the left arm. Neither in this case nor in the other which he reports, however, was the operation successful in saving life; and as these are the only examples of surgical treatment hitherto recorded, the history of amœbic abscess of the brain is up to now one of uniform failure. One or two suggestions of importance in regard to technique are worthy of record. Extensive trephining is necessary, and the abscess should be sought for with a channelled sound and not with an aspirating needle, since the pus is viscid and runs reluctantly. For the same reason it is essential to provide freely for drainage. Possibly an earlier attack upon the disease may in the future give happier results.

SO-CALLED SYNONYMOUS PRODUCTS.

A GOOD deal has been said and written concerning the practice, which seems to be growing rather than diminishing, of marketing medicinal articles, identical in composition, under a variety of protected names. The subject, both in its legal and common-sense aspect, was fully discussed in THE LANCET of Nov. 17th, 1906, p. 1391, and on more recent occasions has been dealt with from other points of view. The literature of the subject is, in fact, extensive, and additions to it are being made constantly. In the *Pharmaceutische Zeitung* of April 26th, p. 327, there appeared a translation of an article contributed to the Russian "Official Medical Almanac" for 1911 by Professor B. J. Slowzow, in which the question is approached from a practical standpoint. He deplores the bewildering multiplicity of "new medicinal agents," many of which are merely imitations of, or are claimed to be synonymous with, well-known synthetic products, and shows that many of the preparations which are claimed to be of the same chemical composition as well-known branded products differ from them materially. The question arises as to what results must be expected from the employment of "imitations," and in this connexion he gives instances showing how a well-known product got a bad name because a "synonymous" article which had been substituted caused "œdema of the nasal mucous membrane and violent perspiration." Professor Slowzow suggests that medical practitioners could do a good deal to improve matters by the simple process of adding the maker's name when prescribing this or that preparation. This is not so simple as it seems, for the difficulty is in finding out which maker's name to add.

IN view of their departure for India the Duke of Teck and Viscount Iveagh, two of the three Governors of King Edward's Hospital Fund for London, have, with the approval of His Majesty the King, Patron of the Fund, and the concurrence of the Speaker of the House of Commons, appointed the Earl of Donoughmore, Lord Chairman of Committees of the

House of Lords, and the Right Hon. Sir T. Vesey Strong, Bart., K.C.V.O., to act with the Speaker as a committee to exercise the powers of the Governors until their return.

THE British Institute of Social Service and the National League for Physical Education and Improvement are holding a joint conference on "Some Preventive Measures against Consumption" in the library of the institute, 4, Tavistock-square, on Wednesday, Nov. 22nd, at 5 P.M. Free tickets of admission may be obtained on application to the secretary at that address. The chair will be occupied by Dr. Arthur Newsholme, chief medical officer to the Local Government Board.

AT the meeting of the Medical Society of London held last Monday Dr. F. W. Mott opened an interesting debate upon the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System in words which we reproduce in full in another column of THE LANCET. An interesting debate ensued thereon, which has been adjourned until Monday next, Nov. 20th.

AT the seventh annual public meeting of the Association of Women Pharmacists, to be held in the lecture theatre of the Pharmaceutical Society, at 17, Bloomsbury-square, W.C., on Monday, Nov. 20th, at 8 P.M., an address will be given by Professor W. E. Dixon on the Relation of the Pharmacist to Therapeutics.

Dr. Henry Curwen has received the King's Royal Licence to accept and wear the decoration of the Fourth Class of the Order of El Aliyeh which has been conferred upon him by the Sultan of Zanzibar in recognition of valuable service rendered while employed under the Zanzibar Government.

Sir Thomas Boor Crosby, M.D., Lord Mayor of London, has accepted the invitation of the Council and the Head Master of Epsom College to distribute the prizes and to address the boys on the next Founder's Day, which falls on July 27th, 1912.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ORDINARY MEETING OF THE COUNCIL.

AN ordinary meeting of the Council was held on Nov. 9th, Mr. C. W. MANSELL MOULLIN, Vice-President, being in the chair.

It was resolved to issue Diplomas of Membership to 80 successful candidates.

At the recent examination for the Diploma of Tropical Medicine, which was the first examination held, only one candidate presented himself, and he passed the examination. The successful candidate was Dr. James Bruce-Bays, of Grahamstown, Cape Colony.

A report was received from the Board of Examiners in Dental Surgery dealing with the report of the Inspector of the General Medical Council on the Final Examination for the Licence. *Inter alia* it suggests a revision of the syllabus of the examination in Surgery and Surgical Pathology, and it was approved.

A report was received from the Committee of Management; in it were considered the facts and suggestions contained in the report of the Public Health Committee of the General Medical Council. The report was received and adopted, and it was resolved to send it to the General Medical Council.

The VICE-PRESIDENT reported that Mr. Hallett had been invited by the Council on Medical Education of the American Medical Association to attend the conference on Medical Education to be held in Chicago on Feb. 28th, 1912, and address the meeting on the subject of the methods of conducting examinations for licences to practise medicine adopted by the Conjoint Examining Board in England, and that after consultation with the chairman of the Committee of Management Sir Henry Butlin had agreed with the President of the Royal College of Physicians to give Mr. Hallett leave to accept the invitation.

The VICE-PRESIDENT reported that the Bradshaw Lecture would be delivered by Mr. R. Clement Lucas on Wednesday, Dec. 6th, at 5 o'clock P.M., and that the subject of the lecture would be "Some Points in Heredity."

SPECIAL MEETING OF THE COUNCIL.

As we announced in THE LANCET of last week a special meeting of the Council was held on Nov. 9th to receive the resignation of the President, Sir Henry T. Butlin. The resignation was accepted with regret, and the following resolution was moved by Sir HENRY MORRIS, seconded by Mr. EDMUND OWEN, and carried unanimously:—

In accepting the resignation of the President of the College, as they very regretfully and reluctantly have just done, the Council desire to convey to Sir Henry Butlin the expression of their deep sympathy with him in that he has been compelled on account of illness to curtail the period during which he otherwise would have held the position of President of the Royal College of Surgeons of England.

The Council fully recognise and appreciate the intrepid and unflinching manner in which Sir Henry Butlin, in spite of imperfect health and impaired strength, has throughout performed the varied and important duties of President, and they share with him the disappointment, which they are sure he himself keenly feels, that he is not physically able to continue in office any longer.

The Council, moreover, desire to express their admiration for the ability, dignity, and courtesy with which Sir Henry Butlin has represented the College, and to assure him that the high standard of his example will always be remembered and cherished by his colleagues.

The Council then elected Mr. Rickman J. Godlee to fill the vacant post of President.

TUBERCULOSIS IN SCHOOL CHILDREN.

IN THE LANCET of Nov. 4th (p. 1278) we referred in general terms to the interesting report of the Chief Medical Officer of the Board of Education. One of the most important sections of that report deals with the various aspects of tuberculosis in school children. The subject of tuberculosis in young life has until recently received more attention in France than in this country, and the numerous institutions which have been formed for the care of "consumptive" children throughout that country, and the absence of similar provision for adults, bear a singular contrast to the methods which have been adopted in this country. With the advent of the school medical officers, however, much more attention is being drawn to the incidence of tuberculosis, especially of the pulmonary variety, in children at the school age, and the observations and suggestions to be found in Sir George Newman's report are well worthy of study.

The section to which we have referred deals with three chief issues relating to tuberculosis in children: 1. The Findings of School Medical Officers. 2. Existing Provision for Treatment. 3. Suggestions for Treatment by the Local Education Authority.

Findings of School Medical Officers.

In the first of these divisions especial stress is laid on the difficulties of diagnosis. This is shown by the considerable difference in the percentage of cases discovered in various areas. In Worcestershire, for instance, owing to the fact that one of the assistant medical officers diagnosed pulmonary tuberculosis in about 15 per cent. of the children examined, the percentage of cases discovered is 4·18. On the other hand, in Hertfordshire, out of a total of 12,772 children examined, one case of tuberculosis only was recorded. In children the diagnosis of early pulmonary tuberculosis is admittedly difficult, and must be especially so in the course of routine medical inspection; one reason is that it is more difficult to obtain sputum from children than from adults, and consequently the bacteriological test can frequently not be carried out. The von Pirquet test has been applied by some of the officers, but opinion is by no means unanimous as to its true diagnostic value.

We remark with satisfaction that the home conditions of tuberculous children have been investigated in a number of areas. This is a matter which we consider should be encouraged, if not insisted upon, wherever possible. The report states that whenever such investigations have been made the home surroundings, and particularly the sleeping arrangements, have almost always been unsatisfactory, and the need for inspection and supervision of the homes, together with the giving of advice and practical assistance, becomes increasingly evident. We have frequently insisted on the fact that the "fight against consumption" is inseparable from the housing problem, and until the slums are

cleared and the working classes are properly instructed in the need of cleanliness and of ventilation of the living rooms, but little real progress will be made towards the eradication of the disease. These remarks apply both to urban and rural districts. We trust, therefore, that the education authorities will speedily act upon the suggestions of the medical officer to the Board of Education.

Existing Provisions for Treatment.

In the second division of this section an account is given of the existing provisions for the treatment of tuberculous children. The special means already established are; (*a*) Hospitals and hospital schools; (*b*) sanatoriums and sanatorium schools; and (*c*) open-air schools, schools for physically defective (cripple) children. Institutions of these characters are but few in number, but their success shows that if more were provided much good would result.

A Scheme for the Prevention of Tuberculosis.

The third division is headed "Suggestions for the Treatment of Tuberculous Children by the Local Education Authority," and Sir George Newman very rightly remarks: "The time has perhaps come for education authorities carefully to consider their responsibilities with regard to the cases of tuberculosis among children occurring in their areas. For whilst it is true that the problem of tuberculosis, as a whole, does not come directly within the purview of the Local Education Authority, it is becoming more evident that the authority is, in fact, somewhat deeply concerned." We entirely endorse the remark that any national scheme for the prevention of tuberculosis is conspicuously incomplete without special arrangements for dealing with the disease among children, and it seems clear, therefore, as is mentioned in the report, that education authorities by means of their school medical service have the opportunity of playing an extremely important, and indeed essential, part in the prevention and cure of tuberculosis.

Sir George Newman then gives details of "A Scheme for the Prevention of Tuberculosis." In the first instance he insists that "all stages of phthisis should be notifiable, and notification should be made to the medical officer of health." The arguments which have been advanced for and against this suggestion are very forcible, and if such a proposal could be carried to its logical and practical conclusions—that is to say, if every case notified were visited by the medical officer of health, and if his directions as to the destruction or satisfactory alterations of unhealthy tenements were rigidly carried out—then, indeed, a most important step towards the prevention of tuberculosis will have been established. Notification, to be effectual, is a costly proceeding; already pulmonary tuberculosis is compulsory in institutions under the Poor-law and in all hospitals and institutions supported by voluntary contributions, and some experience of this measure as it is now practised is necessary before definite conclusions as to its utility can be formed. The establishment of "tuberculosis" dispensaries is undoubtedly a step in advance, and we agree that they should either be controlled by the medical officer of health and his assistants, or, if they are provided by voluntary associations, they should be intimately connected with the public health and school medical services. Perhaps the most important function they would fulfil would be to give practical advice as to personal and general hygiene.

The third suggestion under this scheme is as to the provision for the actual treatment of children. From the dispensary or school inspection clinic appropriate cases of the disease in children would be referred to a hospital, a sanatorium, a sanatorium school, a residential tuberculosis school, an open-air school, or a special day school. To carry this out a vast organisation would be necessary, but we believe the result would fully warrant the expense which would be entailed, for, once more to quote the report, "It is essential to the extermination of the disease that the early treatment of tuberculous children should receive attention."

In considering the relation between the pre-tuberculous school-child and the tuberculous adult there may lie one of our most important methods of checking phthisis.

Dr. A. Emrys-Jones has been reappointed a member of the medical board of the University of Wales for a further period of three years.

BRITISH MEDICAL BENEVOLENT FUND.

AT the October meeting of the committee 34 cases were considered and grants amounting to £253 made to 26 of the applicants. As the treasurer had reported that the account at the bank was already overdrawn to the extent of £95 the total deficit is now £348. Additional help is urgently needed, for applications at this time of the year are not only very numerous but most distressing. Contributions may be sent to the honorary treasurer, Dr. Samuel West, 15, Wimpole-street, W. Appended is an abstract of the cases relieved:—

Daughter, aged 66, of late M.D. St. Andrews. Only income a small annuity purchased by friends, and is in such poor health that work is impossible. Relieved four times, £48. Voted £12.

Daughter, aged 60, of late F.R.C.S. Has maintained herself as companion, housekeeper, &c., for several years, but for the last 18 months has been unable to obtain any post. Relieved twice, £10. Voted £5.

Widow, aged 56, of L.R.C.P. Edin. No income. Health very indifferent and dependent on two children who can ill afford to help. Relieved four times, £40. Voted £10.

Daughter, aged 68, of late L.S.A. No income and quite unable to earn a living. Relieved four times, £40. Voted £10.

Daughter, aged 50, of late M.R.C.S. Has had some very good posts as daily governess, but for the last nine months has been unable to obtain any work in spite of every effort. Small savings exhausted. Voted £10.

Daughter, aged 37, of late L.R.C.P. Edin. Used to maintain herself by teaching languages, but broke down in health two years ago and is still unfit for regular work. Voted £2 and given the offer of being taken in at a hospital for a rest cure before the reconsideration of her case.

Daughter, aged 48, of late L.F.P.S. Glasg. Has supported herself for some years by letting lodgings at a small seaside place, but earnings during the recent season have been insufficient to provide for the winter. Voted £10.

Widow, aged 44, of L.S.A. Unprovided for at recent death of husband, but has been promised a post in New Zealand and had the passage money provided by relations. Asks for a little help towards immediate needs before leaving this country. Voted £5.

Daughter, aged 76, of a late surgeon in the Scots Guards. Lost her income through a defaulting trustee several years ago and is now dependent on an old-age pension and slight occasional help from relations. Relieved twice, £33. Voted £15.

Widow, aged 79, of F.R.C.S. Has a small income, but being a chronic invalid is compelled to incur expenses for which it is insufficient. Voted £10.

Daughter, aged 64, of late M.R.C.S. Only income £10 per annum from another charity and is nearly blind. Relieved six times, £54. Voted £12.

Widow, aged 63, of L.R.C.P., L.R.C.S. Edin. Endeavours to support herself by letting rooms and teaching, but has lost most of her pupils and the rooms have been vacant for some weeks. Relieved 12 times, £92. Voted £5.

Widow, aged 64, of L.F.P.S. Glasg. Only income a pension of £24 per annum; children unable to help and health feeble. Relieved three times, £20. Voted £10.

Widow, aged 71, of M.R.C.S. Dependent on an old-age pension and slight assistance from children. Relieved six times, £74. Voted £12.

Widow, aged 73, of L.R.C.S. Edin. Kept a school for some years after husband's death, but has recently been practically dependent on a boarder who left a few months ago after a stay of ten years. Relieved five times, £39. Voted £5.

Daughter, aged 60, of late M.R.C.S. No income and dependent on a sister who only has two small annuities from charitable societies. Relieved twice, £20. Voted £12.

Widow, aged 71, of M.D. St. Andrews. Supported herself for several years after husband's death, but is now quite without means; children only give slight irregular help. Relieved four times, £54. Voted £12 and recommended to apply for an old-age pension.

Widow, aged 50, of L.R.C.P.I. Quite unprovided for at husband's death a few years ago, and being in feeble health is dependent on a daughter who teaches music. Relieved four times, £48. Voted £12.

Daughter, aged 52, of late L.R.C.P. Edin. No income, and quite unable to support herself owing to continuous ill-health. Relieved twice, £20. Voted £12.

Daughter, aged 59, of late M.D. Lond. Only income £7 a year, and totally incapacitated by a nervous disease. Relieved twice, £24. Voted £2, and recommended to apply for admission to an infirmary.

Widow, aged 73, of L.R.C.P. Edin. Supplements an income of a few shillings a week by letting rooms, but finds increasing difficulty in obtaining lodgers. Relieved once, £12. Voted £12.

Widow, aged 44, of M.R.C.S. No income; supports herself by letting lodgings but wants help to tide over the winter and to give a daughter lessons in shorthand. Relieved twice, £25. Voted £10.

Widow, aged 63, of M.R.C.S. No income and has just been obliged to give up a post as companion on account of a nervous complaint. Relieved twice, £24. Voted £12.

Daughter, aged 39, of late F.R.C.S. Has been practically incapacitated for some years by tubercular disease of a large joint but hopes to shortly resume work. Only means of subsistence meanwhile 2*s.* 6*d.* per week from another charity. Relieved five times, £60. Voted £12.

Daughter, aged 62, of late M.R.C.S. Receives a few shillings a week from friends, but is unable to earn anything. Relieved seven times, £78. Voted £12.

Daughter, aged 69, of late M.R.C.S. No income, and dependent on a brother whose means are very small. Has recently undergone a severe operation. Relieved once, £12. Voted £12.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH FOR 1910.

County of Middlesex.—In reporting on the administration of the Midwives Act Dr. C. W. F. Young states that during 1910 as many as 283 midwives notified to the county council that they intended to act as midwives, and that in addition 466 other certified midwives reside in the county. Of the practising midwives only 91 are now enrolled by reason of having been in *bonâ fide* practice before the passing of the Act, the rest being qualified by examination. Dr. Young considers that the county is well supplied with midwives, and that many of them do not attend a large number of cases, though they are anxious to do so. Out of some 27,000 births, it is estimated that 9482 were attended by registered women as midwives and 1356 by nurses under medical men. Medical aid notifications were received in respect of 754 births attended by midwives, a proportion of 2·3 per cent., almost identical with that in 1909. Of 41 cases of puerperal fever notified in the county 15 occurred in the practice of midwives. The report refers to the sanitary regulation of tents, vans, and other moveable dwellings, which frequently give rise to difficulty, as while the local authority can enforce its by-laws (for example, as to obtaining a sufficient supply of water) on the occupant, it cannot do so on the owner of land habitually let as a camping-ground. The principal facts of sanitary administration in the 33 sanitary districts (29 urban and 4 rural) of which Middlesex is now composed are set out in a very instructive manner. Dr. Young's next report should have the further interest of presenting statistical data regarding the several districts which are based on the recent Census enumeration. The population of the administrative county has increased from 792,476 in 1901 to 1,126,694 in 1911.

Metropolitan Borough of Islington.—Islington, one of the largest of the London boroughs, has shared in the diminution of population which has taken place in the more central parts of the metropolis. It had 327,423 inhabitants this year, a decrease of 7568 on the previous Census. Although there is evidence that many dwellings are unoccupied, the density of population is high—117 per acre. There has also been a notable increase in pauperism, an average of 10,476 people per week being in receipt of relief during 1910. The changes in the character of the population, and the possibility that, owing to the system of relief in Islington or to other causes, there is a considerable immigration of persons of the poorest class, give special importance to the efforts of the medical officer of health to deal with unsatisfactory housing, food-supply, and like matters. Several dwellings were closed as unhealthy under the Housing and Town Planning Act during the year, and there is room for a vigorous policy in this respect. Mr. A. E. Harris presses for the appointment of health visitors, not only for the prevention of infant mortality, but in order to deal with individual cases of phthisis notified under the Local Government Board orders. In the absence of visiting these orders merely throw on the health department a mass of comparatively useless clerical work. The report gives details of inspection of kitchens of restaurants, coffee and dining rooms, and similar places, a large number of which were found to be in an extremely unsatisfactory condition as regards cleanliness, lighting, and ventilation. It is an anomaly that while refuse is removed from the large hotels and restaurants, when desired, free of extra charge, there is only a weekly clearance from small coffee-shops and eating-houses; any extra removal is charged for, and the occupiers prefer to keep their bins crowded to their utmost capacity. These small shops are in the poorest parts of the borough, and the accumulated refuse gives rise to various nuisances and breeds large numbers of flies. In places where ice-creams are made the most unsatisfactory condition which is now found on inspection is the want of suitable storage for the materials used, which at present are kept anywhere, and have sometimes been found in the bedrooms of the makers. The inspectors have secured a marked improvement in the cleanliness of milk measures, but Mr. Harris finds that the lids of milk-cans are sometimes in a very uncleanly state. He considers also that the time has come for requiring that foodstuffs, particularly those which are eaten in a raw state, should no longer be sold in open-fronted shops. Mr. Harris has continued the energetic administration of the Sale of Food and Drugs Acts for which Islington has for many years been conspicuous, but he again draws attention to the way in which the clumsy and antiquated provisions of these Acts make it impossible to deal with flagrant cases of misdescription and adulteration, particularly of foods and drinks sold in poor neighbourhoods; and his report contains some striking illustrations of the need for official definitions of foods in this country, comparable to those in force in British colonies and the United States.

County Borough of St. Helens.—Under the St. Helens Corporation Act, 1898, the town council can require any privy ashpit in the borough to be converted and adapted to the water-closet system, whether it give rise to nuisance or not, and any tub or pail-closet to be converted into a water-closet if it creates a nuisance. If the latter do not create nuisance the conversion can still be enforced by the municipality if it is prepared to contribute half the cost. Notwithstanding these provisions a great deal remains to be done in this town to improve methods of excrement and refuse disposal. There remain as many as 2820 privy middens, most of which are in the thickly inhabited portions of the town, and 6382 pail closets, which are still almost as numerous as the water-closets in the borough. The retention of privy-ashpits and the defects in the pail system no doubt contribute to the maintenance of sporadic enteric fever. This disease occurred in 71 houses in 1910 and is understood to be still more prevalent during the present year. Dr. J. J. Buchan gives figures which show that it would be practicable to continue conversion at a much greater rate than hitherto without materially adding to the local rates. In August, 1910, an outbreak of poisoning attributed to canned meat was investigated. A large tin of a well-known brand of corned beef had been opened by a grocer and sold by the slice on the same or the next day to 11 customers, through whom the meat was eaten by 33 persons. All but one of these became ill within a very short time of eating the meat; the shortest period of incubation was two hours and the longest ten hours; the majority were affected in about four hours. The symptoms consisted chiefly of vomiting and severe diarrhœa, continued from six to 24 hours after the onset; the illness was accompanied by a great amount of depression, which left the persons affected ill for some days. Bacteriological examination failed to show any evidence of the presence of bacilli of the Gaertner group or B. botulinus, and the general history of the outbreak made it probable that it was due to bacterial toxin rather than to living bacteria. Dr. Buchan considers that much good has been done by the systematic visiting by a trained nurse of practically all births notified under the Notification of Births Act. In this way the percentage of infants who are breast-fed has increased, and on the present method of reckoning amounted to 98 in 1910. An inquiry into 2170 cases showed that only 6·6 per cent. of the infants originally reckoned as breast-fed at birth were weaned before they were six months old. In St. Helens the town council pay a small fee—6*d.* per birth—to medical practitioners and midwives notifying under the Act.

County Borough of Blackpool.—Dr. E. W. Rees-Jones's report contains several matters of interest. The birth-rate of Blackpool, which was 27·74 in 1898, has now fallen to 16·7; the death-rate for 1910 was as low as 12·47. The Census population, 58,378, on April 1st last is, of course, greatly below the normal population of this popular seaside resort during a large part of the year. Blackpool is so dependent on visitors that there is special need for precautions against the spread of infectious disease through lodging-houses, and Dr. Rees-Jones strongly urges, in regard to phthisis, that the sanitary authority should have compulsory powers to disinfect thoroughly all premises which have been occupied by consumptive persons, and that it should be a penal offence to allow such premises to be occupied by others without previous disinfection. Measles has been a notifiable disease in Blackpool for over 20 years; in 1910 the notifications were 660, and the deaths 4 only. Dr. Rees-Jones considers it doubtful whether the administrative measures based on notification have had much effect in reducing the prevalence of the disease, but believes that a marked effect has been produced by them on the case mortality. The cost of the infectious diseases hospital to the rates, including interest,

sinking fund, renewal expenses, and cost of disinfection, averaged £2 5*s.* per patient per week; cost of maintenance in food averaged for the year 4*s.* 11*d.* per head per week. Special attention is given by the sanitary authority to basement dwellings; 89 families living in basement rooms have only one room for the whole of the family. In Blackpool the administration of the Shop Hours Acts and Employment of Children Act is carried out in the department of the medical officer of health.

REPORTS OF SCHOOL MEDICAL OFFICERS.

County Borough of Stockport.—Mr. H. E. Corbin, in presenting the report of the school medical officer (Dr. M. Gertrude Edis), is able to state that the amount of treatment obtained as a result of inspection is very satisfactory. Of the 5102 children inspected out of a school population of 17,906, 68·6 per cent. were found to have one or more defects, and 15·6 per cent. parents attended. As in most other places, great difficulty exists in dealing with ringworm and verminous conditions, and less improvement is reported in these conditions than in other defects, the actual percentage of verminous heads found being increased over last year's figure. It is suggested that the cloakrooms help in spreading the condition. In connexion with anæmia (379 cases) it is suggested that the badly ventilated classrooms are a contributory factor. There were 32 mentally defective children, and 215 "backward" cases, of whom 60 per cent. were accounted for by some physical defect, and 40 per cent. showed no obvious cause. 126 cases had deformities. Difficulty in the treatment of ringworm arose partly because of the refusal of the infirmary board to treat school cases, and led to the issue of a circular letter to all practitioners in the town and to the passing of special administrative measures. The success of these measures is not stated. A detailed report on the sanitary circumstances of schools reveals a number of grave defects; in four schools privy-middens exist, many schools are dirty, cloakroom accommodation is bad, and in some schools the heating arrangements are very poor, in one department so much so that frequent exercise has had to be added to overcoats worn in the class-room to maintain the temperature. This last school was a non-provided institution.

County of Ayr.—Dr. C. R. Macdonald's report takes us up to July, 1911, and comprises reports for the Northern, Kilmarnock, and Ayr and Carrick districts, and for the schools in the Burgh of Ayr. In the Northern district the number of "entrants" and "leavers" examined was 3537, the number found defective being 2309; out of 280 special cases presented by the teachers, in 273 the attention of parents was drawn to a remediable condition. It is not a little remarkable that for all these children only 122 parents attended, and it would be extremely interesting to have a light thrown on the social school conditions, if any, which go to produce this effect. A large proportion of the defects found among the routine cases were in regard to cleanliness, and when these are subtracted only 997 cases remain, of which 360 were "bad" dental caries, 163 defective vision, and 175 deafness. There were 36 cases of tuberculosis and 18 of valvular disease of the heart. It is curious to note that only one case of enuresis is recorded. The figures quoted are fairly typical of many other districts, and it is a matter for consideration whether an economy in energy might not be effected by a method of examination other than that of mechanical routine. It is also a matter of interest to consider how long an investigation of some kind into the digestive system can be left out of school examinations. Possibly some light might be thrown by such an investigation on "malnutrition." The medical officer of the Northern district reports on the privy-midden, still existing in some schools, as "an absolute abomination." There is no excuse of any kind for the persistence of these insanitary antiquities. Dr. B. C. Stevens reports for the Kilmarnock district that more parents attended than last year, 3654 routine cases were seen and 365 special cases, and with these children 364 parents came to the inspection. One in nine of these children suffered from malnutrition, as compared with the figure of 1 in 18 for the Northern district, and 1 in 23 for the district of Ayr and Carrick. As the three districts concerned are only divided for administrative purposes, and the report does not note any special differences between them, it is to be presumed that these wide divergences are due to differences of standard in estimating nutrition.

Hampshire County Council.—Dr. Robert A. Lyster's report deals with the three districts into which the county is divided for school purposes, containing 42 urban and 308 rural schools, with 13,753 and 33,009 children in average attendance respectively. During the year 1185 visits were made to schools, of which 458 were routine visits, and 48,895 examinations of children made, children known to be defective being examined on several occasions. 7885 routine cases were inspected and 41,010 special examinations made, this figure including re-examinations. The method adopted provides for the registering not only of the usual observations, but also, among other matters, gives the number of rooms in the homes of children and number occupied, and the occupation of the parents. The coöperation of the teachers is greatly encouraged, and went as far in one school as the actual rehearsing of a medical inspection in order to secure smoothness of working. It is interesting to note on these figures that Dr. Lyster classes 1·06 per cent. "entrants" (5 years) as suffering from bad nutrition and 0·89 per cent. "leavers" (13 years); this is a diminution on the figures of the previous year, whereas dirtiness has increased. In regard to clothing Dr. Lyster notes the prevalence of over-clothing, and the fact that this is often confined to the chest and abdomen, the legs being left bare. This is probably a universal experience with certain sections of the population, and may well account for the prevalence of bronchitis and broncho-pneumonia among children whose parents are of the poorer class. Considerable attention is directed to the condition of clothing, as also of footgear, and a strong plea is put in for the "economical and hygienic" clogs. The difference between the North where clogs are habitually worn and the South where they are not appears to be a matter of social custom only. Medical inspection will prove a powerful weapon indeed if it can produce not only fashions which will tend to eradicate pediculi, but also fashions in footwear. The figures for attendance of parents at examination are not given, but it is stated that few attend, partly owing to the long distances to be travelled. Despite this over 54 per cent. obtain treatment for the defects pointed out at inspection, and apart from dental defects 64·4 per cent. are treated. A special investigation was made in the Fareham Poor-law area to discover why children needing treatment had not obtained it. Inquiries were conducted concerning children living in 282 homes, and the fact emerged that more than half these cases had a total income (excluding rent) of not more than 10*s.* to 20*s.* a week, while 10 per cent. of the cases were below 10*s.* a week. A tabulation of special work done in connexion with schools by teacher and others is given, and is interesting as affording a measure of the amount of individual initiative and goodwill available for school purposes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7900 births and 4056 deaths were registered during the week ending Nov. 11th. The annual rate of mortality in these towns, which had been 14 4, 13·3, and 13·5 in the three preceding weeks, declined to 13·1 per 1000 in the week under notice. During the first six weeks of the current quarter the mean annual death-rate in these towns averaged 14·1, or 0·1 per 1000 above that recorded in London during the same period. The death rates in the 77 towns last week ranged from 5·0 in Walthamstow, 5·1 in King's Norton, 5·7 in Willesden, and 6·2 in Reading, to 19·0 in Swansea, 20·0 in Stockton-on-Tees, 20·7 in Sunderland, and 21·6 in Bootle. The 4056 deaths from all causes in the 77 towns were 126 fewer than the number returned in the previous week, and included 279 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 301 in the 11 preceding weeks. Of these 279 deaths, 113 resulted from infantile diarrhœa, 55 from diphtheria, 37 from measles, 26 from scarlet fever, 24 from enteric fever, and 24 from whooping-cough, but not one from small-pox. The mean annual death-rate from these epidemic diseases

last week was equal to 0·9 per 1000, against 1·1 and 1·0 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœa, which had steadily decreased from 2714 to 128 in the 11 preceding weeks, further declined to 113 last week, and included 39 in London and its suburban districts, 10 in Manchester, 7 in Liverpool, 6 in Birmingham, and 4 in Sheffield. The deaths referred to diphtheria, which had been 60, 46, and 56 in the three preceding weeks, were 55 last week; 15 deaths occurred in London, 4 in Stoke-on-Trent, 4 in Liverpool, 3 in Portsmouth, and 3 in Southampton. The 37 fatal cases of measles were 1 in excess of the number in the preceding week, and included 11 in London and 4 in Tottenham. The deaths attributed to scarlet fever, which had steadily increased from 10 to 30 in the four preceding weeks, fell last week to 26, and of these 7 were registered in London, 4 in Liverpool, 3 in Stoke-on-Trent, and 2 in Birmingham. The deaths assigned to enteric fever, which had been 48, 28, and 35 in the three preceding weeks, declined last week to 24, of which 3 were recorded in Birmingham, and 2 each in London, Blackburn, York, and Hull. The 24 fatal cases of whooping-cough were equal to the average in the three preceding weeks, and included 8 in London, 3 in St. Helens, and 2 in Coventry. The number of scarlet fever patients in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 2189 in the 10 preceding weeks, had further advanced to 2203 on Saturday last; 292 new cases of this disease were admitted to these hospitals during the week, against 344, 297, and 269 in the three previous weeks. These hospitals also contained on Saturday last 1249 cases of diphtheria, 174 of whooping-cough, 130 of enteric fever, and 83 of measles, but not one of small-pox. The 1108 deaths from all causes in London last week were 32 fewer than the number in the previous week, and included 196 which were referred to diseases of the respiratory system, against 228, 210, and 170 in the three preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 158 and 144 in the two preceding weeks, further declined to 136 last week, and 325 inquest cases were registered. The causes of 39, or 1·0 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified last week in Manchester, Leeds, Bristol, West Ham, Bradford, Nottingham, Stoke-on-Trent, Portsmouth, and in 51 other smaller towns. The 39 uncertified causes of death in the week under notice included 8 in Birmingham, 4 in Bootle, 4 in Warrington, 4 in South Shields, and 3 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 798 births and 533 deaths were registered during the week ending Nov. 11th. The annual rate of mortality in these towns, which had been 16·7 and 16·4 per 1000 in the two preceding weeks, was equal to 16·3 in the week under notice. During the first six weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·1 per 1000, and was 2·0 per 1000 above the mean rate during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 12·3 and 14·5 in Paisley and Dundee to 18·1 in Edinburgh and 18·9 in Perth. The 533 deaths from all causes were 5 fewer than the number in the previous week, and included 48 which were referred to the principal epidemic diseases, against 52 and 47 in the two preceding weeks; of these 48 deaths, 14 resulted from diphtheria, 13 from measles, 9 from whooping-cough, 9 from diarrhœa, 2 from scarlet fever, 1 from enteric fever, but but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·5 per 1000, and was 0·6 per 1000 above the mean rate from the same diseases in the 77 large English towns. The deaths attributed to diphtheria, which had been 5, 8, and 11 in the three preceding weeks, further rose last week to 14; 8 deaths were recorded in Glasgow, 2 in Edinburgh, and 2 in Dundee. The deaths assigned to measles, which had steadily increased from 1 to 15 in the six preceding weeks, slightly declined to 13 last week, and included 7 in Aberdeen and 4 in Glasgow. The fatal cases of whooping-cough, which had been 5, 4, and 5 in the three previous weeks, rose to 9 last week, and of these 4 occurred in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The deaths referred to diarrhœal diseases, which had decreased from 41 to 12 in the four preceding weeks, further declined last week to 9, all but one of which were of infants under two years of age; 3 deaths were registered in Glasgow and 2 in Paisley. The deaths attributed to scarlet fever, which had decreased from 8 to 4 in the four preceding weeks, further declined to 2 last week, and were recorded in Dundee and Leith respectively. The fatal case of enteric fever was registered in Leith. The deaths referred to diseases of the respiratory system, which had increased from 78 to 116 in the three previous weeks, declined to 108 in the week under notice, but were 43 above the number in the corresponding week of last year. Of the 533 deaths from all causes in the Scotch towns last week, 155, or 29 per cent., were recorded in public institutions, and 21 deaths were attributed to various forms of violence. The causes of 15, or 2·8 per cent., of the deaths in the eight towns last week were not certified; in the 77 large English towns the proportion of uncertified causes did not exceed 1·0 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 631 births and 388 deaths were registered during the week ending Nov. 11th. The annual rate of mortality in these towns, which had declined from 19·6 to 17·1 in the five preceding weeks, rose to 17·6 per 1000 in the week under notice. During the first six weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·2 per 1000; in the 77 English towns the mean annual death-rate during the same period did not exceed 14·1 per 1000, while in the eight Scotch towns it was equal to 16·1. The annual death-rate last week was equal to 22·1 in Dublin (against 12·8 in London), 15·7 in Belfast, 19·7 in Cork, 15·3 in Londonderry, 8·1 in Limerick, and 15·2 in Waterford; while in the 16 smallest of these Irish towns the annual death-rate did not exceed 13·6 per 1000. The 388 deaths from all causes were 10 in excess of the number in the previous week, and included 33 which were referred to the principal epidemic diseases, against numbers decreasing from 134 to 40 in the eight preceding weeks; of these 33 deaths, 10 resulted from diarrhœal diseases, 9 from measles, 6 from diphtheria, 5 from scarlet fever, 2 from whooping-cough, and 1 from enteric fever, but not one from small-pox. These 33 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·5 per 1000; in the 77 English towns the mean death-rate from these diseases did not exceed 0·9 per 1000, while in the eight Scotch towns it was equal to 1·5. The deaths attributed to diarrhœal diseases, which had steadily decreased from 121 to 24 in the eight previous weeks, further declined last week to 10, all but one of which were of infants under two years of age; 5 deaths were recorded in Dublin. The deaths referred to measles, which had increased from 1 to 6 in the four preceding weeks, further rose to 9 last week, and comprised 6 in Dublin, 2 in Newtownards, and 1 in Cork. The six fatal cases of diphtheria were 4 in excess of the average in the four preceding weeks, and comprised 2 each in Dublin, Belfast, and Cork. Of the 5 deaths assigned to scarlet fever, 3 were recorded in Dublin and 2 in Belfast. The 2 fatal cases of whooping-cough and that from enteric fever also occurred in Belfast. The deaths referred to diseases of the respiratory system, which had been 57 and 77 in the two preceding weeks, slightly fell to 75 in the week under notice. Of the 388 deaths from all causes in the Irish towns last week, 117, or 30 per cent., were recorded in public institutions, and 5 were attributed to different forms of violence. The causes of 12, or 3·1 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 1·0 per cent. in the 77 large English towns, and was equal to 2·8 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeon: F. A. Capps to Haulbowline Hospital. Staff-Surgeons: H. Huskinson to the *Boadicea;* and E. R. L. Thomas to the *Victory*, additional, for disposal. Surgeon and Agent, Ryde, Isle of Wight: J. W. Pridmore.

In accordance with the provisions of Order in Council of April 1st, 1881, Fleet-Surgeon Shirley Hall Birt has been allowed to withdraw from His Majesty's Naval Service with a gratuity (dated Sept. 18th, 1911).

ROYAL ARMY MEDICAL CORPS.

Major Albert Pearse retires on retired pay (dated Nov. 15th, 1911).

Lieutenant Benjamin Biggar, from the seconded list, is restored to the establishment (dated Oct. 1st, 1911).

Colonel W. G. A. Bedford, C.M.G., principal medical officer at Hong-Kong, has been selected for appointment as Principal Medical Officer of the London District in succession to Colonel A. Peterkin. Lieutenant-Colonel A. F. Russell, C.M.G., has been appointed Principal Medical Officer in Egypt in succession to Colonel T. M. Corker, who is appointed Principal Medical Officer of the Eighth (Lucknow) Division of the Northern Army in India. Lieutenant-Colonel W. W. Pike, D.S.O., senior medical officer at Cairo, has been selected for appointment as Principal Medical Officer of the Bombay Brigade, vice Colonel R. H. Forman, retired. Lieutenant-Colonel F. H. Treherne has embarked for India to take up the appointment of Principal Medical Officer of the Bangalore and Southern Brigades, vice Colonel H. J. R. Moberly, who has retired. Lieutenant-Colonel H. J. Barratt, senior medical officer of the Straits Settlements, has been appointed Principal Medical Officer of the Allahabad Brigade, relieving Colonel L. E. Anderson, transferred as Principal Medical Officer of the Bareilly, Gharwal, and Dehra Dun Brigades. Lieutenant-Colonel W. H. Starr has taken up charge of the Military Hospital at Lichfield, vice Lieutenant-Colonel G. W. Brazier-Creagh, C.M.G. Lieutenant-Colonel W. A. Morris, commanding the Station Hospital at Allahabad, has been selected for increased rate of pay under Article 317 of the Royal Warrant. Major S. F. Clark has taken up duty as Medical Inspector of Recruits in the Western Command at Headquarters, Chester, in succession to Major G. S. McLoughlin. Major A. O. B. Wroughton, on return to duty from sick leave, has been posted to the Eastern Command. Major H. C. French, specialist in dermatology and venereal diseases at Malta, has arrived home on leave of absence. Major E. W. P. V. Marriott has arrived home from Gibraltar, tour expired. Major E. M. Morphew, lately commanding the Station Hospital at Ranikhet, has been transferred to the Home Establishment and appointed for duty in the Western Command. An exchange of destinations in India has been approved by the Director-General between Major W. T. Mould and Major L. P. More, who are both under orders to embark during the ensuing trooping season. Major J. W. Leake has taken up duty at Sierra Leone. Major G. S. Crawford has been appointed Recruiting Medical Officer at Dublin in succession to Major G. W. Tate, appointed Medical Inspector of Recruits. Major E. P. Sewell, lately serving at Belfast, has taken up duty at Ceylon as Specialist Sanitary Officer. Major G. St. C. Thom, specialist in otology and laryngology, has been granted one year's extension of Indian tour of service. Major F. J. W. Porter, D.S.O., in medical charge of effective troops at Cosham, has been placed under orders for duty with the Northern Army in India. Major R. C. Lewis, on the closing of Carnarvon Camp, has joined for duty at Pembroke Dock. Major H. G. F. Stallard, on relief by Brevet-Colonel R. S. F. Henderson, K.H.P., has been transferred from Army Headquarters, Simla, to Cherat. Major N. Marder, from Cosham, has taken up duty at Portland. Major G. Mansfield, in charge of the Military Hospital at Norwich, has been granted ten days' leave. Captain J. J. O'Keefe has been appointed to hold civil medical charge of Roorke, in addition to his military duty, in succession to Captain B. E. M. Newland, I.M.S. An exchange on the roster for service abroad has been approved by the War Office between Captain M. F. Foulds, specialist in advanced operative surgery at Belfast, and Captain A. F. Carlyon, serving at Devonport. The latter will accordingly take up duty at Mauritius during the ensuing trooping season. Captain P. G. Hyde, from Dublin, has arrived in Ceylon for a tour of service. Captain W. F. Tyndale, C.M.G., has taken up duty as Specialist Sanitary Officer at Devonport on transfer from the Irish Command. Captain R. C. Wilmot has joined for duty at Colchester as Specialist in Ophthalmology on transfer from the Southern Command. Captain W. Byam has arrived home on leave of absence from duty with the Egyptian Army. Captain F. E. Rowan-Robinson, at present serving at Norwich, has been granted leave of absence from Dec. 1st to date of embarkation to Bermuda. Captain H. B. Kelly has been appointed to the medical charge of the Military Families Hospital at the Curragh. Captain M. J. Cromie, Captain E. W. Powell, and Captain A. D. O'Carroll have been detailed for duty on board the troopship s.s. *Plassy*, which left Bombay for Southampton on Nov. 9th. Lieutenant H. S. Ranken has taken up duty in the Egyptian Army with the rank of Bimbashi, for appointment under the Government of the British Sudan.

INDIAN MEDICAL SERVICE.

Surgeon-General H. W. Stevenson has received an extension of his leave of absence home from India. The Lieutenant-Governor of the Punjab has appointed Lieutenant-Colonel C. H. James a first-class Civil Surgeon. Lieutenant-Colonel P. Hehir has taken up duty as Officiating Principal Medical Officer of the Burma Division. Lieutenant-Colonel J. Morwood on return from leave has been appointed Civil Surgeon of Shahjahanpur, United Provinces. The services of Major E. L. Ward, superintendent of the Central Jail at Lahore, have been placed temporarily at the disposal of the Coronation Durbar Committee for employment at Delhi. Major D. N. Anderson has embarked for India on the expiration of his leave of absence. Major E. C. G. Maddock has been permitted to extend his leave of absence from India on the recommendation of a medical board for a further period of six weeks. Captain E. A. Walker, Bengal Presidency, has arrived home on leave of absence. The services of Captain S. B. Mehta, plague medical officer at Rohtak, have been placed at the disposal of the Government of India for employment under the Department of Education in the Punjab. Captain W. J. Fraser, officiating civil surgeon at Chanda, has been placed on deputation for a course of training at the X Ray Institute, Dehra Dun. Captain F. W. Sumner, officiating civil surgeon at Shahjahanpur, has taken up duty at Fategarh, United Provinces, relieving Captain E. P. Mackie, who has been appointed Officiating Civil Surgeon at Bijnar. Captain E. J. C. McDonald, officiating civil surgeon at Sibsagar, has been selected for employment as Medical Officer in Charge of the Military Police Force engaged on active service with the Abor Expedition. Captain J. W. McCoy, Bengal Presidency, has received two months' extension of his leave of absence home from India. Captain T. C. Rutherfoord, civil surgeon of Bilaspur, has been appointed to the medical charge of the Raipur District. Captain H. C. Keates has taken up duty as Superintendent of the Jullundur District Jail. On return from leave Captain A. F. Babonall has been transferred from Ambala District to Gurgaon as Plague Medical Officer. Captain W. E. Brierley has embarked for service in India. Captain W. L. Trafford has received permission to extend his leave home from India for a further nine months.

TERRITORIAL FORCE.

Royal Army Medical Corps.

1st London (City of London) Field Ambulance, Royal Army Medical Corps: Lieutanant Eardley L. Holland resigns his commission (dated Nov. 11th, 1911).

1st South Midland Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be captains (dated Oct. 1st, 1911):—Lieutenant Cyril R. Lunn, Lieutenant William M. Sturrock, and Lieutenant William McCall.

2nd South Midland Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be captains (dated Oct. 1st, 1911):—Lieutenant William A. L. Holland, Lieutenant John H. Hobling, and Lieutenant Alfred A. Hingston.

Attached to Units other than Medical Units.—Lieutenant Frederick W. K. Tough to be captain (dated Oct. 1st, 1911).

For Attachment to Units other than Medical Units.—Thomas Charles Hunter to be Lieutenant (dated Sept. 9th,

1911); Oskar Teichmann to be Lieutenant (dated Sept. 16th, 1911); Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel Charles Henry Gwynn, from the 4th Battalion, The King's (Shropshire Light Infantry), to be Lieutenant-Colonel with the honorary rank of Surgeon-Colonel (dated Nov. 11th, 1911).

The undermentioned officers of the Royal Army Medical Corps to be Adjutants of Schools of Instruction:—Captain Hugh Herbert James Fawcett (dated Oct. 19th, 1911), and Captain Farquhar McLennan, Captain Charles Bramhall, Captain Richard Nason Woodley, Captain Charles Reginald Sylvester-Bradley, Captain Richard Brassey Hole, Captain John Martin Maynard Crawford, Captain Montague Frederick Grant, Captain Henry Horace Andrews Emerson, and Captain Roland Harley Bridges (all dated Nov. 1st, 1911).

Deaths in the Services.

Surgeon-Major-General Robert Wyatt Meadows, A.M.S., at his residence, "Fensalir," Saltash, Cornwall, on Nov. 9th, in his 80th year. He entered the army as assistant-surgeon, joined the 9th Norfolk Regiment at Malta in 1854, and, volunteering for war service, was sent to the Crimea. He was present at the battle of Inkerman, and served throughout the whole of the siege of Sevastopol. At the conclusion of the war he was gazetted to the 68th Regiment and proceeded to Canada; later he went to India and rendered excellent service during the cholera epidemic at Mhow, in Central India, and for which he received the special thanks of the Commander-in-Chief (the late Duke of Cambridge). After 20 years' foreign service he came to England in 1874, and was appointed medical officer in charge of Bull Point, Devonport. In 1878 he went to Bengal, being attached to the 60th Rifles, and served during the Afghan war of 1879–80. Later he was selected to be principal medical officer of the 3rd Division, and took part in the march from Kandahar to Cabul, under Sir D. Stewart, and was at the battles of Kheyl and Urzoo, as well as at some minor engagements. At the close of the war he was promoted deputy-surgeon-general to the Mhow Command. He returned to England later and was appointed principal medical officer of the old Western Command at Devonport. He was afterwards made principal medical officer at Gibraltar, and was promoted surgeon-major-general. In 1892 he retired from the service and took up his residence at Saltash.

Close of a Remarkable Career.

News comes from Calcutta of the death of Surgeon-Lieutenant-Colonel K. P. Gupta, I.M.S., at the age of 68. In spite of extreme poverty in early life he had a distinguished student career at the University of Calcutta, and not only supported himself out of scholarships but managed to contribute to the maintenance of his widowed mother in their native village of Bengal. He passed the B.A. examination with distinction in 1865 and obtained first place in the M.A. examination a year later. After passing the final M.B. examination in the first division in 1868 he proceeded to Scotland and qualified as L.R.C.P. & S. within a year. In 1879 he obtained the F.R.C.S. Edin. and in 1884 the D.P.H. of Cambridge. He passed high into the Indian Medical Service and remained in that service for 29 years. He was Deputy Sanitary Commissioner of Bengal for a considerable period and rendered valuable service to the Government. Lieutenant-Colonel Gupta was much beloved by his fellow countrymen and was an active benefactor to his native village.

The Shortage in the Medical Services.

In answer to Mr. Bennett Goldney in the House of Commons on Nov. 13th, Mr. Macnamara said that the shortage of medical officers in the Royal Navy Medical Service at the present time was practically the same as it was 12 months ago—20 had entered and 22 had gone owing to retirements or deaths. The shortage was 60 of all ranks. In reply to a similar question with regard to the Royal Army Medical Corps of all ranks in the Regular Army, in the Reserve, and in the Territorial Force, Mr. Tennant said: The present shortage was as follows:—Regulars: officers, 22; other ranks, 208. Reserves: officers, *nil;* other ranks, 3174. Territorial Force: officers, 283; other ranks, 1759. There is no definite establishment of officers of the Special Reserve, but the present strength amounted to 114. At the last three examinations for commissions the number of candidates qualified exceeded the number of vacancies. For the examination to be held next January for not less than 20 vacancies three candidates had already entered, but the list would not be closed until Jan. 15th.

Indian Medical Service Examination.

An examination for not less than 12 commissions in the Indian Medical Service will be held in London on Monday, Jan. 22nd, 1912, and the five following days. Particulars and the necessary forms for application can be obtained from the Military Secretary, India Office, London, S.W.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—There is no doubt that a large majority of the profession is strongly opposed to the suggestion that the medical benefits under the Insurance Bill—soon to become the Insurance Act—shall be dispensed by "contract" with the doctors at a uniform and continuous *per capita* rate. Among those who assent to this contract system are many who do so only because they regard it as inevitable, or as the only practicable system, and many others who think that all objections to the system pass away if the scale of payment is adequate. There are very few of us who hold that it is in principle as well as in practice the right system of payment of doctors. The simplest and best way to test one's conviction of its merits is to answer the question whether it is adapted for all classes of the community, the rich as well as the poor. The initiation of the system was due to the desire of medical men to extend *their charity* to their poorer neighbours. Is a system founded on voluntary charity adapted for compulsory State assurance? Surely we have never had a more extraordinary proposal to fill old wine-skins with new wine than is this!

You have already, in June last, extended to me the courtesy of your columns to urge my professional brethren to refuse the position offered them under the Insurance Bill, which is, in a word, to underwrite the "medical benefit" of that Bill. I will not repeat what I then said, but will only add that the way in which "free doctoring" has been spoken of by the Chancellor of the Exchequer as one of the great attractions of the Bill to the assured is the clearest proof of the danger of this Bill to the medical profession. Will this "bribe" of "free doctoring" and "no doctors' bills" be paid by the State or wrung from the impoverished pockets of the general practitioner?

The contract system is not essential or inevitable to a scheme of sickness insurance. There are at least three other possible methods; two of these can be dismissed at once—the system of State doctors to attend only the insured and the system under which the State or the Local Insurance Committees would undertake to pay the bills for medical attendance upon the insured. These plans have no advocates, and we need not discuss their drawbacks. The objections which were urged to the latter system by your correspondent, Dr. J. P. Walker, throw a lurid light upon the difficulties of carrying out medical attendance upon insured persons.

The real practicable alternative to the "contract system" is to include the cost of medical benefit in the weekly insurance money and let the insured man use it in the payment of his doctor for services rendered in exactly the same way as he will use the rest of the money in the payment for his other necessaries. It is evident that if the sum paid to the profession under a scheme of "contract" is "adequate" it must equal the total sums that should be paid by the sick members of the insured community under the ordinary method of payment for work done. An "adequate" *per capita* rate must at least equal the "adequate" remuneration of the doctors for the work they do. The sum of money, therefore, that would be required for "payment for work done" would not exceed that paid under an "adequate" contract system. But there would be this difference: the money would be paid directly to those who earn it, and at the time of earning it, and there would be that close and direct association between work and remuneration that sweetens both. The "contract system" lends itself to abuses that "payment for work done" does not. The latter would

prevent—unreasonable demands upon the doctor, and valetudinarianism or malingering. When each visit of the doctor has to be paid for in hard cash the poor man will not be tempted to make undue calls upon his doctor. Undoubtedly one of the chief difficulties in the working of any system of sickness insurance is that of valetudinarianism or malingering. It is openly stated that since the Workmen's Compensation Act came into force injuries have been more slowly recovered from than heretofore. We all have daily evidences of the potent influence of mind over body, and it does not involve any charge of moral obliquity to maintain that the need to earn one's living is a healthy stimulus to convalescence, and that when this stimulus is removed convalescence is apt to be prolonged. If the Insurance Act is not to be an intolerable burden to the State, and a blighting influence upon the wage-earning population, it must leave the sick man with a very direct interest in getting well as quickly as ever he can; and to force him to pay for his "medical benefit" out of his insurance money will be a simple and efficient means of applying the pressure which will be the necessary stimulus.

Among other advantages of the "payment for work done" system are these: There is no need for a wage-limit, as the scale of fees would vary, as at present, in accordance with the financial ability of the patient; the question of the control of doctors by Local Insurance Committees or by societies and clubs would not arise; the payment for consultations, operations, and the services of specialists of all kinds, as well as the payment for hospital treatment, can be arranged quite easily and along the same lines as the payment of the regular doctor.

Were this system to be adopted the doctors would have to contribute to its working by giving a certificate to enable the sick man to receive each week's insurance money, such certificate stating that the insured man was duly carrying out his doctor's advice and was still unfit for work, and it might include a statement of the number of medical visits paid during the week and the amount of the fees that had been paid to the doctor for his attendance. The doctors would also have to accept small cash fees and to insist on their payment at the time.

I must not encroach further upon your valuable space, and in conclusion would only urge all my professional brethren to realise that the "contract system" is not indispensable to the insurance scheme, that the ordinary mode of conducting medical practice—payment of fees for work done—is easily adapted to the insurance scheme, and I cannot help thinking that its adoption is essential to the honourable conduct of the profession of medicine and to the safeguarding of the industrial community from evils inherent in "contract practice."

I am, Sir, yours faithfully,

Nov. 14th, 1911. ALFRED PEARCE GOULD.

To the Editor of THE LANCET.

SIR,—In the letter which you kindly published on Nov. 4th I put forward briefly my reasons for believing that a *per capita* system of payment will, if the premium is adequate, be advantageous to medical men. If it is true to say "that silence gives consent," then it is fair to conclude that my arguments are either unanswerable, inasmuch as no opponent has come forward to refute them, or that no opponent read my letter. I should like, with your permission, to add a few further considerations in support of my contention.

In my letter of Nov. 4th I referred to the fact that a considerable percentage of medical men is now, and has been for generations, working on the contract system in which payment is by salary. Surely everything that can be said against the *per capita* system applies to this system of payment by salary—that is to say, it is "immoral, dishonest, inherently and ineradically bad and inquisitorial." One must suppose that the writers who have flung these epithets understand what they meant. Is it too much to ask them to tell us on what grounds, in what sense, aspect, or respect, they consider those qualities applicable to the *per capita* system? I have nowhere yet seen any clear statement of the case against contract practice, and if one of those who oppose it will kindly put forward his points without relying too much upon adjectives of vague or undefinable meaning I for one should be greatly enlightened. At present I know of no valid objection to the *per capita* system when worked on an adequate premium. If the premium is inadequate no abuse of the system can be too strong. If the premium is adequate—and of course "adequacy" is a word of elastic meaning—it has the strange property of denoting one thing for a "society member," sound and well on joining, and another thing for a mere "Post Office" individual. I maintain that contract practice is more lucrative than private practice. It seems to me that it is the size of the premium that decides the question of morality or immorality. A premium of 3*s*. 6*d*., or, indeed, anything under the Post Office rate, is, and would be, immoral, and the higher the rate mounts so is immorality gradually shed until we reach the position of the doctor who is paid a yearly fee of £1000 a year for "looking after" his millionaire—work or no work—and we have arrived at what can only be described as a condition of perfect holiness and bliss. The writer who asks, "who but a lunatic could expect a doctor to give attendance and medicine for a year for the price of a pair of gloves or a dozen collars?" is evidently under the impression that all insured persons are and will be ill all the time; he apparently thinks that "*per capita*" means "per sick person" instead of per "insured person." It is obvious he did not read my letter of Nov. 4th in which it was shown that the total receipts in my practice from contract work were equal to the whole receipts from a *larger* number of private *clients* (not patients mind).

I should like to say a word or two in supplement of my remarks, previously published, on the system of "payment by fee," or, as some express it, for "work done," terms which mean generally of course "visit" or "consultation." Supporters of this system appear to be under the impression that there is something definite, precise, something even moral and blessed, in this phrase "work done." Those who contend for payment for "work done" under the Act intend, I presume, that there should be paid us a fixed fee for every "visit." Now what could be more indefinite than this thing "visit"? Does it in any way whatever show value of service rendered? Is there any real connexion between service rendered and fee received? Is there, can there be, any standard of value in this system of payment? Compare a visit four miles away on a bleak evening in January to one in June, or attendance on an anxious case to a call on a trivial one. The fee in each instance is the same! It is obvious when we come to think of it that the relation of fee to "work done" varies within the widest limits. One really "contracts" to "see" patients at so much a visit no matter what the case, no matter what the weather, no matter what time is taken up in earning the fee. I maintain that in its essence private practice is contract work—we "see" patients at so much per "visit" or "consultation." Is it customary to increase the fee if the "visit" is prolonged, involving extra skill or care or anxiety? or to reduce the fee if the conditions of the visit are exactly opposite?

Thus the value of the service rendered has no limit in its variation to the fixed fee. In the same way one can see that though the fee is in some occult way supposed to bear relation to the income, or rather rent of the patient, the relation is anything but regular—so irregular, in fact, that it is foolish to call it "relation" at all. A labourer pays a fee of 2*s*. 6*d*. a visit (the amount of his day's pay) and a person with a hundred times the income pays, we will say, 10*s*. 6*d*. Such a system is indeed farcical in its inequality, its injustice. Perhaps one could say that if there is anyone in the profession who can claim that he works on a system of "payment for work done" it is the surgeon. Fifty guineas, we will suppose, is his fee for an operation for appendicitis. Are any two of his cases alike? I remember a surgeon being called in to remove an ovary which was supposed to be cystic; it was ascertained beforehand that his fee would be 100 guineas. The ovary was found to be cancerous and irremoveable, but there was no offer on his part to reduce the fee. A fee is a fee! I think it is obvious, then, that my contention is fair and cogent, that under our present system of "payment by fee" or for "work done" there is a complete absence of uniformity; that the relation of service rendered to fee received is a value that varies indefinitely. There is no science in the system, to say the least of it.

Now under the *per capita* system the relation—of visit to fee—is absolutely scientific, and in a series of years would be invariable, or nearly so. We can foretell how many births there will be during the year in the whole community, how many deaths, how many cases of illness, how many

accidents. In a district or a corporation area these calculations are also available. I do not say, of course, that I can foretell how many visits I shall have to pay in the next month, but if I took the trouble to count up visits paid in the corresponding months of the last ten years I could get near an accurate estimate. On a *per capita* system, one may say, then, that one will be paid a sum known beforehand (practically a salary) for attending a mathematically calculated and nearly certain number of visits next month. And one has only to do a little sum in arithmetic to find out, if he likes to know, how much he will be paid for every visit he is going to pay next month! This sum or salary is fixed, but the "fee" per visit will vary (if the period for which the calculations have been made is long enough, say 10 years) only with the premium per person insured.

If the premium is, let us say, 8*s*. per head, one will find that for every visit he has paid to his contract *patients* the fee will work out at 2*s*. 6*d*. Next year might be a bad influenza year, and the result might be a paltry 2*s*. 5½*d*.; year after, and so on, there would be slight fluctuations, but over a decennial period we should find an average, probably, of 2·569 shillings as the actual money received for every visit paid during any year. Though the rate is thus found to be slightly wobbly, the same cannot be said of the total sum or salary received. This has been steady, regular, punctually paid without any baneful accompaniment of ledger, day-book, cash book, bill, receipts, letters, bad debts, and other paraphernalia inseparable from a practice worked on a system of "payment for work done."

In my early days I held a small practice in which there was one small club. My monthly receipts were most uncertain, most inconveniently variable, and it required great carefulness to keep our household finances anything like straight. I felt this inconvenience all the more as I had left a salaried post. It was a friend of mine, similarly engaged in country practice, who first convinced me of the advantages of a surgery club. He pointed out the absurdity of sending a bill to a labourer; that the labourer could easily pay 6*s* a year to the surgery club, and that with bad debts and other considerations I should find his plan more lucrative to myself and better for my working-class patients. Since then I have done everything I can to encourage this class of "client" to "insure for doctors' attendance," and after 20 years' experience of this system I am more than ever convinced of its advantages to both parties. I should like to extend it to all classes of my *clientèle*, and I should rejoice if all my practice could be worked on a contract, *per capita*, or whatever one calls the plan or system. To be "busy" brings joy to the half of me that is private practitioner and sorrow to the half that is club doctor; if I was all "club doctor" I could smile when other people smile and weep when they weep. To pass three or four days without seeing a single patient—as happens now and again in the summer—only produces a sort of feeling that is neither one thing nor the other; I am half-hearted whether I weep or chortle in my joy. If I was entirely a "private practitioner" I should never be laughing when other people laughed or crying when they cried, so there is no real enjoyment either way. If I was a club doctor pure and simple I could join in at any time whether the folks are laughing or crying.

I am, Sir, yours faithfully,

West Mersea, Colchester, Nov. 13th, 1911. B. HALL, M.B.

To the Editor of THE LANCET.

SIR,—Many of your readers will be surprised at the letter of Dr. B. Hall, a correspondent who is opposed to "any system of payment by fee" for medical services. It would be interesting to know how many of our brethren share the views of this radical reformer, who utterly condemns what has been the almost universal system of remuneration in our profession throughout the world in the past and present, whatever it may be in the future.

It is true a variety of reasons are given for this novel view. The first would seem to be Dr. Hall's own experience of contract, as compared with private, practice. That experience is no doubt interesting, but in the absence of any definite knowledge of the kind of private practice referred to, its cogency is not great in helping to decide on the respective merits of contract and private practice generally. It is not denied there may be forms of private practice worse than contract. The argument as to "worry" involved in the two classes of practice seems to me rather unsafe, if the public good is the chief desideratum. If the doctor takes the same care of, and interest in, his contract patients as he must do in the case of his private, his worry and anxiety might be expected to be rather more, seeing that he must attend a much larger number to gain the same income as in private practice—that is, at any capitation rate he is at all likely to get. If, because he is sure of his income, and that the capitation fees are bound to come in, he gives more or less perfunctory attendance, then his "worry" might be considerably less; but I feel sure Dr. Hall does not mean to suggest this. The argument that as medical work, owing to various agencies, is likely to get much scarcer in the future, we should therefore be glad to take *per capita* fees, is not a little attractive. Does Dr. Hall mean that as payment for work done must necessarily diminish in the future, it is wise of us to look out for payment for work we do not do?

Why the *per capita* system has been denounced as "immoral," I think, we most of us know very well. It does not mean that it is necessarily immoral, but that it far more easily lends itself to the "immoral" than private practice. Dr. Hall speaks of the "dread of making too many visits" in private practice. Is there no fear of making too few in contract practice? It might be a nice point to decide which was the more "immoral," though the patient might suffer more through the latter.

There can be no doubt that good and honourable work can be done under either system, and I think a majority of us would be found to admit that contract practice under certain circumstances is a necessity. But that is quite another thing from approving of the medical proposals in this Bill. They are most degrading to the profession; they revolutionise it in a way that has never been accomplished by the Government of any civilised country. In Germany there is a £2 a week income limit, but there is every reason for believing that the German profession cordially detests its medical insurance system in spite of it.

Unless the medical practitioners of the country stand firm—and the critical time is close at hand—the chains of contract practice will be rivetted on us too strongly to hold out any chance of breaking them. That individual divisions throughout the country will be able to enforce any income limit locally they may desire is to my mind a pleasant dream, and how it can be regarded in any sense as an equitable compromise for the statutory income limit demanded is to me quite incomprehensible. Our only hope is that the profession by a large majority will refuse to accept any appointments under the Bill when it becomes law. We have already practically pledged ourselves to this, for any pretence that the six cardinal points of the British Medical Association have been conceded is a delusion and a mockery.

I am, Sir, yours faithfully,

Nov. 11th, 1911. MAJOR GREENWOOD.

To the Editor of THE LANCET.

SIR,—The time is rapidly approaching when the Insurance Bill will become law, and, in my opinion, it is a matter of very grave doubt whether the interests of the medical profession have yet been safeguarded in the way it has so wholeheartedly demanded.

We placed our case in the hands of the British Medical Association, and we recognise that it has obtained for us two substantial concessions—namely, the administration of medical benefit by the Local Health Committees, and the free choice of doctor by patient. Further, we have been promised adequate representation upon the controlling bodies, and the formation of Local Medical Committees. Nevertheless, the matter which affects us most closely and personally appears to have been seriously neglected. I refer to the amount of remuneration we are to receive for our services.

When the Bill was first introduced we were told by the Chancellor of the Exchequer that financial provision had been made for the payment of a capitation fee of 6*s*., of which a portion (at first said to be 2*s*.) was to go to the chemists. This figure has not been discussed in Parliament, and there has been no promise to increase the lump sum (£4,200,000) allocated for the purpose. Once the Bill becomes law the capitation grant must remain at 6*s*.

It is understood that the policy of the British Medical Association is to leave the matter of the financial arrangements to be fought out in each locality between the local

medical men and the Local Health Committee when the Act comes into operation. But it will then be too late to get anything altered, and both the Local Health Committee and Medical Committee will be absolutely tied by the terms of the Bill and by the financial provisions made. It is *now* that we should secure both adequate remuneration and reasonable terms of service.

We have supported the demand of the Association for an income limit, and have obtained a partial concession on this point. But surely the question of an income limit is indissolubly bound up with that of a capitation fee. The higher the capitation fee, the higher the income limit we are prepared to accept. Suppose, for example, the capitation fee was 20*s*., would anyone who has made the smallest analysis of the figures wish to exclude persons with incomes of £500 or even £1000 a year? It is quite certain that we do not get £1 per head per annum from the whole middle class, taking ill and well together. And so with the income of £2 per week for which we have been agitating. It may be to our advantage, but it is pure surmise that the people of this class are paying, at present, on the average, more than 6*s*. per head per annum for medical attendance. By urging their exclusion we may be cutting our own throats. No figures of any value on this matter have been published, and many of the statements as to approaching ruin made in the medical press will not bear the smallest investigation. The mistake, for example, has frequently been made of arguing from the actual number of patients on the books, when what has to borne in mind is that each doctor will have a share of the insured persons, well and ill, and that he will receive the capitation grant from a number of persons who may be years without once consulting him. The sooner we have some authoritative information, so that we may know what to ask for, the better.

As for the income limit, it is an impossible thing to put it into practice. How are we to find out the incomes of 15,000,000 working people? The machinery to do so would cost another 6*s*. per head. A man works for one employer for £2 a week, is out of work for three weeks, and gets a job at 30*s*. His wife earns 12*s*. at a laundry, a boy gets 7*s*. on a milk-round, and a daughter, as much, or more, in a shop. Moreover, these figures are always fluctuating. To make an approximate estimate of such a man's income would necessitate a Somerset House in every village.

My strong impression is that had we held out from the beginning for an increase of the capitation fee to 7*s*. 6*d*., or a clear 6*s*., with special fees for operations, night visits, and mileage, we should have done more for ourselves than all the concessions obtained up to the present will do. 7*s*. 6*d*. could, and in all probability would, have been granted by the Chancellor. There would have been a single fight, and we should have won. Now there must be a hundred fights all over the country. We have no solid figures upon which to base our demands, and if we be told later on by the Health Committees that any particular point cannot legally be granted, we will have no ground for objection, seeing that we are now tamely accepting the provisions made.

I am, Sir, yours faithfully,

Enfield, Nov. 14th, 1911. R. HALDANE COOK.

To the Editor of THE LANCET.

SIR,—May I be permitted to express my thorough concurrence with your leading article in to-day's issue of THE LANCET. The fondness of some members of our profession for contract work at capitation fees passes my comprehension. How can a system of strictly limited payments for an unlimited amount of work possibly be satisfactory? Does not every man who can afford it get rid of his contract work as soon as ever he can? The refusal of Parliament to adopt the £2 a week wage limit I regard as a blessing in disguise, as it allows the profession to reconsider the question and to adopt what I believe to be the better plan of payment by fee for work done. Is such a system impossible? I think not. The National Deposit Friendly Society has shown that with proper supervision it is perfectly feasible to attend the working classes at a reasonable scale of fees.

Now, under the Bill there are two classes of the insured—viz., the members of approved societies and the Post Office contributors. The former will be amenable to the rules of their societies and under the constant supervision of their visitors and officials. These I would treat at National Deposit Friendly Society rates. This system would be a powerful inducement to economy and a check on malingering, as it would be to the interest of every member of the societies to restrict sickness and thus diminish the doctor's and chemist's bills. The Post Office contributors would have to be separately considered. They will apparently be quite unorganised and without any system of supervision, consequently I believe it will be inevitable to accept them at a capitation fee, which, considering the class of life they will be, should be a pretty high one. Happily this class will be a diminishing quantity. The Bill offers the insured every inducement to join an approved society, and as young good lives come on they will be absorbed by them.

For both classes a properly thought-out scale of extras should be drawn up, comprising night work, midwifery, vaccinations, lunacy certificates, general anæsthesia, surgical operations, and the treatment of fractures and dislocations based upon the scale allowed by the Poor-law. Such briefly is the scheme I advocate which I have submitted to the authorities of the British Medical Association in greater detail. Its advantages, I submit, are as follows: (1) It provides adequate remuneration for work done, and the rate of payment is about the same as large numbers of the insured have been accustomed to pay as private patients, thus preserving private practice among the working class; (2) it obviates the injustice of our being obliged to treat, at a capitation fee, all the insured for disease the result of their own misconduct; (3) it allows for payment for the treatment of the insured in institutions if the profession wishes it; (4) it overcomes the income limit difficulty; (5) it gives the doctor a more direct interest in his patient and gives the insured the satisfaction of feeling that they are treated as private patients.

Consideration for your space forbids me to go into the matter at greater length. I will only plead for unity and a pretty general agreement as to the system to be adopted. The profession, even now, does not seem to realise its power, and there is no doubt that we can obtain fair treatment provided that our demands are logical, reasonable, and just.

I am, Sir, yours faithfully,

HUMPHRY J. WHEELER, M.D. Durh.

High Wycombe, Nov. 11th, 1911.

To the Editor of THE LANCET.

SIR,—I desire to lay before the profession a proposition which is not intended to be antagonistic to the work done by our leaders but rather an addition to it. I think it will be seen that the point I wish to make seems in danger of being overlooked, for the fighting so far has been on the question of control, but I think we ought now, if not already too late, to ask, and with no uncertain voice, the following questions: 1. What will be required of us under the Act? 2. What are we to be paid for it?

My reasons for these questions are as follows: 1. Contracts vary in different parts of the country; in some parts of the Midlands a sum of 1*s*. per lunar month is deducted from the earnings of all adult colliery employees and this pays for all medical and surgical attendance on the employee and, where he is married, on his wife and children under 16 years of age, but does not include midwifery, which is paid for extra at 10*s*. 6*d*. per case. In the valleys of South Wales a system of poundage is in vogue, and sums of 2*d*., or in some cases 3*d*., are deducted from every 20*s*. earned by colliery employees, and these sums pay for all attendance, including midwifery. The ordinary Friendly Society benefit is too well known to require description. What will the benefit be under the Act? and (2) What shall we be paid for it?

This question must be divided into (*a*) By whom will it be paid and (*b*) To whom will it be paid? As to the main question, we are told that we must wait and bargain with Local Insurance Committees. As to this, I say, Heaven alone can help the profession if we do not make our stand now. At present our paymasters are our private patients and contract employers, be they Poor-law bodies, collieries, works, Friendly Societies, or the like. Who will they be in the future? Under the Act we in working-class practices will have no private patients after two or three years, when the benefits have been extended to women and children, and under the Harmsworth amendment we shall have just as many contract employers.

To whom is the money to be paid? At present we receive the whole of the contract earnings and supply the whole benefit, including drugs. In the future drugs and the doctor are to be divorced. Let me show how this will work under a *per capita* arrangement. It is necessary to understand that a certain sum per head will be allowed, and this sum, whether it be 2*s*., or 20*s*., or the figure of 6*s*. alleged to have been used by Mr. Lloyd George, will have to cover the entire cost of the medical benefit—viz., attendance and medicine. Now, taking an ordinary medical case, what will happen is this: The doctor is called in, and he will diagnose the disease, give clinical advice, and write a prescription. The prescription will be taken to a chemist, who has already bargained that he shall be paid for his drugs with an additional 1*d*. or 2*d*. per bottle for his work of dispensing. This part of the medical benefit—i e., the supply of drugs—becomes an unknown quantity so far as cost is concerned and may depend in great measure on economical prescribing. Let us assume that the sum of 6*s*. per annum *per capita* has been fixed (and here let me repeat that whether it is 6*s*. or 16*s*. does not affect the principle of my contention), then in a working-class practice of 2000 men, women, and children we may in the first year of the Act assume that there will be 400 insured persons, of whom 50 will come under the doctor's care and require two bottles of medicine each. Allow that the chemist charges 1*s*. per bottle for drugs and 2*d*. for dispensing, there will be a chemist's bill of £5 16*s*. 8*d*., to be paid out of a total of £120, leaving £114 3*s*. 4*d*. for the doctor. This refers to a normal year, but take such a season as 1888–89 then 200 will be under the doctor, requiring six bottles of medicine each. The chemist's bill will then be £70 and £50 left for the doctor, who will have done 12 times as much work as in the normal year. Surely this is absurd and yet it is what is proposed.

Even admitting that the British Medical Association in 1905 did issue a report saying that some form of contract practice is inevitable, and allowing that, so far as the principle is concerned, their hands are tied, their report would not be stultified if they declined to proceed in this matter until satisfactory pecuniary arrangements have been made. I am, Sir, yours faithfully,

ROBERT J. FARMAN, L.M.S.S.A.

Upper Kennington-lane, S.E., Nov. 12th, 1911.

To the Editor of THE LANCET.

SIR,—The bulk of the correspondence on the Insurance Bill is devoted to the questions of the income limit, the method of remuneration, and the abolition of contract practice. May I point out that these matters are intimately bound up with the question of the Addison and the Harmsworth amendments. The Medical Secretary of the British Medical Association assured us recently that the two former would not be stated in the Bill, but that the Association would see that they were equitably settled by local option through the Medical Committees acting under the Addison amendment; but he warned us that there was a long and strenuous fight before us over this matter. Why should we be obliged to fight for our just dues at all? Mr. Smith Whitaker spoke at Hampstead of the need for "the deletion or profound modification of the Harmsworth amendment," but what of the Addison amendment? The Chancellor of the Exchequer has been telling deputations of various persons who will be the insured that under it they have the power to combine and do anything they like. The Harmsworth amendment provides only for "persons who are receiving medical attendance and treatment under any system, or through any organisation existing at the time of the passing of the Act and approved by the Local Health Committee and the Insurance Commissioners." The Addison goes very much further than this: it provides that "(3) the regulations made by the Insurance Commissioners shall authorise the Local Health Committee by which medical benefit is administered, to *require* any persons whose income *exceeds* a limit to be fixed by them, and to *allow* any other persons" (the italics are mine) to contract out of the Bill and "make their own arrangements for receiving medical attendance and treatment," and the Committee shall pay over "for such persons sums not exceeding in the aggregate the amounts which the Committee would otherwise have expended," and, as the Chancellor points out, they can combine and do what they like with them. There is not one word in the amendment to prevent their starting medical institutes or other contract practice at sweating rates. There is not one word to prevent a claim on the bills of a cancer quack, a herbalist, or a professor of Christian Science. There is no mention of the necessity of associations being approved here; there is no indication that the "other arrangements" need be for *legitimate* "medical attendance" at all. This is no chimera; the matter has arisen as one of the difficulties of the German scheme already; and the Medical Secretary told me after the Peckham meeting that the matter was being considered here. May I urge my fellow practitioners to give this matter urgent consideration, with a view to definite instructions being given to our representatives to have the clause so altered in the report stage as to be safe. If we do not, the income limit is worth nothing, for all above must, and all below may contract out, and will be enabled to organise some contract scheme which, while legal under the Bill, will nullify any advantages we may have gained. I am, Sir, yours faithfully,

Catford, S.E., Nov. 11th, 1911. THORNTON COMBER.

To the Editor of THE LANCET.

SIR,—I am instructed to forward you a copy of the following resolution passed unanimously at a meeting of the Broughton Medical Union held on Thursday, the 9th inst.:—

That the Broughton Medical Union reaffirms its unwavering adherence to the declared policy of the British Medical Association, including the six cardinal points of that policy, in relation to the National Insurance Bill; declines to accept any amendments that would defeat the objects of that policy; and is resolved to refuse any arrangements for medical attendance and treatment which do not comply with that policy.

I am, Sir, yours faithfully,

R. B. FLETCHER,

Manchester, Nov. 11th, 1911. Honorary Secretary.

THE STRIKE AND THE DEATH-RATE IN LIVERPOOL.

To the Editor of THE LANCET.

SIR,—The admirably expressed views of your Special Sanitary Commissioner on the subject of social reform and the necessity of an adequate living wage in order that men may live wholesome lives, so delight me that I can forgive him for the perverse fatality with which he unintentionally misrepresents my arguments. My reputation both in Liverpool and before the profession stands, however, so much at stake that I must reply to parts of his letter and correct misunderstandings.

There is no one keener than I am on the maintenance and increase of sanitary service in our cities, nor less inclined to condone any want of public spirit in any grade of life which may interrupt sanitation and subject a community to the inroads of a plague of infectious disease. But I did think we might have discussed a specific scientific problem and garnered its practical lessons as to modes of propagation of one of the direst of diseases without becoming opportunists and attempting to preach political sermons on inadequate texts.

Let me adduce one argument more to clear my reputation as a lover of sanitary science before coming to the narrower specific issue before us. While I hold that no disease broke out or was actually increased by the interference of the strike with sanitary work, I equally hold that such an effect might have been produced, especially if the strike had been more prolonged. With this in my mind, in my first letter to the *Liverpool Daily Post and Mercury*, I suggested that to prevent the possibility of any recurrence in a future strike of interference with sanitary service some terms should be arranged beforehand with labour leaders as to what was to be contraband of war and what not. The problem for municipalities is just the same as for the railway companies, and the policy of pretending to ignore the existence of trades-unionism when there are millions of workmen enrolled throughout the country is, to my mind, identical with the policy of the ostrich. Last August the city authorities had all the power of the police and military behind them, and yet an alderman wrote to the local press explaining that they were unable to get coal in sufficient quantity to their municipal sterilised milk depôts to prepare the milk

for infants, hundreds of whom would in consequence lose their lives unless the strike came to an end. In his letter your Commissioner informs us that the authorities were unable to swill out the slum courts with a fire hose. One cannot help wondering what would have happened had a great fire broken out.

Making all allowances for slight exaggerations, I do not in the least degree condone any of these interferences on the part of the strikers, but surely our action as sensible and thinking people ought to be directed towards preventing their recurrence. We shall never attain this object by crying out in parrot-like fashion: "Down with strikes, repress the strikers, and give them a whiff of grape-shot if necessary," as one London paper suggested. It is of no avail to shake the mailed first of law and order at the workmen, the vast majority of whom are just as strongly in favour *at present* of constitutional action as those who are opposed to them. There is a social disease to be studied, remedied, and prevented, and those who urge the neglect of that study are only hastening our whole social fabric onwards towards destruction by syndicalism, anarchy, and revolution, followed by the inevitable reaction.

Now as to the narrower problem of infantile diarrhœa and the Liverpool portion of the strike, in the first place my opponent ignores dates and my contention based thereon, that the only period when the strike could have caused an effect was on the decline of the disease incidence, where there is no slightest perturbation to show its influence. I would reiterate that an effect cannot precede its cause. Secondly, my adversary accuses me of dealing exclusively with garbage, and then makes a quotation from one of my letters which does not apply to the point in the least. The same arguments apply as to human excreta left in the slum courts by failure of washing down as for garbage. The interruption occurred in the third week in August and the first infant deaths attributable thereto would be in the fourth week in August or first in September, when the epidemic was declining and nothing in the figures shows an influence of the strike. The same remark applies to interrupted health visits. Again, as to the quotation from me regarding the epidemic being uninfluenced by the strike indicating that infection is probably carried from human dejecta and not from garbage. The human dejecta in question mean, of course, dejecta from other infants infected with the epidemic diarrhœa, and not human dejecta in general, such as accumulated for a few days in the courts. The strike did not increase the number of children ill with the disease, hence amount of infection was not increased in spite of the condition of the streets and courts, and the epidemic ran a quite normal course. Thus the use of my own quotations against me, while ingenious, does not appear to me to be quite so ingenuous, and I trust my opponent now sees my line of argument.

The same applies to my comparison of Dublin and Liverpool. It is not a question of which city displays a greater or less degree of perfection in its sanitary arrangements, nor which city experienced the more severe epidemic, but a comparison of the forms of incidence—rise, maximum, and abatement—in the two cities in the months of July, August, and September, one city at a certain period having its sanitation interrupted by a strike while the other did not. It is an attempt on what I regard as scientific lines to get as near as possible to the question of whether the strike produced any effect, and in my opinion the answer is emphatically in the negative. I am surprised at this point being misunderstood.

But if my opponent desires figures as to actual severity, although they do not bear directly on the case, these figures can now be given. Since then the Registrar-General's figures as to deaths from infantile diarrhœa in the big cities of England and Wales have come in, and Liverpool, although the centre of the strike, does not figure so badly, taking into account that it is always somewhere near the top of the list in severe epidemic years. I have calculated for the 48 cities having over 90,000 inhabitants, the number of deaths during the third quarter of this year per 100,000 inhabitants from epidemic diarrhœa. The 12 cities most severely hit are as follows: Stoke-on-Trent, 217; Burnley, 186; Rhondda, 186; St. Helens, 182; Hull, 171; Bolton, 166; Liverpool, 161; West Ham, 153; Stockport, 152; Walsall, 148; Birmingham, 136; Birkenhead, 136. The average for these 12 cities is 168, which is considerably above the figure for Liverpool.

Your Commissioner now admits that "it is difficult to say how far the increased death-rate was due to the high temperature or to the disorganisation of the sanitary service." I take it, therefore, that he now no longer adheres to his former statement that in two of the weeks in August one-third of the deaths were due to the strike. But he still impugns me for stating that there is no proof "that the preventive efforts in the last two or three years possess any causal relationship with the decrease previous to this summer or that the strike was connected with this summer's increase," and goes on to accuse me of inviting belief that sanitary measures can do no good.

Never was there a more palpable *non sequitur* to a quotation entirely warped from its setting. The two or three summers in question were cold and wet, and the amount of epidemic diarrhœa was greatly reduced everywhere; my point was that there existed no proof that the fall in death-rate in Liverpool differed from the fall in all the rest of the country. Scientific criticism is wanted for any new method, and my mind is so constituted that I cannot attribute a given result to one of two causes working together when elsewhere the same result follows the action of the other cause working alone which for some reason is ignored by the experimenter.

In other words, the character of the summer for me explains sufficiently the falling off in death-rates in previous summers and the increase this summer, in Liverpool as elsewhere. This I express in a negative way by saying that "there is not a shred of proof that the preventive efforts in the last two or three years possess any causal relationship with the decrease previous to this summer, or that the strike was connected with this summer's increase." Yet I am just as anxious as your Commissioner that these preventive efforts should be continued, and increased, and added to, in order that they may be thoroughly tested, and in the end we may find the cause and cure of the disease so that sanitary science may flourish and abound.

I am, Sir, yours faithfully,

Liverpool, Nov. 13th, 1911. BENJAMIN MOORE.

THE ETIOLOGY OF ENDEMIC GOITRE AND CRETINISM.

To the Editor of THE LANCET.

SIR,—Your editorial remarks upon the above subject recall to my memory a series of investigations which I made into the etiology of endemic goitre when I was residing in Lanarkshire in 1898. The results which I then obtained led me almost to the same conclusions as those at which Captain McCarrison has more recently arrived—viz., that the enlargement of the thyroid is due to hypertrophy, and is instituted for the purpose of neutralising a toxin formed by a virus introduced into the organism in drinking water. The reasons for my conclusions were embodied in a paper read before the Glasgow Medico-Chirurgical Society, and published in the *Glasgow Medical Journal* of February, 1899. They were as follows: 1. That the pathological changes met with in the thyroid gland of endemic goitre, prior to the onset of secondary degenerations, are those of simple hypertrophy of the glandular secreting elements. 2. That the absence of general constitutional symptoms in simple goitre obviously indicates that the excess of gland secretion produced by the hypertrophy is neutralised in the body—presumably by a toxin. 3. That many of the characteristics of the endemic disease indicate that drinking water is the agent which conveys the poison; and as the water can be rendered harmless by boiling it is reasonable to suppose that the poison is a *contagium vivum*.

Finally, it is clear that the reduction in the size of the goitre brought about by the administration of thyroid gland substance by the mouth also strongly supports the theory of toxin hypertrophy.

With regard to cretinism, in which there is, of course, a profound constitutional disturbance, we may assume that in that condition the total amount of thyroid secretion formed is neutralised or destroyed by the poison. The result will be an organism in which the thyroid secretion is deficient or absent, and so cretinism will be brought about.

Such, briefly, are the chief reasons upon which the theory of the living virus can be based. Moreover, an examination of the general features of the endemic disease supplies us with a number of facts which are more easily

explained by this theory than by any other that has hitherto been put forward.—I am, Sir, yours faithfully,

Brook-street, W., Nov. 10th, 1911. DAN MCKENZIE.

OLD AND NEW VIEWS ON THE TREATMENT OF CONSUMPTION.

To the Editor of THE LANCET.

SIR,—I hope Dr. Claude Lillingston will forgive me saying that through taking too narrow a view of the sense of the word *fatal* in his letter in THE LANCET of Nov. 11th, p. 1364, he appears unjustly to charge Dr. C. Theodore Williams with being inconsistent. He says: "Dr. Williams writes of acute cases of phthisis that they 'all pass through an early stage to a fatal issue.' Further on he writes: 'It is true in some of these cases the disintegrating process comes to a standstill and fibrosis sets in—the disease is incapable of cure.' In other words, they all die early; but some don't!" Dr. Lillingston appears here to limit the meaning of the word *fatal* to the sense of *deadly*, ignoring its larger meaning of *inevitable*.

We speak of "*fatal*" results in our manuals of physiology—e.g.: "Reflex Action.—We may define a *reflex act* as the *immediate* motor response to centripetal excitation; it is unchosen, 'fatal'" (Waller). I hope I am not labouring the point in adding the following definition of *fatal*, with examples. Larousse has, "Fatal, e. Fixé irrévocablement par le sort: *les décrets fatals du sort*. Par extension, *Funeste*." "Our *fatal* shadows that walk by us still" (Fletcher).

I am, Sir, yours faithfully,

Worcester, Nov. 11th, 1911. TOM BATES.

EMOLUMENTS IN THE INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—May I be permitted to comment on that part of the letter of "Civil Surgeon" (in your issue of Sept. 23rd, p. 917) which enumerates five advantages of the Indian Medical Service?

1. "Pay at more than a living wage from the beginning." With this I quite disagree. The pay of some of the billets is a living wage, but there are great inequalities, and nowadays the pay in most billets is only a living wage for bachelors. I myself entered the service near the top of the list; I did not marry till I was 30; I have never played polo or indulged in any expensive sport; I do not drink, or smoke, or gamble. I have had one year of leave home; and I have three children, none of whom have yet been to school. So far from my pay and what I have been able to make by private practice sufficing to meet my expenses, I have spent in addition about £1500 of my own and my wife's money in little more than a decade of service. Had we not had these private means we would be bankrupt. They are now exhausted, and although I have not been home for nearly eight years, I cannot now afford the expense of going home. My wife's life is made miserable by a constant struggle to economise.

2. "An extremely liberal scale of pensions ....." If these pensions were sufficient in years gone by they have depreciated in value now owing to the increased cost of living at home. Moreover, officers in the old days were able to save money to supplement their pensions. Now the great majority of officers can hope to save nothing, or next to nothing. They compare unfavourably with the £1000 a year of the I.C.S. after 25 years' service.

3. "One year's holiday for every three years' work." This is an absolute error. The maximum furlough is one year in every five, if we can be spared. But the service is kept at such a strength that this amount of furlough is not possible to everyone, and I have met few officers who have been able to get all the furlough due to them. Even if it could be got it could not all be taken by officers, on account of their not being able to save sufficient money to afford it. Another thing which prevents furlough being taken is the rule that after taking furlough, or other break in service, as when an officer has gone sick and has had to have sick leave, no more furlough can be taken for three years. This regulation does not figure in the inducements held out to men about to enter the service.

4. "A variety of work and appointments, so that the most diverse temperaments and capabilities can get the sort of 'job' they like. ....." Some do; but the Government has to fill all its billets and a great many men are compelled to serve in uncongenial employment. Within recent years, to gain efficiency and effect economy, the Government has put the entire jail service into the hands of the Indian Medical Service, and it has told men that their only hope of civil employ was in the jail department. Nearly all civil surgeons are burdened with district jails, and the number of purely medical appointments in the Indian Medical Service is really very few.

5. "The privilege that the men with whom you have to work are, as a rule, educated gentlemen of your own social class." I do not quite follow what "Civil Surgeon" means here. If he is talking of civil surgeons, all I can say is that the ordinary civil surgeon is the only bird of his kind in the district, and he hardly ever gets the great privilege of consultation and converse with another medical man of his own kind. It is one of the great drawbacks of the service to anyone who is keen on the scientific and intellectual side of his profession. This isolation is one of the reasons why less original work has been done in Indian medicine than one would have expected from the high standard of quality of the men who have hitherto entered the Indian Medical Service.

I am, Sir, yours faithfully,

Oct. 18th, 1911. ALSO A CIVIL SURGEON.

THE DEMAND FOR PUBLIC ABATTOIRS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

(Continued from p. 1368.)

THE EXPORT ABATTOIR OF COPENHAGEN AND THE IMPORT ABATTOIR OF MANCHESTER.

The Copenhagen Municipal Abattoirs.

WHEN describing the deplorable condition of the Newcastle slaughter-houses reference was made to Copenhagen. The Danish capital is just on the other side of the North Sea, and there is much intercourse between the two ports. The Copenhagen municipal abattoir is not built after the latest model, nor is it kept so clean and in such good order as to rival the best abattoirs of Germany and Switzerland; nevertheless, it is a very fine institution. The inhabitants of Newcastle should go over on their holiday trips to see what their maritime *vis-à-vis* has done. The Copenhagen municipal abattoir consists of several buildings, with much open space between ornamented with trees or bushes. To my mind, however, the structure in which the horned cattle are slaughtered seemed rather low and dark. It is paved with large cemented flagstones draining into a couple of gutters near the centre of the building. Large windows face each other, and there is an opening along the apex of the roof through which the air passes freely. When the cattle are brought to be slaughtered no attempt whatsoever is made to screen from them the sight of blood and of killing. A good deal of the blood is lost, and though it may not be of much value, still it can be utilised, and unnecessary waste should not be allowed. Above, the rafters are of iron and painted. This is good, for the roof is non-absorbent and easy to clean. The walls are of glazed or enamelled brick up to the height of 10 feet and then of ordinary brick. It is claimed that they are frequently cleaned, but I felt inclined to demur as to the frequency of the process. There is an absence of the smartness and brightness about the place that make German abattoirs look so tidy and clean, and almost disguise the sinister nature of the work for which they are intended. Also there are not sufficient mechanical appliances. Thus men have to lift the carcasses up to hang them on hooks on each side of the slaughter-house. This, of course, should be done with a rope and pulley attached to a travelling overhead rail.

Details of the Work.

If a carcass is found to be affected with tuberculosis all the diseased parts are cut away and the rest is stamped as second-class meat and sold. Every month a notice is published in the papers warning the public that such meat should be very carefully boiled. Of course, these notices do not suffice, for there is no guarantee whatsoever that the advice is followed. For anything we know to the contrary

some of the meat may be sold at restaurants in the form of underdone grilled steaks. Also some of this second-class meat may, when carefully trimmed, look very good and tempting. It would be far safer to boil it and see that it is thoroughly sterilised in the abattoir before allowing it to be sold for human food. A boiling place for feet and calves' heads already exists, and it is much better to do all necessary cooking on the premises before selling the meat to the public.

There is naturally a separate building for the slaughtering of swine. Here some men are employed during all their time to keep the place clean; they are not, however, very successful. Every year one of the buildings or slaughter halls is repainted. Evidently they were not all built at the same time and those that are more recent are better devised. There is one large double-sized hall with a low partition down the centre which is preferable to the others. It has more window space and light from above. A smaller building is reserved for a horse slaughter-house, and in this, as is so frequently the case where horses come with their iron hoofs, the pavement was in need of repair. Then there is the large export slaughter hall where cattle are killed for foreign consumption. It is a fine building and should interest British visitors, as a good deal of the meat derived from the animals killed here is exported to and consumed in Great Britain. (In the Manchester meat market I came across a good deal of Danish beef; it is very popular in Lancashire, because it is lean and there is very little waste.) The greater part of the roof is lantern-shaped, with windows opening all the way round. Below the walls have large windows and the doors are wide. It should be easy to keep the place clean and sweet if the viscera were promptly removed, the intestines cleaned, and the pouches emptied in premises specially constructed for this very unpleasant work.

The Good Points at Copenhagen.

What is really good about the Copenhagen municipal abattoir is the ample space, the broad avenues planted with trees, and the absence of high buildings and of inhabited dwellings close by. The pens also are good, especially those allotted to the big cattle. The flooring is carefully laid to provide a sufficient slope so that all liquids easily drain away to the gutters that are on each side of the central passage. A long trough goes all the way round in front of the cattle, and there is a continual current of fresh water passing before them. The roof is not so lofty, but it lets air and light pass freely. There is naturally a small slaughter-house especially reserved for killing animals known or believed to be unhealthy, and there is also a small building for keeping condemned meat till it can be conveyed to the destructor, which is some distance away. The veterinary surgeons are easily recognised by the uniform cap they wear, and are always present when the slaughtering begins. They are employed and paid by the municipality and not by the butchers, so they have no interest to serve by concealing or acting leniently where anything suspicious is found. Complaints are made that the abattoir costs a great deal of money. Nevertheless, it may be said that in round numbers for every £30 spent £35 (or £5 net profit) are received. This seems a very good return, though with better organisation and greater care bestowed on the utilisation of the by-products a much larger profit might be cleared.

The Manchester Foreign Animals' Wharf.

Sufficient reason has been adduced to show that a municipal abattoir should be built at Newcastle without further unnecessary delay. There are cogent reasons why this is also necessary at Liverpool. The difficulty in England is the tendency to tinker and to compromise. For instance, taking the great roads for international traffic from East to West, Scandinavia, Copenhagen, and Holland send over meat to England viâ Newcastle and Hull, and emigrants land at the same time to be transmitted to the ships that sail for America from Glasgow and Liverpool. What has been done to deal with this trade in a scientific and sanitary manner? One of the best enterprises has been the foreign animals' wharf on the Ship Canal, constructed by the Manchester corporation at Old Trafford. It was opened in 1895, and ships of 5000 to 6000 tons can come alongside and land cattle immediately opposite their pens. Alley ways with strong wooden swing gates are so contrived that the cattle on landing from the ships cannot go astray and cannot turn back, but must go forward till they reach the stables that have been assigned to them. These are lofty and airy, though the floors are slippery and do not seem well drained. When, however, the sewage does ultimately reach a gutter and a drain it flows into two brick tanks that are 26 feet below the floor level of the wharf. These tanks are just behind the engine-house. There is a suction pipe, so that the contents are raised daily and pumped into the neighbouring main sewer. Thus a sufficient fall can be obtained in all parts of the premises to drain away surface water even if mixed extensively with blood and sewage. But the manure and heavier refuse matter is not drained into the sewers. There are three jetties, and the big ships land the cattle at the end of these piers. By the side of the piers barges are moored, and these will hold from 50 to 80 tons of manure; thus there are no manure heaps and no manure is kept on the premises. This is an illustration of the use of a waterway by the side of an abattoir.

Insufficient Slaughtering Accommodation.

There is room at the Manchester Foreign Cattle Wharf to place in comfortable stables 2000 cattle. The more recently built lairage is less lofty, easier to keep warm, but there are louvred openings the whole length of the roof and there is plenty of light. The buildings are very broad, and there is room inside for many rows of cattle, separated by cast-iron posts and wood cross rails, with gates that open into the stalls and close the passages, or open the passages and close the stalls. Overhead there is nothing but the roof, which is lantern-shaped all the way down the centre, with a louvre opening on each side. Then half-way down the broad roof that slopes from the centre to the outer walls the slate tiles are replaced for some feet by window panes which let through a stream of light. These lairs are certainly more satisfactory than the slaughter-houses. The latter are lofty, with walls of white enamelled bricks; there is an opening at the apex of the roof and louvred windows at each end are kept bright and clear. Immediately outside there are small pens where the cattle wait their turn to be pole-axed, and there is a contrivance by which a rope passed through the wall enables the butcher to pull in the animal without risk of being hurt. The doors on the opposite side, and these are sliding doors, face the cooling room, which is reached through a covered way, where are overhead rails to convey the carcasses. Here 500 "sides" may be hung. Then at one end of the cooling room there are three cold storage or chill rooms, each holding 174 "sides." All this is conveniently arranged, but the slaughter-houses themselves seemed to me too small. Instead of a large hall there are five slaughter-houses with two killing floors in each, and these measure only 33 by 45 feet. It would not be possible to kill more than 20 cattle simultaneously, and as there are sometimes as many as 300 cattle waiting to be slaughtered this means working under pressure for as long as seventeen hours. This is wrong from every point of view. It is injurious to the health of the workers and likely to lead to carelessness.

Overlapping and Confusion of Authority.

Nearly all the slaughtering consists of horned cattle imported from America. There are a few Canadian sheep and a small pen and slaughter-house for them, and there is also a small slaughter-house on the landing-stage for the killing of exhausted cattle. To decide whether the cattle may be allowed to rest and recoup from the effects of their sea journey or should be killed at once, and to see if they are generally in a healthy condition, both the Board of Agriculture and the Port Sanitary Authority have their staff of inspectors, who watch the living animals and examine the carcasses. But it was a third authority, the Manchester corporation, that built the entire place. Then, again, though the Manchester corporation does not undertake the slaughtering of the animals, it does all the cleaning. It levies a toll of 4*s.* a head on all the cattle. The cost of the food the animals consume is paid by the importers, and the latter attend to the cattle. More extravagant and wasteful than this strange overlapping of authorities and work is the surrender of some of the most profitable side trades. Why have the best paying sections of the work been allowed to slip through the fingers of the Manchester corporation? If the municipality was justified in building

the wharf, which might have been done by private enterprise, it was still more justified in keeping in its own hands a business that may give rise to many unwholesome conditions requiring supervision, but also bring in much profit.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Hospital Sunday Fund.

THE committee of the Hospital Sunday Fund, in presenting its forty-first annual report, regrets that the decline which set in four years ago shows no signs of abating. The receipts from the collections made on Hospital Sunday of 1911 were £6119 against £6162 in the previous year. It is true the decrease was only £43, but the expenses, which in 1909 and 1910 were generously borne by two members of the committee, have this year to be met from the general fund. The total sum available for distribution, after deducting expenses, is £5977, and of this sum £5946 have been paid to the joint fund (Hospital Sunday and Saturday), whilst a balance of £30 12*s.* 3*d.* has been carried forward. The total sum distributed by the joint funds this year was £13,800, as against £14,530 in 1910, a decrease of £730. The charities participating in the distribution are the same as last year, with the addition of the Children's Convalescent Home at West Kirby, to which a grant of £50 was made. One pleasing feature of the report is the generous contribution of £100 made by the Welsh Church committee. The number of churches contributing has risen from 403 in 1910 to 421 in 1911. The committee is unable to claim any grant this year from the kind donors who promised a donation of 10 per cent. on any increase in the total collections of the joint funds.

Liverpool School of Tropical Medicine.

Professor R. Newstead has returned to Liverpool from his expedition to Central Africa. At the special request of the Government the School of Tropical Medicine sent him to Nyasaland in connexion with the sleeping sickness commission which the Government is sending out under Sir David Bruce. Professor Newstead, who has been absent about six months, was recently appointed to the Dalton memorial chair in Entomology at the University of Liverpool.

Mitchell Banks Memorial Lecture.

The council of the University of Liverpool has appointed Professor F. M. Caird, the occupant of the chair of Clinical Surgery in the University of Edinburgh, to deliver this lecture in the session of 1912–13. The lecture, which formerly was delivered annually, has now been altered to a biennial one. It will be remembered that the lectureship was founded as a memorial to Sir William Mitchell Banks, the distinguished Liverpool surgeon, and for so many years professor of anatomy in University College, Liverpool, prior to its absorption in the University of Liverpool. The nomination of Professor Caird is a happy one, and has given much satisfaction to the medical profession of the district.

Liverpool University Association.

The University Association is to entertain as its guest, at the dinner to be held on Dec. 15th, Professor Michael Sadler, the new Vice-Chancellor of the University of Leeds. The Universities of Liverpool and Leeds have been closely associated for many years, and it will be gratifying to members of the former body to show to the new head of the University of Leeds that they desire the close and cordial relations to continue. The dinner will be held as usual at the Adelphi Hotel.

Munificent Gift to Chester Infirmary.

The Duke of Westminster has contributed £3000 towards the funds of the Chester Infirmary for the extension and renovation of the institution.

Typhoid Fever at Skelmersdale.

For the past few weeks the village of Skelmersdale has been suffering from a severe epidemic of typhoid fever. Upwards of 50 cases have been notified, with 5 deaths.

Nov. 14th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Causes of Crippling.

THE report of the physically defective inquiry subcommittee of the education committee previously referred to contains some useful information as to the causes of crippling. An exact diagnosis was made in 721 of the 728 cases under 16 years of age. The percentage of the distribution of the causal disease was as follows: Tuberculosis, 285 (39·5); infantile paralysis, 175 (24·3); rickets, 73 (10·1); congenital deformity, 71 (9·8); apoplexy, 33 (4·6); birth palsy, 25 (3·5); scoliosis, 13 (1·8); pseudo-hypertrophic muscular paralysis, 5 (0·7); progressive muscular atrophy, 2 (0·2); rheumatism, 3 (0·4); necrosis of bone, 5 (0·4); rheumatoid arthritis, 0 3; flat foot, 1 (0·1); achondroplasia, 1 (0·1); and accident, 25 (3·5). The accidents were mainly burns or being run over. 24 cases due to apoplexy or birth palsy were found to be also mentally defective and have been excluded from the list. Of 828 cases over 16 years of age the diseases were: tuberculosis, 206 (24·9); accidents, 133 (16·1); apoplexy and birth palsy, 116 (14·0); infantile paralysis, 73 (8 8); rheumatoid arthritis, 29 (3·5); rheumatism, 33 (3·9); rheumatic fever, 10 (1·2); congenital deformities, 47 (5·7); venereal disease, 39 (4·7); spinal myelitis, 11 (1·3); cerebral tumour, 3; paralysis agitans, 3; spastic paraplegia, 5; anterior poliomyelitis, 3; disseminated sclerosis, 2; 1 case each was due to amyotrophic lateral sclerosis, Friedreich's ataxia, lumbar pachymeningitis, cerebro-spinal meningitis, progressive muscular atrophy, congenital muscular atrophy, alcoholic neuritis, amputation for gangrene following typhoid fever, diabetic gangrene, flat-foot, frost-bite, white-leg, elephantiasis following scarlet fever; 8 were due to amputation for blood-poisoning and scoliosis respectively, 7 to rickets, 5 to amputation for tumour, 4 to septic poisoning, 3 to muscular dystrophy and necrosis of bone, 2 to lead-poisoning and fragilitas ossium; 60 were unclassified. Two of the cases of septic poisoning followed childbirth. The number of cripples due to tuberculous disease rapidly diminishes as age advances; thus there are 285 cripples under 16 years of age, 117 between 16 and 30, 55 between 30 and 45, 22 between 45 and 60, and 12 over 60. The records for infantile paralysis are somewhat similar, 175 under 16, 39 between 16 and 30, 22 between 30 and 45, 12 between 45 and 60, and none over 60. One of the chief objects of the inquiry was to obtain information about accidents. Of the 133 cases of permanent crippling over 16 years of age due to accidents, 92 were males and 41 females; there were 2 between 16 and 30, 31 between 30 and 45, 50 between 45 and 60, and 30 over 60 (the ages refer to the age of the cripples at the time of examination, not at the time of the accident). Of the 133 accidents, 51 occurred at work, 59 not at work, and in 23 the mode of occurrence was not ascertained.

Birmingham Medical Mission.

The annual report shows that during the past year the buildings have been considerably extended. The total number of cases was 7558, making 33,408 attendances, including 1950 visits at home by the medical superintendent. The work is done in harmony with the efforts of the medical officer of health and the medical officers of the education committee. Children are protected from overwork at school or encouraged to attend regularly as the case requires. Others are introduced to the open-air school, and very many are recommended to convalescent homes and special hospitals. The committee makes an appeal for £250 to enable it to meet the extra expenditure of the year.

Nov. 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University and Degrees in Veterinary Medicine.

THE question of an Edinburgh University degree for veterinary students has been referred to from time to time. Not only have negotiations been satisfactorily concluded, but a draft ordinance has been approved by the University Court, the scheme of which I have already alluded to in your columns. By the full scheme it

is proposed to have two degrees—viz., Bachelor of Science and Doctor of Science—in this department. For the B.Sc. the following conditions are required: 1. Four years of study in veterinary medicine. 2. The candidate must be a Member of the Royal College of Veterinary Surgeons or hold a veterinary diploma entitling him to be registered. 3. In addition to the courses prescribed for the diploma of the Royal College of Veterinary Surgeons, a course of instruction must be taken in the following subjects: practical chemistry, physics, advanced or applied botany or zoology, anatomy of domesticated animals (including embryology and practical anatomy), histology, experimental physiology and physiological chemistry, pathology and bacteriology, protozoology and entomology, sanitary science and veterinary hygiene, and genetics (heredity and the principles of breeding). Attendance at the Royal (Dick) Veterinary College, Edinburgh, shall qualify *pro tanto* for admission to the University examinations. One year of study must be spent at the Edinburgh University, and the Senate is given the power from time to time to determine the proportion of classes to be taken at the University and at the Royal (Dick) Veterinary College. The University Court is given power to determine what other courses of instruction may be accepted by the University other than those mentioned. The examination for the degree of B Sc. is to consist of three divisions:—First division, chemistry, physics, botany, and zoology; second division, anatomy (including embryology and histology) and physiology; third division, pathology (including bacteriology, protozoology, and entomology), genetics, and sanitary science and veterinary hygiene. Graduates who have held the degree of B.Sc. for three years may offer themselves for the degree of Doctor of Science. Such candidate shall be required to present a thesis or a published work or memoir on a subject bearing on veterinary science or practice. It is provided that this ordinance shall come into force at the beginning of the winter or summer session next after the date of its approval by His Majesty in Council.

Aberdeen County School Medical Inspection Staff.

At a meeting of the Aberdeen County Committee on Secondary Education, held on Nov. 10th, a report was read as to the carrying out of the school medical inspection for the current year. The number of children inspected last year was 9655, and the estimated number to be examined this year is, counting those who have to be re-examined, 15,691. The report pointed out that a third medical officer was urgently needed, and raised the question of the coöperation of nurses in the work of medical inspection in the county. A motion was carried that the matter be remitted to the Medical Inspection Subcommittee for consideration and report.

Nov. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Insurance Bill in Ireland.[1]

THE amendments put down by Mr. Lloyd George for the Irish portion of the Insurance Bill show that, so far as Ireland is concerned, it is really a new measure, and that an attempt has been made to meet the two diverging views of the Irish Nationalist party. "Medical benefits" are left out, but the Irish dispensary doctors are to give the certificates needed for sickness, &c. This plan will satisfy the representatives of the rural districts, while the clause by which "medical benefits" may be introduced as an additional benefit by the members of an approved society should be approved by the Members who represent industrial centres. As a result many fear that, instead of getting away from the Poor-law system, its methods will be intensified, while the very club practice which the members of the medical profession in England want to get rid of, and which up to the present has taken little root in Ireland, will now be fully installed here. The real mistake made by the medical profession was in not insisting that under no circumstances would they agree to the contract system of medical attendance. This would have been logical.

[1] See Parliamentary Intelligence for notes on the progress of the National Insurance Bill.

Boarding-out of Workhouse Children.

Lord Mayo, who last week led a deputation to the Local Government Board from the Irish Workhouse Association, pointed out that although 2593 children were being boarded-out, 7279 were still housed in the workhouses. Moreover, 32 unions had taken no steps to board-out any children. The Vice-President of the Local Government Board expressed sympathy with the objects of the association.

The Milk-supply in Ireland.

The *Dublin Gazette* of Nov. 10th announces the appointment of a Vice-Regal Committee "to inquire into the alleged scarcity in the supply of milk in some parts of Ireland, and to report upon the causes of the deficiency, where it exists, its effects upon the public health, and the means whereby the deficiency can be remedied; and also to inquire into and report upon the dangers of contamination and infection in the present milk-supply, and the methods best adapted to guard against these dangers." The chairman is Mr. P. J. O'Neill, J.P., chairman of the Dublin county council, and the other members are Sir John Lentaigne, F.R.C.S. Irel.; Mr. George A. Moorhead, F.R.C.S. Irel.; Mr. Alec Wilson, of Belvoir Park, Belfast; Mr. Dermod O'Brien, president of the Royal Hibernian Academy; Mr. John R. Campbell, B.Sc., assistant secretary in respect of agriculture of the Department of Agriculture and Technical Instruction for Ireland; Mr. Albert E. Mettam, B.Sc., M.R.C.V.S., principal in the Royal Veterinary College of Ireland; Lady Everard, of Randlestown, Navan; and Miss Margaret McNeill, assistant inspector of reformatory and industrial schools, Ireland. It seems unfortunate that the committee should not contain any medical officer of health experienced in dealing with milk-supply. The appointment of the committee has caused surprise, as it is generally thought that if the Local Government Board enforced the Dairies and Cowsheds Order the conditions of the milk-supply in Ireland would be satisfactory. The absence from the committee of a representative of that Board has also caused surprise.

Accommodation for Consumptives in the Royal Hospital for Incurables.

A "public" meeting was held last Monday to protest against the proposed building of a new pavilion for consumptive patients at the Royal Hospital for Incurables, and several speeches in opposition thereto were delivered. Mr. Mahony, consulting surgeon to the hospital, as well as a member of the managing committee, were refused a hearing by the chairman. Mr. Mahony's undelivered speech, subsequently published, showed that the increased accommodation is only from 69 beds to 80. It is to be hoped that the governors will not be deterred by the opposition in the neighbourhood from making the very necessary addition they propose.

"Ui Breasail."

The total receipts of Ui Breasail, the Health Exhibition held at Bates Bridge, Dublin, in May and June last, amounted to £9956 6*s.* 11*d.*, and the expenditure to £7437 14*s.* 7*d.*, leaving a net profit of £2518 12*s.* 4*d.*, more than £1500 of which came from donations. The financial result is disappointing, but the exhibition must be credited with some educative effects. The accounts do not give sufficiently detailed information to justify an opinion as to where the wastage occurred.

A Degree of Sc.B. for Dublin University.

Hitherto Dublin University has conferred only a doctorate in science. In future a degree of Sc.B. may be conferred, for research and advanced study in any important branch of mathematical, experimental, natural, or applied science, on Dublin graduates who have obtained moderatorship in mathematics, experimental science, or natural science, provided one full year after graduation shall have been devoted to any important branch of any of the above-named subjects, both by study and research. Graduates of other universities holding a degree equivalent to the moderatorship shall be eligible on like conditions, provided the year's study and research is passed in residence at Dublin University. Graduates of Dublin or other approved university who have not obtained moderatorship or its equivalent may qualify for entry on the year's course as above by presenting themselves at the moderatorship examination for the intended study and obtaining therein qualifying marks for moderatorship.

The Belfast Water-Supply.

At a recent meeting of the Belfast water commissioners, in discussing the question of an emergency supply from Lough Neagh, it was stated that Lough Neagh had been considered as a source of supply, but experts had advised that it would be dangerous as it received the sewage of various towns. The medical officer of health of Lurgan, Dr. Samuel Agnew, in rejoinder, showed at a meeting of the Lurgan town council that the same statements, supported by the same authorities, had been subsequently made when Lurgan was deciding on its water-supply. They, however, decided to get their supply from Lough Neagh, one inch of water from the surface of which supplied 2,000,000 gallons. The lough covered 100,000 acres, and had a maximum depth of over 100 feet, and a minimum depth of over 25 feet. Such an enormous storage reservoir acted as a great purifying agent, and when the water was pumped up to Lurgan, and there filtered, it became a water of exceptional purity and reliability. The results of analysis made by the Clinical Research Association of the water taken from a tap in the town of Lurgan showed that it was of a high degree of bacterial purity. The freedom of Lurgan from disease communicated by infected water was an additional practical proof of the purity of the Lough Neagh supply.

Belfast Asylum.

In the report of the inspector, Dr. W. R. Dawson, just issued, it is urged that the erection of villas at Purdysburn Asylum should be pushed on, so as to complete as soon as possible the transfer of all the patients there, and so avoid the expense of maintaining two institutions, with the overlapping of staff rendered necessary in some departments.

Alleged Pollution of a River.

At the recent Castlebar sessions, before Judge Doyle, the Marquis of Sligo brought suit against the Westport urban council, seeking an order from the court under the Rivers Pollution Act to restrain the council from allowing the sewage of the town of Westport to flow into the river, which runs through the town and Lord Sligo's demesne to the sea. Evidence was given that the sewage of the town was discharged into the river, and that the latter was in consequence very offensive. On the other hand, it was alleged that there was no nuisance. His honour reserved judgment till the January sessions.

Typhoid Fever in Omagh Asylum.

Referring to the outbreak of typhoid fever in Omagh Asylum chronicled last week the report of the resident medical superintendent, presented on Nov. 9th, showed that the water and the farm milk had been inspected and reported as all right, and the sewerage had also been examined without revealing the cause of this sudden outbreak. It was decided to employ an expert to make a test of the sewers, water-supply, and drainage of the institution, and to report thereon and make recommendations to the committee. At a meeting of the Omagh rural council held on Nov. 11th, in reply to the Local Government Board, asking why no action had been taken in regard to the report of Mr. J. J. Todd, medical officer of health of Omagh [1] as to the nuisance caused by defective sewerage at the lunatic asylum, the chairman said that the asylum authorities had not yet ascertained that the sewerage was at fault. This was the third outbreak at the asylum, and they had been unable to trace the source. Probably the disease broke out through some individual coming to the asylum (? a typhoid carrier). To a question asked by one of the members of the rural council, "Would the sewage passing through Omagh not carry infection?" no answer was given. The Local Government Board is bound to see that sewage from a typhoid-infected institution shall not be discharged untreated into the river passing through the town. This is the point raised by the medical officer of health. On Nov. 13th the deaths numbered eight.

A Parsimonious Board of Guardians.

At Enniskillen quarter sessions, on Nov. 1st, Mr. John Wilson, of Enniskillen, sued the Enniskillen board of guardians for 3 guineas fees and 15*s.* car hire. On August 24th, on a telegram from the relieving officer, Mr. Wilson drove by car to Jubapeeney, county Cavan, 17 miles distant, to attend an operative midwifery case. On reaching the pass leading to the house he had to walk three miles through heather, and over rocks and through a bog. The guardians tendered Mr. Wilson 3 guineas, but objected to pay the car hire. Judge Craig, K.C., said that, if necessary, the doctor should have taken a motor-car. Where the lives of a mother and child were in danger no expense should be spared. It was the duty of the medical officer to take the quickest route. He gave a grant for the full amount claimed.

Nov. 14th.

[1] See THE LANCET, Nov. 11th, p. 1372.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Reunion of Provincial Sanitary Officers.

THE heads of the Bureaus of Hygiene of towns of more than 20,000 inhabitants and the departmental inspectors of hygiene met recently at the Pasteur Institute, under the presidency of M. Vaillard, Medical Inspector-General of the Army. Among those present were by M. Jules Renault, Inspector-General of the Sanitary Service; M. Mosny, Secretary-General of the Congress; M. Vincent, Professor at the Val de Grâce; and M. Chassevant. M. Diénert, Chief of the Water Inspection Department of Paris, made a report on the selection, securing, protection, and surveillance of water destined for drinking purposes. Dr. Mauriac, Inspector of Hygiene of the Gironde, presented a communication on the measures taken at Bordeaux against the invasion of cholera by land. Dr. Marchoux reported on the epidemic of typhoid fever which has prevailed in Paris and in the department of the Seine during the past three months. He said that the Paris water-supply must not be held solely responsible for the recrudescence of the disease, but that the outbreak was rather due to the return to Paris of persons who had contracted elsewhere the germ of the disease. The drinking water of Paris, according to him, is superior to that of many other places, and it should not be spoken ill of. Dr. Marchoux then detailed the various procedures employed to discover the source of the fever, and, finally, he stated that the different vaccines that had been tried had given no good results, with the exception of one constituted of sensitised bacilli—that is to say, cultivated in typhoid serum.

Blennorrhagic Arthritis.

M. Ramond on Nov. 3rd recommended, at the Société Médicale des Hôpitaux, a procedure used by himself in blennorrhagic arthritis when all other therapeutic measures had failed, before having recourse to surgical intervention. He withdraws by puncture from 3 to 5 c.c. of synovial fluid and immediately re-injects it under the skin of the articulation; then a compress of cotton-wool is applied. The injection may be repeated every two or three days if necessary. A cure without ankylosis is usually established in eight or ten days. M. Ramond has treated several cases of arthritis of the knee in this manner, two of which were apparently very serious, for the fluid in them was decidedly purulent. Nevertheless, as microscopic examination did not demonstrate the presence of the gonococcus among the pus cells, M. Ramond did not hesitate to inject the joint contents, but used only 1 cubic centimetre for the first injection. The injection was well borne, as also were the following ones, which were made in stronger doses of from 2 to 5 cubic centimetres. The same procedure gives results equally encouraging in hydrarthroses of all kinds.

The Consequences of the Excessive Heat.

Dearness of provisions and dearth of milk and other foodstuffs have not been the only results of the excessive heat of the past summer; it has unfortunately had a more direct influence on the public health, and the gastro-intestinal and hepatic troubles induced by it have formed the subject of a special study by M. de Fleury. These troubles have been attributed generally to the increased use of iced drinks. This cause may, it is true, hold an important place, but besides this the heat has had a great influence on foodstuffs of animal origin by hastening putrefaction, thus augmenting the virulence of the intestinal pathogenic microbes. It provokes an almost complete substitution of perspiration for micturition, but sweating

cannot make up for the renal insufficiency. The inadequate elimination thus produces an intoxication. Finally, the excessive heat appears to over-work the glandular apparatus and thus to diminish the protective powers of the organism. M. Fleury proposes, in order to augment the renal secretion at the expense of the cutaneous, a *régime* devoid of all food of animal origin, such as milk, eggs, fish, and meat, intestinal antisepsis by means of lactic ferments, and the raising of the blood-pressure in the renal artery by means of theobromine, together with small doses of caffeine.

Death of M. Henri Monod.

M. Henri Monod, a member of the Academy of Medicine, died recently at the age of 68 years. For upwards of 20 years his administrative career had been devoted to questions of public assistance and hygiene. In 1887 he was named Director of Public Assistance at the Ministry of the Interior, to which was added two or three years later the section of public hygiene. As a commissary of the Government he was very active in promoting the law for the protection of the public health, which was, in fact, almost entirely his work.

Nov. 13th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A Proposed Reform of the Law Relative to Occupational Diseases.

IN an article on the diseases and accidents to which workmen are liable Dr. Roth has stated in the *Aerztliche Sachverständigen-Zeitung* that the number of accidents due to the fault of employers has decreased from 20 per cent. in the year 1887 to 12 per cent. in 1907, but that the accidents due to the workmen themselves have, on the contrary, increased during the same period from 27 per cent. to 41 per cent. He is of opinion that the increase was not caused so much by the carelessness of the workmen as by fatigue. He believes that the considerable diminution of the hours of work enforced by the law necessarily induces quicker working, and that this fact may possibly be the cause of the increase of accidents due to the fault of the workmen. One of his recommendations is the employment of factory inspectors for the various trades. As regards the diseases commonly associated with certain trades, it is stated that notwithstanding the sanitary regulations a decrease of those diseases has either not taken place at all or not in proportion to the improvement of the sanitary condition of factories and workshops. The number of cases of lead poisoning has increased from its former proportion of 12·2 per cent. to 19·1 per cent. in 1908. Dr. Roth earnestly advocates medical inspection of all the factories where the work is dangerous to health, and recommends careful investigation into the cause of the individual cases, as is prescribed by the existing law regarding accidents. The medical inspection ought to be particularly strict with respect to youths and working women, the latter showing a mortality far above the average—a fact which is the more remarkable as women are by law excluded from a great number of unhealthy or dangerous occupations. The notification of every case of a trade disease ought to be made compulsory, he considers. The number of cases of trade diseases is not extremely great here. In the Berlin municipal hospitals—which, of course, are only a section of the Berlin hospitals—the number of cases of lead poisoning is only 91 per annum, of which 50 per cent. recovered, the remainder being discharged as either relieved or unimproved. Other examples of trade diseases are eczema caused by chemical substances and poisoning by carbonic oxide. When these cases are notified and treated at an early date the patients occasionally recover completely in a short time. Tuberculosis is, of course, in many cases due, at least indirectly, to employment in dusty workshops, but notification of this disease is not yet possible because the connexion between the disease and the trade cannot be exactly ascertained in every case. The new reformed law for the insurance of workmen is a great improvement, because it empowers the Federal council to stipulate that certain trade diseases may come under the provisions of the statutes relative to insurance against accidents, so that workmen unable to follow their employment through suffering from the diseases in question are entitled to compensation, as in the case of an accident.

Modern Treatment of Inoperable Cancer.

At a recent meeting of the Association of German Naturalists and Medical Men Professor Czerny, of Heidelberg, read a paper on the Modern Treatment of Cancer. He said that the principal points in rational treatment were an early diagnosis and an early operation. The results of treatment in advanced cases not permitting an operation would continue to be unsatisfactory as long as the causes of the disease remained unknown, and surgeons must therefore in these cases be content to relieve the sufferings of the unfortunate patients. As a result of recent researches it has been stated that certain lipoid substances produced a strong cancerous proliferation of the epithelial cells. These substances were possibly active in the development of the forms of cancer affecting chimney-sweepers, aniline workers, and tobacco-smokers. The Roentgen rays, by producing dermatitis, prepared a precancerous stage, leading sometimes to real cancer. Chronic irritation of ulcers and scars of the skin, or of the gastro-intestinal mucosa, or of the gall-bladder, might bring on cancer by the action of an unknown irritant and where predisposition existed. Nearly all statisticians declared that cancer was increasing in every civilised country. The increase was not uniform or steady, but occurred epidemically, in certain places more than in others, and in certain times it ceased altogether. Special researches carried out by Dr. Werner in the grand-duchy of Baden had shown that the exciting cause of the disease was present either in the soil or in the houses in which the patients had been living, that the time of incubation was rather long and that the germ was not conveyed from man to man. With regard to modern methods of treatment, Professor Czerny said that to avoid the possibility of cancerous tissue being left in the wound and producing a local relapse he was accustomed to operate in two stages; after the operation the wound was left open and then electrical fulguration, diathermy or exposure to radium rays or Roentgen rays, was resorted to. After three months had passed without the occurrence of a relapse the wound was closed by a plastic operation, and in order to avoid dispersal of the cancerous germs the tissues were cut by an electric cautery instead of a scalpel. Professor Czerny made frequent use of radiotherapy, more than two-thirds of his cases being inoperable. Radium rays and Roentgen rays destroyed the cells of the growth, the tumour becoming smaller by necrosis. Owing to their anodyne effect the patients liked to have the rays administered, although a radical cure was not produced, the cells, but not the germs, being destroyed by the rays. Injections containing preparations or emanation of radium had proved unsuccessful, the insoluble preparations being encapsuled, and thus rendered inert, while the soluble ones passed through the body too quickly to become effective. Salvarsan administered by subcutaneous and intravenous injection has given some suggestive results in sarcoma, but in cancer it was only used in the form of injections within the growth to produce necrosis. The effect of serum-therapy and treatment with antitoxin was not yet sufficiently tested. Professor Czerny then showed three cases of inoperable cancer of the stomach in which he had made the growth accessible and had then given an exposure to the Roentgen rays, with the result that the pain was much relieved. In another case of cancer of the cardia gastrotomy was performed, and the Roentgen rays were applied through the fistula. The growth was then drawn through the fistula and cauterised by an electric cautery. The fistula was sutured a fortnight afterwards on the special desire of the patient. Professor Czerny said that in the cancer hospital at Heidelberg it was found that real cancerous tissue might be successfully destroyed by physical means, but he was opposed to this method of treating patients who were in a cachectic state and had internal metastases.

Nov. 13th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

Medical Prospects in South Africa.

NEARLY every local practitioner of any standing has his advice sought from time to time by younger colleagues of his acquaintance in the old country as to the prospects of medical practice in South Africa. There are very few who would advise any home-born practitioner to emigrate to South

Africa at the present time, for the opportunities afforded newly arrived practitioners are by no means attractive. There can be little doubt but that the Union is overstocked with medical men, and the ranks of the local profession yearly are becoming more and more overcrowded and out of all proportion to the increase in the European population. In the larger towns competition has been very keen for years past, and the same is becoming more and more evident in the villages and hamlets. In most country villages one now finds two or even three practitioners where there is really only a proper living to be made by one. Moreover, the expenses of living do not tend to cheapen, and South Africa must still be regarded as one of the most expensive places in the world in which to live—at any rate, with the same standard of comfort as in Britain. The home-born practitioner desiring to emigrate has, perhaps, a better chance of success in the towns than in the country, for though competition is very keen in the former, a newcomer who is prepared to wait can, as a rule, eventually establish himself in practice. In the villages, unless he is very lucky and able to find a place where the opposition is exceptionally weak, he does not stand much chance of success. In most country villages he must equip himself with a good working knowledge of the Taal, but even with this he will usually find that an Afrikander opponent will have the advantage of him, not only in selection for all public appointments, but in private practice as well. It is true that the day has gone when the British practitioner is boycotted on account of his nationality, but, nevertheless, if in a Dutch district he is opposed by an Afrikander practitioner he will find out, unless his opponent be extraordinarily incompetent, that the practice will become divided up to a very large extent on racial lines, and in case of a public medical appointment falling vacant in his district both Church and State will be arrayed against him should he seek preferment.

Apart from present difficulties, it is rumoured that a new Medical and Pharmacy Act has been drafted for the Union on radically different lines to that drafted for the assistance of Government by the medical councils of South Africa. It is stated that the draft Act contemplates the opening up of the country to all practitioners who are qualified to practise in their country of origin. It is to be hoped that the rumour is not true, for it would virtually mean that South Africa will be again over-run with the quack and the charlatan; even if this could be guarded against, inevitably there would be a lowering of the ethical code, which, under present circumstances, is by no means on as high a level as could be desired. One feels that the rumour is likely to be true, for it is notorious that several of the present Ministers have expressed themselves at various times in favour of opening the gates of practice to the talent of all nations. It is well known, also, that one Minister at least has stated his rooted objection to the Medical Council system, and it would seem likely, therefore, that the new legislative proposals may not enable disciplinary action to be taken in case of professional misconduct. For years past Ministerialist organs have expressed disapproval of the powers conferred upon the medical councils of the Provinces. Only the other day *De Volkstem*, which is supposed, as a rule, to reflect Ministerial opinion, had fault to find with any law which protected medical practitioners by penalising those who practise without a licence. It quoted the case of the cancer quack, Mrs. Van Niekerk, who, it contended, proved conclusively that she had greatly assuaged the sufferings of those whom doctors from "Oxford and Cambridge" had given up as hopeless. It omitted to mention, however, that the claims of Mrs. Van Niekerk to cure cancer were carefully sifted by a Select Committee of the House of Assembly at the Cape some years ago and were found wanting, and that this person has been repeatedly fined by magistrates and was once indicted for manslaughter for causing grievous bodily harm to a patient which resulted in death. *De Volkstem*, in the same article, recalls how in their wanderings on the Great Trek, the Boers of old were entirely dependent upon the skill of wise women and of others who had gained a knowledge of medicinal herbs and of simple remedies, and that they managed very well for years without licensed doctors. The article concludes by insinuating that the reason for the high death-rate in the concentration camps was because medical men and not "wise women" were employed. Apparently the author of this effusion would have the profession legislated out of existence; though *De Volkstem's* opinions on the need or otherwise for stringent laws to govern the medical profession and to safeguard the public are doubtless not a proper reflection of ministerial views, the article is significant in that it does represent undoubtedly the views of the "backveld" Boer. Under all the circumstances one would be inclined to issue a strong warning to any practitioner thinking of settling in South Africa to the effect that for the present, at any rate, this country has little to offer to any newcomer who has to earn his living by means of his profession.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Malaria in the Punjab.

A NOTABLE Government report[1] has been issued, entitled "Malaria in the Punjab," which deals specially with the great epidemic of 1908, when Amritsar suffered so severely and the province lost 307,300 persons in a little over two months. The Punjab, it may be stated, is the only province in India which suffers with any frequency from terrible autumnal epidemics of malaria. Major S. R. Christophers, I.M.S., writer of the report, distinguishes between ordinary seasonal malaria of the autumn and the fearful epidemics of malaria which occur in certain years and which wipe out the inhabitants of cities and villages. This virulent type he calls "fulminant malaria" As an example of the ravages of this "fulminant" type of malaria may be cited that of the city of Umballa, which lost in the month of October, 1890, no less than 17,025, a death-rate of 1200 per cent. above normal! Major Christophers says he at first thought the epidemic of 1908 to be quite unique in its virulence, but when he examined the facts of the last fifty years he was surprised how frequently such serious outbreaks had occurred. The worst years have been in 1876, 1878, and 1879, then the years 1890, 1892, and 1894, and in the present century 1900, 1901, 1903, and 1908. He found that the difference in the years was so marked that while in 1905 and 1907 the autumnal mortality was between 60,000 and 80,000, in 1900 and 1908 it was between 250,000 and 300,000. He therefore made a careful study of the causes of these variations. One obvious factor, of course, is the rainfall. Heavy autumn rains in the Punjab mean a spread of malaria. The following figures show the importance of this factor: For 20 years in which rainfall was deficient the average mortality was 81,000; for 10 years in which rainfall was normal the average mortality was 104,000; for nine years in which rainfall was excessive the average mortality was 177,000. On examining the districts affected he found that in the West Punjab, where rainfall is scanty, "fulminant" malarial epidemic is very rare. In the south-east and sub-montane Punjab, such as Delhi, Amritsar, Gujranwala, and Gujrat, where rainfall is often heavy, the "fulminant" malaria epidemic often appears. He further found that its chief centres were the "riverain" districts (i.e., districts which have old beds of rivers) and also the flood lands along the banks of rivers from which the rainfall could not drain off quickly. In such places, where the country remained flooded for days, the "fulminant" type of malaria appeared most frequently. On the other hand, where drainage was good and the water did not remain standing for days, this "fulminant" malaria very rarely occurred. Thus the conclusion is clear, and I give it in Major Christophers's own words: "The removal or prevention of flood water in or near villages should be the first step in the sanitation of all rural districts." The same held good for the cities of Delhi and Amritsar, where flooding from river-beds and low-lying grounds near the city walls makes a dangerous state of affairs. Amritsar is nothing less than a water-logged city. The subsoil water is only three feet from the surface and the soil is clayey and the land flat. Thus malaria causes more deaths than plague, and it is sad to see the finest Indian peasants—the sturdy Punjabi—being ruthlessly decimated by malaria under the above conditions. It is useless to talk about mosquito destruction in some of these places, when quinine distribution and drainage are the

[1] This may be obtained from Messrs. Gulab Singh and Sons, Lahore, for 2 rupees.

two sanitary agents to push. In cities and villages, of course, small pools may be so treated, but these are often better filled up. There is another factor for which a remedy is harder to find, and that is scarcity of food. A year with short rains may be feverless, but if crops have no rain there is less food and higher prices. This lessened food-supply causes loss in stamina. Hence, if this is followed in the next year by a heavy monsoon (with large areas of mosquito breeding grounds) there will follow "fulminant" malaria. Better economic conditions alone can counteract this mortality. This would mean for the peasants a surplus from previous good harvests and freedom from debt. But those who understand how the Indian agriculturist is imposed upon by rich zemindars in the conditions on which he holds his land will be able to appreciate my remark that at present "better economic conditions" is but a dream. Government has started coöperative credit banks which deserve to be widely made known to the ignorant villagers. Major Christophers's conclusions may be briefly summarised as follows: 1. Economically "fulminant" malaria is by far the most important factor in the Punjab to be combated by sanitary and other measures. 2. There have been many "fulminant" epidemics in the Punjab in the past 50 years and with proper scientific measures these might be much lessened in the future. 3. The most salient feature of the epidemic is excessive mortality, especially among children. 4. These epidemics start from a centre or centres in every direction. At the centre is the heaviest mortality, sometimes rising to the weekly mortality of 500 per 1000 per annum. 5. The determining causes are excessive rainfall and food scarcity. The worst epidemics are apt to occur when a heavy monsoon succeeds a period of deficient rains. 6. The epidemic areas are not coincident with the heaviest rainfall areas, but with areas of floods. The drainage of flood waters is of first importance.

Lahore Medical College.

Major D. W. Sutherland, principal and professor of medicine, has just returned to India from deputation to England in connexion with the King Edward Memorial at Lahore, which is to take the form of very extensive improvements to this college and hospital.

Oct. 15th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Ninth Australasian Medical Congress.

THE Ninth Australasian Medical Congress assembled in Sydney on Monday, Sept. 18th, under the presidency of Dr. F. Antill Pockley. The delegates were formally welcomed on Saturday, the 16th, at the Town-hall, by the Lord Mayor of Sydney, Sir Allan Taylor. In the afternoon a reception was given at the University by the President and Mrs. Pockley. On Sunday special services were held at the Anglican and Roman Catholic Cathedrals, and at Stanmore Methodist Church. The Anglican Primate, Archbishop Wright, preached the sermon at St. Andrew's, and Archbishop Kelly officiated at St. Mary's. On Monday the business session was opened, and the committees on hospital abuse and contract practice abuse presented reports. In connexion with the latter, it was stated that the resolutions affirmed at the previous Congress as to a wage-limit clause being inserted in friendly societies' agreements had not been enforced in any State except New South Wales, where the professional organisation is very complete. The resolutions as to hospital abuse, agreed upon at former Congresses, were reaffirmed, with the addition that in the event of the financial support of the hospitals being undertaken by the Government patients able to obtain medical services outside the public hospitals should be excluded, and that in any event boards of management should be retained. The main purport of the reaffirmed resolutions was that no payment should be taken from patients in hospitals supported by Government grant or private benefaction, and that intermediate hospitals should be established, without staff, into which any practitioner might send patients under approved conditions and attend them there. Dr. R. Worrall, who introduced the report, spoke strongly against the proposals of the New South Wales Government for the nationalisation of hospitals, and the general feeling of Congress was entirely in sympathy with his attitude.

On Monday evening the Congress was formally opened by the Governor-General, Lord Denman, and Dr. Pockley delivered his inaugural address. The gathering was a very brilliant one, and distinguished representatives of all professions were present on the platform. The visitors were welcomed by the Premier of New South Wales and Sir Allan Taylor. Dr. Pockley's address dealt with various problems of medical science, and he expressed himself against the present socialistic trend of thought, which looked to nationalisation of medical service as a desirable ideal. On Tuesday work was begun in the various sections and proceeded throughout the week. The address in Surgery was delivered by Mr. G. A. Syme, of Melbourne, who reviewed the advance of modern surgical achievement, which he thought was not so extensive as was sometimes supposed, although operations were now much more safe than formerly and much more frequently undertaken. Mr. Syme dealt with his own personal experience of intra-thoracic surgery by means of tracheal insufflation and the great field of modern operation for appendicular and gall-stone affections. He also paid a high tribute to the achievements of two young Melbourne surgeons, Dr. T. P. Dunhill, in the surgery of the thyroid gland, and Dr. Basil Kilvington, in the resection of nerves for paralytic conditions. In the Section of Medicine Mr. W. T. Hayward, of Adelaide, delivered the presidential address, sketching the newer developments in medicine. At the same time he deprecated the fact that the modern student was overloaded in the attempt to keep pace with them. Mr. W. Beattie Smith, in the Neurological Section, pleaded for more accurate study of the causes of insanity. Mr. F. J. Clendinnen, in the Section of Radiology, and Mr. Herman F. Lawrence, in that of Dermatology, dealt chiefly with the action of radium in malignant disease. Both held that radium was of use in lessening the probability of recurrence, and should be used both in pre-operative and post-operative conditions. Dr. G. Rothwell Adam, in the Section of Gynæcology, and Dr. A. Jeffreys Wood, in that of Diseases of Children, reviewed recent work in its bearing on these special departments. In the Public Health Section Dr. B. Burnett Ham introduced a discussion on the Prophylaxis of Venereal Disease, and gave an outline of the work done in Melbourne, where a system of notification had been carried out for a year, supported by a Wassermann test in each reported instance. Of 5000 notifications some 1900 had given a positive reaction, and 400 a partial one. The whole of the testing was carried out by Dr. Konrad Hiller. Dr. Ham concluded with a series of proposals for the regulation of venereal disease. Chief among them were an impersonal notification; establishment of dispensaries open at night for gratuitous treatment; penalty for communication of venereal disease; segregation of dangerous cases; the suppression of solicitation and of impure literature, among other things. These things, he suggested, should be undertaken by the State. An educational campaign was also proposed in the form of a "Red Plague League," to be composed of men and women of all classes who should distribute literature and make known the dangers of venereal disease in other ways. Professor H. B. Allen strongly deprecated the teaching of sexual physiology in schools, as was sometimes advocated, which he thought would do more harm than good. Dr. Pockley held that such teaching would be beneficial.

At the final business meeting Dr. Dick's motion was adopted to establish a standing committee of Congress to watch medico-political events and report from time to time, such a committee to be representative of all States. Other resolutions of Congress called on the New Zealand and State Branches of the British Medical Association to enforce the clause passed at the last session of Congress, held in Melbourne in 1908, forbidding medical men to pass for professional attendance at contract rates any man whose income, together with that of his wife, exceeds £4 per week, or to attend any present member whose income, with that of his wife, exceeds £6 a week. To facilitate this, steps were recommended to be taken to strengthen the Australasian branch and to form a fund for those members who may suffer financially through such prohibition. The attention of Congress was also directed to the inadequate remuneration for club practice in some parts of Australia, and medical

men were forbidden to act as medical officers for proprietary aid or benefit societies unauthorised by the Standing Committee of Congress. The adoption of a *per capita* basis and not a fixed salary was also recommended.

In the Naval and Military Section resolutions declared inadequate the terms of service and pay of the Commonwealth Naval Medical School as at present outlined, and recommended the formation of a committee to discuss the subject with the Naval Board. The Section of Pathology, Bacteriology, and Tropical Medicine urged representations to the Federal Government to secure adequate funds and staff for the Australian Institute of Tropical Medicine. The Public Health Section passed resolutions dealing with feeble-minded children, the relationship to disease and the classification of Australian mosquitoes, the giving of death certificates, the formation of a central committee to deal with the collection of Australian medical data and statistics, the compulsory teaching of hygiene in State Schools and for older girls of the feeding and rearing of children, the detention of venereal prisoners for treatment, the compulsory notification of disease, and the treatment of venereal disease by non-qualified practitioners. The Sections of Neurology, Pathology, Public Health, and Diseases of Children urged the making of infantile paralysis compulsorily notifiable. The Section of Ophthalmology called for a proper course of technical instruction for spectacle-makers, demurred to legislation authorising opticians to test vision, and demanded the legal restriction of the term oculist to legally qualified medical practitioners. The next meeting of Congress was fixed for 1914, to be held in Auckland, N.Z., under the presidency of Dr. Arthur Purchas.

Friendly Societies Dispute.

An acute rupture has taken place between the medical men in Adelaide and the executive of the Adelaide United Friendly Societies Dispensary. Hitherto no dispensaries have existed in Adelaide, the lodge surgeons either dispensing their own medicines or having an arrangement with chemists, and charging a covering fee for such service. The lodge surgeons are of opinion that the proposed dispensary service does not offer a fair remuneration, and they object particularly to a scale of fees for operations in connexion with it. The outcome was that 83 medical men, comprising all the well-known Adelaide practitioners, issued a manifesto in the public press declining to accept the proposed terms. The Victorian branch of the British Medical Association passed a sympathetic resolution urging its members not to apply for the advertised positions. The Friendly Societies allege that they can fill the positions in spite of this opposition, and the matter remains for the present at this stage.

The Medical Service of the Federal Defence Scheme.

A disagreement has arisen between the Federal Defence Department and the medical profession over the remuneration to be paid for examination of cadets for the compulsory service scheme. The original arrangement was to pay area officers £25 for examinations within each area, but this was deemed inadequate, and the profession agreed to demand 2*s.* 6*d.* per head. To this the department disagreed, and proposes now a sum of £60 for area officers who would also be called upon to give certain attendance to the permanent staff within the area. The matter is not settled, but the department states an adjustment can probably be arrived at.

Oct. 4th.

THE AFTER-CARE ASSOCIATION.—Three meetings have recently been held on behalf of this society, whose objects are to assist poor persons discharged recovered from asylums for the insane. At Bath, through the kind invitation of Mrs. Blackburne, when the Archdeacon of Bath presided, and addresses were given by Dr. Maurice Craig, Dr. N. Lavers, and Mr. H. Thornhill Roxby. At Hampstead, at the kind invitation of Mr. and Mrs. Adair Roberts, Mr. Roberts presiding, short speeches explaining the work were made by Dr. Craig and Mr. Thornhill Roxby. At Bethlem Royal Hospital (by permission of the governors), Dr. Stoddart being in the chair, the audience was addressed by Alderman Sir William Dunn, Dr. G. H. Savage, Dr. J. Chambers, Dr. Robert Jones, the Rev. H. Stephens, and Mr. Thornhill Roxby. During the past year applications on behalf of 379 cases were received from various parts of the country.

Obituary.

SIR SAMUEL WILKS, BART., M.D. LOND., F.R.C.P. LOND., F.R.S.,

LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, AND CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

Samuel Wilks was born—as he himself has told us in his fascinating biographical reminiscences, reviewed in our columns only two weeks ago—at Camberwell on June 2nd, 1824. He was the second son of Joseph Barber Wilks, a cashier of the Honourable East India Company's service, a company which had claimed the life work of several of his ancestors. He received his early education at Aldenham Grammar School, Herts, and later at University College School. In 1840 he was apprenticed to Mr. Richard Prior, surgeon, of Newington, and attended at Guy's Hospital, matriculating also at the University of London. In 1847 he was admitted a Member of the Royal College of Surgeons of England, and took the M.B. of London University in the following year, graduating with honours in physiology and comparative anatomy, surgery, and medicine. In 1850 he took the M.D. degree at the same University, again with honours, and in 1851 became a Member of the Royal College of Physicians of London. He was elected to the Fellowship in 1856. He filled most of the offices of the College at various times, having been Examiner in 1867, Councillor in 1870 and again in 1880, Censor in 1875–76 and again in 1888, Vice-President in 1890, and President from 1896–99. In 1879 he delivered the Harveian Oration at the College, in which he laid stress on scientific investigation, in addition to the treatment of disease, as the daily task of the medical profession, and in happy vein contended that elevation of thought, imagination, poetry, and the love of the beautiful are no monopoly of literature and the fine arts, but belong equally to the pursuit of medicine and science.

In 1853 Dr. Wilks obtained the appointment of physician to the Surrey Dispensary. The prevalence of typhus fever in Bermondsey at that time afforded him the opportunity of studying that disease at first hand. Typhus had only recently been clearly distinguished by Sir William Jenner from typhoid fever, the two diseases having been previously confounded, under the common name of continued fever. Wilks's studies fully confirmed the correctness of Jenner's observations. He was for a year physician to the Infirmary for Children in Waterloo-road.

Wilks's connexion with Guy's Hospital was long and fruitful. After serving as medical and surgical registrar he became curator of the Museum, demonstrator of morbid anatomy, and subsequently lecturer on pathology, an appointment which he held for ten years—namely, until 1865. During this period he published the Pathological Catalogue of the Museum of Guy's Hospital, a valuable work of reference. In 1856 he was appointed assistant physician to Guy's Hospital. In 1865 he exchanged the lectureship on pathology for that on medicine, and in 1867 became full physician and continued to act in that capacity until 1885, when he was appointed to the consulting staff. For several years he edited the *Guy's Hospital Reports*, which have served him and the profession so good a turn in enabling him, in his recently published "Biographical Reminiscences," to recall and set forth methodically his own personal knowledge of many interesting developments of medicine recorded or illustrated therein. In 1864 Dr. Wilks was a member of the Contagious Diseases Commission, and later, 1870, of the Royal Commission on the Contagious Diseases Act. In 1867 he became examiner, and in 1885 a member of the Senate, of the University of London. He had previously, in 1868, held the post of examiner in medicine at the Royal College of Surgeons. In 1887 he became a Member of the General Medical Council.

In 1870 Dr. Wilks was elected a Fellow of the Royal Society. In 1879 he was appointed physician to Their Royal Highnesses the Duke and Duchess of Connaught. In 1884 he received the honorary degree of LL.D. from the Edinburgh University. In 1897 he was created a baronet, and was honoured with the appointment of physician-extraordinary to Queen Victoria. In the same year he was awarded the Moxon gold medal, an honour conferred by the Royal College of Physicians of London on "the person who shall be deemed to

have most distinguished himself by observation and research in clinical medicine." In the following year, during his tenure of the Presidency of the College of Physicians, the memorable banquet to the medical profession was given at the Mansion House by the Lord Mayor, Colonel H. D. Davies, M.P. He also had the honour of admitting the late King Edward, then Prince of Wales, as an Honorary Fellow of the Royal College of Physicians. He retired from practice in 1904, and during the closing years of his life lived at Hampstead.

Of Sir Samuel Wilks's literary works the most important was the publication in book form, in 1859, of his lectures on Pathological Anatomy, which soon became out of print. In the preface the author stated that they contained no statement unverified by his own observation and experience. A second edition appeared in 1875, the work of preparation having been entrusted to Dr. Walter Moxon, who carefully retained the original character which was so great a feature of Wilks's work, and which caused "Wilks and Moxon" long to remain a standard textbook on pathology. The book reached a third edition. His lectures on Diseases of the Nervous System, published in 1878, had excited much interest at the time of their delivery, some ten years previously. In this work all the author's acquisitions from observation and reading were well digested and assimilated, and the description of disease was always accurate, though sometimes scanty, as was also the case in the matter of treatment. Besides the Pathological Catalogue of Guy's Hospital Museum, previously referred to, Sir Samuel Wilks published in 1892, in conjunction with Mr. G. T. Bettany, a biographical history of Guy's Hospital. Other works were his lectures on "Specific Fevers and Diseases of the Chest," published in 1874, and the article on Addison's Disease in Vol. V. of "Reynolds's System of Medicine" (1879). He also edited Addison's works, and his contributions materially helped to clear up some of the obscurity surrounding the pathology of Addison's disease. Besides occasional contributions to the medical press, some of his papers on Alcoholism and Vivisection were published in the *Contemporary Review* and the *Nineteenth Century*.

We have enumerated the many claims upon the recollection and gratitude of the medical profession that can be advanced for Sir Samuel Wilks; we append two eloquent personal appreciations of the great physician.

Dr. Hale White has sent us the following note on the career of his friend and master:—

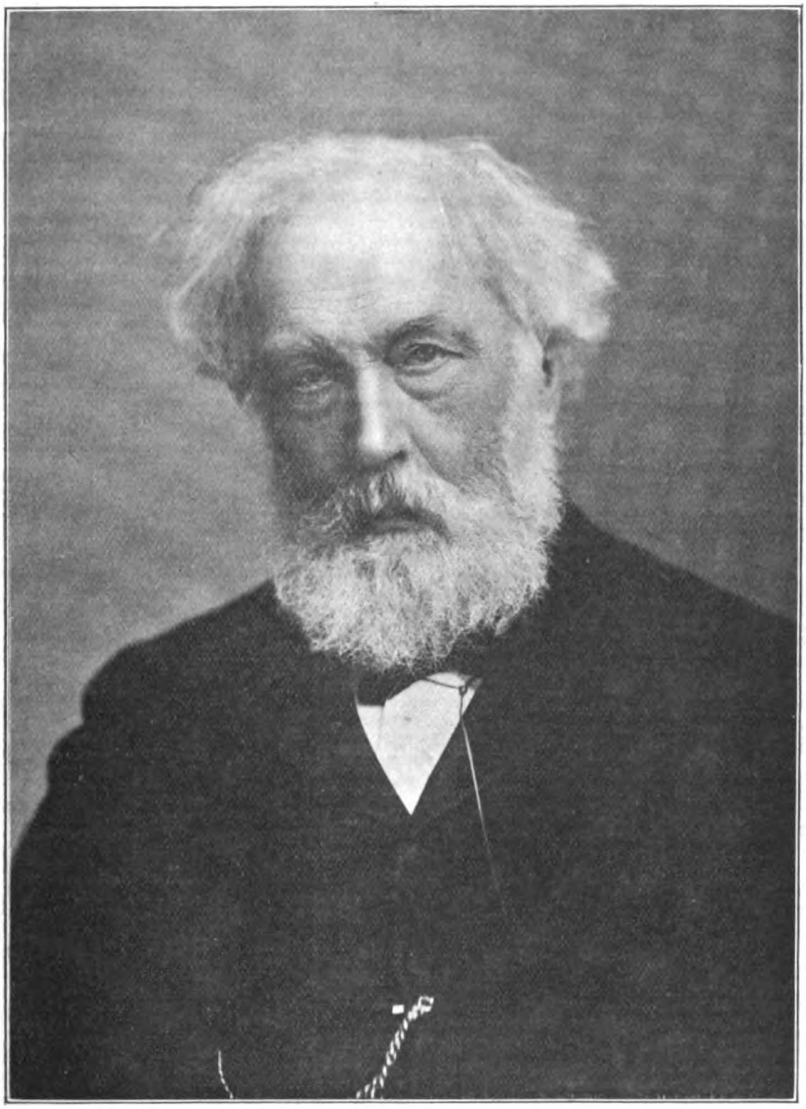
"When Death came as a friend to Samuel Wilks he took with him a great man, one of those rare blessings to the human race who besides commanding our admiration for their intellect compel our affectionate reverence for their influence on us. He did not preach, but after talking with him you left him with a fresh incentive to work for its own sake and feeling that never would you be a party to any humbug, intellectual or other. It was his enthusiasm for scientific progress, his constant interest in the investigations of others, his encouragement to beginners, his honesty, his hearty contempt of dishonesty, and the way in which he exemplified that medicine was at its highest, not when it was a means of livelihood, but when it was an intellectual pursuit—it was all these points that made him loved by those who fell under his spell, that made young men determine to do their best, that led to delightful Sunday evenings at his house in Grosvenor-street, and later on to pleasant walks to see him at Hampstead. Twenty-seven years have passed since he ceased to be on the active staff of Guy's Hospital, but affection for him never waned, and many of his old pupils and friends have gone to Hampstead until the end, from time to time, to enjoy his company. He was a great talker, and as his good talk flowed on none noticed the flight of time. It might be that if you called on him about 3 you would find him smoking a cigar; this would go out as he talked, and at 4 two cups of coffee and some muffins would appear; these would all get cold, and when the talk ceased the cigar stump was relit, the cold coffee was drunk, and the cold muffins were eaten. His fine, beautiful face and his ironical sense of humour added to the charm of his company. Artists and sculptors innumerable have tried to reproduce his features—indeed, at one time he nicknamed himself the professional beauty, so frequent were these efforts.

"He often used to say that Guy's was his life; certainly no one has ever been more devoted to it or added more to its reputation. He was proud of its school, and, following his predecessors Bright and Addison, kept up its tradition that accurate and scientific observation should form the basis of medicine. To him the post-mortem room was as important as the ward, and his teaching has shown many hundreds of students that each case of disease is a problem to be unravelled, and in so doing has made their life's work a pleasure instead of a drudgery. It is 30 years since he gave up lecturing, and his lectures themselves were not, as far as I remember, especially attractive, but the matter was so good that the students begged him to reprint them; so those on 'The Specific Fevers and Diseases of the Chest' were published privately and could be bought at the hospital. Later on his 'Lectures on Diseases of the Nervous System' appeared and were eagerly read by his old pupils. As a teacher he rose above ordinary teaching, and you left him at the end of a round in the wards feeling not so much that you were richer in knowledge as that you had been taught how to use it, how to think, and that you had been inspired with an earnest desire to unravel problems for yourself and become a philosopher.

"Wilks was a great observer, but I am not now attempting to speak of his additions to medical knowledge which have made him famous. He was many-sided and always praised those who did thoroughly good work, even if he had no sympathy with it, and he had to an extraordinary degree the happy faculty of always being interested in something, provided it exercised his mind. He never lost this power until his final unconsciousness, and the way in which he exercised it to banish the tedium and loneliness of old age was wonderful. He was well read and fond of good literature. The photographs on his bedroom mantelpiece during his last illness were those of Wendell Holmes, Wordsworth, and Harriet Martineau. To the end he read his medical journals, and his interest in all kinds of knowledge made him one of the chief members of the Hampstead Scientific Society and gained him many friends among his neighbours. The longer you knew Wilks the more you loved and admired him, and only accident would lead to the discovery of his devotion to those of whom he was fond and his many generosities. As he got older the heroic fortitude with which without a murmur of complaint he put aside the suffering of his illness and drove it out of his thoughts by occupying them with reading, writing, and thinking, revealed a self-control that seemed well-nigh impossible. Not until the end came did the light of his mind cease to burn as bright, steady, beautiful, and clear as ever. To him, indeed, was the hackneyed phrase 'grand old man' applicable; he was a man who would have been a glory to any profession, and happily for us he chose that of medicine."

Yet another friend and colleague has sent us the following eloquent tribute to Wilks's merits as man and scientist:—

"With the death of Sir Samuel Wilks there passes out of the possession of Medicine a remarkable personality. He stands out as the one of all others in England who first set up pathology on its proper bedrock, by the careful record of his daily work in the post-mortem room of Guy's Hospital. His published lectures on Morbid Anatomy should thus ever remain a commanding monument to his memory, as we hope they will also ever be the pride of his school. For although that which a man sows is not that body that shall be, and even the morbid anatomy of one generation is not exactly that of the next, let the almost complete disappearance of 'pyæmia' and even infective disease, as Wilks saw them in his day, bear witness. The book is so carefully descriptive of the appearances of disease in all its aspects, as seen after death, that it must ever remain full of information for those who appeal to it. But what of the man himself? He was indeed a great man by the amount of enduring work that he did, and the amount of thought that he gave to it all, but he was possibly even greater by the unconscious power that was in him for gaining the affection of all his associates. Go anywhere one would, amongst his former pupils, and 'How is Wilks?'—it was, indeed, often more lovingly, if less reverently put—was sure to come. He was everywhere the subject of fond remembrance, and he had entwined himself into the very heart of Guy's Hospital in a way that looking back over 40 years, and into history beyond it, one may doubt whether any other man has ever done, unless it were Edward Carr or Arthur Durham. What was it that so endeared Wilks to his fellows? We might not all agree in this estimate, but three



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(Reproduced from a photograph by Messrs. Elliott and Fry.)

characteristics in chief seem to me to have determined it: his pride in Guy's Hospital; his inborn honesty; and his fund of rippling, gently cynical humour. There were plenty of other attractive features in him too. No man was more absolutely free of all self seeking; he was always too just himself. No one, I think, ever saw two sides to Wilks's character; he was always his own honest, kindly, humorous self. He was ever ready to help a struggling friend. One might think to read his character in great measure from his outward form—a somewhat loose figure and a decidedly non-martial gait. Although a close observer, he seemed to be always in thought. His fine head, his white hair, his long locks, the wondrous blue and twinkling eye that always seemed to illustrate the old proverb, "The mice are at play when the cat is away," in that it always seemed needing a special centre of control whilst he was carrying on some mental operations inside. He constantly gave one the impression of talking to you whilst being partly engaged elsewhere. I think he liked to follow his own train of thought rather than to discuss. There were therefore some who consulted him who were wont to think that he did not understand their case. The fact probably was that his range of its consideration was so wide that the particular symptom that commanded *their* attention did not particularly interest *him*. For a similar reason it would have been impossible to think of Wilks as a specialist. His mind ranged widely over the sick man himself to trace the order of his going. To him the study of mankind was man, and his outward form, the colour of his hair, the furrows on his nails, the condition of his skin, his mode of thought and speech, and so on, would lead him far afield into the hidden causes of things, and the origin of those grosser changes that he knew so well, and that had taught him so much in heaven and earth. Morbid anatomy, in setting him to ponder, had indeed taught him well, and his interests were manifold. The human mind, psychic force, the mental operations of his parrot, the origin of music, the nature of dreams, superstitions, furrows on the nails, scientific therapeutics, were a few of the many subjects which he handled, but the fads and fancies that so sadly beset too many of us he surely must have regarded with but a benevolent neutrality, as he was always for facts and did not care much about opinions.

"Of Wilks's veneration for Guy's Hospital no one can doubt when one reads the small volume published but a week or two ago under the kindly supervision of Sir Bryan Donkin. He was always ready to dwell upon the good work his school had done, and how it had ever been a pioneer along the road of medicine and surgery. This little book also shows the scrupulous regard he was wont to pay to the reputation of former workers in the various fields he traversed. Time and again he has been known to insist by speech and pen that in the matter of priority this or that one was in danger of being deprived of garments that of right belonged to him. Bright and Addison and Hodgkin and many another owe much to him and to his care that the work that he did should increase the stability of theirs; and so it was always to the very last. But it was perhaps in his familiar talks, in conversation, or the lecture theatre—for he still talked there—that he most of all appealed to his public, for there it was that his humour tumbled out in so unexpected and pleasant a way. Mr. Boyter Johnson, an old friend who knew him well, recalls that on rising to return thanks to his many hosts at the complimentary dinner to him on his being created a baronet, although greatly stirred by emotion, he commenced by saying that he had thought there were only two Samuels of repute—Samuel the Prophet and Sam Weller. Samuel Wilks had never occurred to him. There is another little specimen in his Reminiscences which one may extract. Speaking of alcoholic paralysis he says: 'Most of my examples were those of women, or, as I say, "ladies," for the patients were mostly wives of publicans and their husbands' landlords.' His shrewdness of observation may perhaps be indicated by the following episode, told also to Mr. Boyter Johnson. He was called one day to a noble mansion that excited his curiosity as to who the owner might be. He was unable to satisfy himself upon the point until, on leaving, the master of the house helped him on with his coat, and instead of the usual tug at the back that the footman gives he carefully adjusted it under the armpit. 'The man is a tailor,' said Wilks.

"One other characteristic may also well be recalled. He has been heard to say that most of his spare time was taken up by attending upon doctors and their families, and that it was always a matter of gratification to him that he was known as the doctors' doctor. Recollections of a man make but a poor picture, but they may suffice to show in barest outline how large-hearted a man our subject was, and, in some measure, why it was that he has passed away not only dear, to the last day of a ripe old age, to many friends and pupils—this might be the happy lot of a less manful and human spirit—but, to a depth beyond that, by all who knew him; he will have bidden farewell as he crossed the Bar with the hush of a most profound regard."

With these general expressions of esteem for the learning of Sir Samuel Wilks, and for the manly and stimulating qualities of his personality, we may be allowed to identify ourselves.

In 1854 Dr. Wilks married Elizabeth Ann, daughter of Henry Mockett, of Seaford, Sussex, and widow of his former preceptor, Mr. Richard Prior, M.R.C.S., of Newington. She died before him. Sir Samuel Wilks leaves no heir.

The funeral service was held in Hampstead Parish Church on Saturday, Nov. 11th. The body of Sir Samuel Wilks had been cremated that morning at Golder's Green, and the interment took place in Hampstead Cemetery. The chief mourners were Mrs. Allport (sister) and Mr. Ernest Wilks. The Royal College of Physicians of London was represented by Sir Thomas Barlow (President), Sir Dyce Duckworth, Dr. J. Mitchell Bruce, Dr. J. A. Ormerod, Dr. D. B. Lees, and Mr. W. Fleming; the Royal College of Surgeons of England by Mr. Rickman J. Godlee (President) and Mr. Clinton T. Dent (Vice-President); the Royal Society of Medicine by Sir Henry Morris and Mr. J. Y. W. MacAlister; the Governors of Guy's Hospital by Mr. H. Williams; the staff of Guy's Hospital by Dr. Frederick Taylor, Sir James Goodhart, Dr. G. H. Savage, Dr. Hale White, Dr. Newton Pitt, and Mr. Charters J. Symonds; and the Guy's Hospital Pupils' Physical Society by Mr. G. W. Goodhart. There were also present Sir William Osler, Sir John Rose Bradford, Sir William Bennett, Sir Shirley Murphy, Sir Bryan Donkin, Dr. E. F. Bashford, and the Mayor of Hampstead.

JOHN ALFRED COUTTS, M.B. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN.

Dr. J. A. Coutts, who died on Nov. 1st at Barnes, from pneumonia following influenza (as already stated), was the son of a prominent Tyneside shipbuilder, and was born in 1851. He was educated privately and at Emmanuel College, Cambridge, of which he was an exhibitioner. After graduating in the mathematical tripos he began to study medicine and entered St. George's Hospital. He qualified M.R.C.S. Eng. in 1881 and obtained the M.B. degree of his university in the following year. In 1884 he became a Member of the Royal College of Physicians of London, and in 1897 he was elected a Fellow. Dr. Coutts's long association with the East London Hospital for Children began in 1885 when he was appointed assistant physician; six years later he became full physician, and he held the latter post up to the time of his death. During his 26 years' work at Shadwell he became more and more identified with the study of pædiatrics, and established for himself a reputation as an excellent diagnostician and an authority on the literature of children's diseases.

In 1896 Dr. Coutts was Hunterian lecturer before the Royal College of Surgeons of England, and chose as the subject of his lectures "Some Aspects of Infantile Syphilis." He contributed several articles upon his special subject to Allchin's "Manual of Medicine" and to the "Encyclopædia Medica." He wrote well and often, but he seldom spoke in public. He was devoted to the East London Hospital, and his affection for it was returned by all who worked at Shadwell with him. His health was never strong, but he made the most of his physical powers, and throughout his life he was an enthusiastic student of athletics, being in particular a fine judge of rowing and oarsmanship. The news of his death after a very short illness came as a blow to his friends and patients, and his personality and work will long be remembered with affection.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are

announced:—Dr. P. Stuhr, professor of anatomy in the University of Würzburg.—Dr. Eyvin Wang, editor of the *Norsk Magazin for Lægevidenskaben*.—Dr. Alex. Hugh Ferguson, professor of clinical surgery in the Chicago College of Physicians and Surgeons.—Dr. Alfred Binet, director of the Laboratory of Experimental Psychology, Paris, aged 54.—Dr. Felix Löwenhardt, of Breslau, a surgeon well known for his operative ability in urinary diseases. He had been ill for a long period and unable to attend to his practice. His age was about 50.—Dr. R. Kroemer, director of the Conradstein Lunatic Asylum for West Prussia.

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At a meeting of the Comitia of the Royal College of Physicians on Oct. 26th, and of the Council of the Royal College of Surgeons on Nov. 9th, Diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon the under-mentioned gentlemen, who have passed the Final Examination in medicine, surgery, and midwifery of the Conjoint Examining Board, and have complied with the respective by-laws. The following are the names of the successful candidates:—

John Wroth Adams, St. Bartholomew's Hospital; Thomas Ewart Ashley, St. Bartholomew's Hospital; Charles Nelson Atlee, St. Mary's Hospital; Cuthbert Hastings Attenborough, King's College Hospital; Cecil Crees Austen, Westminster Hospital; *John Bruce Baird, B.Sc., M.B., Ch.B. Glasg., Otago and Glasgow Universities and King's College Hospital; John Bramley Ball, L.D.S. Eng., Guy's Hospital; John Hamilton Barclay, M.B., B.S. Durh., Durham University; Howell Wood Barnes, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Robert Campbell Begg, M.A., B.Sc. New Zealand, New Zealaand and Edinburgh Universities; Thomas Mulholland Bellew, Liverpool University; Bertie Blackwood, Leeds University and Guy's Hospital; Gilbert Alan Blake, Guy's Hospital; Richard Frank Bolt, Bristol University; Howard Bullock, M.B., Ch.M. Sydney, Sydney and Oxford Universities and Middlesex Hospital; Maurice Burnett, King's College and St. George's Hospitals; Lionel Charles William Cane, Guy's Hospital; Herbert Edward Cockcroft, Manchester University; Harold Alexander Cooper, M.B., B.S. Durh., Durham University; John Lloyd Davies, University College Hospital; Hubert Daw, Guy's Hospital; Lionel Montrose Dawson, M.D., C.M. Queen's University, Kingston, Kingston University and London Hospital; Evan Richard Evans, St. Bartholomew's Hospital; George Douglas Gordon Fergusson, St. Mary's Hospital; Frederick Thomas Fisher, Birmingham University; Philip Stanley Foster, M.B., Ch.B. New Zealand, New Zealand University and London Hospital; Frank Garratt, University College, King's College, and St. George's Hospitals; Lister Gibbons, M.D. Buffalo, Buffalo University, London and St. Mary's Hospitals; Aubrey Scott Gillett, King's College Hospital; Ernest Franz Waldemar Grellier, Cambridge University and St. George's Hospital; James Bennett Hance, B.A. Cantab., Cambridge University and Guy's Hospital; *Robert Coltart Harkness, M.B., Ch.B. Edin., Edinburgh University; Walter Parker Harrison, L.D.S. Eng., Charing Cross Hospital; John Rippiner Heath, B.A. Cantab., Cambridge and Birmingham Universities; Ashley Ernest Herman, B.A. Cantab., Cambridge University and London Hospital; John William Wynne Hogan, Madras University and St. Bartholomew's Hospital; George Ashby Hooton, St. Bartholomew's Hospital; Abd El Aziz Ismail, M.D. Cairo, Cairo and St. Thomas's Hospital; Ah Chit Jap, Guy's Hospital; *Victor Stanley Kaufman, M.B. Toronto, Toronto University and London Hospital; Robert Kennon, M.B., Ch.B. Liverp., Liverpool University; George Eric Warner Lacey, Guy's Hospital; William Morgan Langdon, Guy's Hospital; †Ernest Millington Livesey, M.B., B.S. New Zealand, New Zealand University; David Charles Lloyd, Liverpool University and Guy's Hospital; George Carter Lowe, Guy's Hospital; Nagib Mahrus, Cairo and London Hospital; Charles Edward Hamilton Milner, King's College Hospital; Patrick John Monaghan, Guy's Hospital; Reginald Sperling Morshead, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Satyen Mozumder, St. Bartholomew's and Middlesex Hospitals; Marwood Mintern Munden, Guy's Hospital; William Marshall Oakden, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Bernard Rayne Parmiter, Guy's Hospital; Hugh Pierce, Liverpool University; Reginald Edward Porter, London Hospital; Thomas Conrad Reeves, London Hospital; *Henry Goulding Rice, B.A. Cantab., Cambridge University and Guy's Hospital; James Freer Richardson, London Hospital; Harrolde Bedford George Russell, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Wilfred Alan Russell, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Laurence Lancaster Satow, St. Bartholomew's Hospital; Henry Wakeman Scott, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Hew William Scott-Wilson, Oxford University and London Hospital; Ahmad Shafeek, Cairo and St. Thomas's Hospital; George William Shore, King's College Hospital; Thomas Henry Gostwyck Shore, Cambridge University and St. Bartholomew's Hospital; Alfred Bernard Pavey Smith, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Alan Richmond Snowdon, St. Bartholomew's Hospital; Harry Stobie, L.D.S. Eng., Charing Cross and St. Thomas's Hospitals; William Albert Stokes, B.A. Cantab., Cambridge and Birmingham Universities; Dudley Macaulay Stone, St. Mary's and St. Bartholomew's Hospitals; Elliott John Storer, St. Bartholomew's Hospital; James Llewellyn Montfort Symns, B.A. Cantab., Cambridge University and Guy's Hospital; Charles Joseph Gordon Taylor, B.A. Oxon., Oxford University and London Hospital; Julian Taylor, University College Hospital; John Wilson Tonks, B.A. Cantab., Cambridge University and University College Hospital; Percival Dillon Warburton, Sheffield University; John Wells Whiteman, Bristol University and Middlesex Hospital; John Helby Wilkinson, London Hospital; Thomas Davies Williams, London Hospital; James Ernest Studholme Wilson, London Hospital; Cecil Charles Worster-Drought, B.A. Cantab., Cambridge University and Guy's Hospital; and Frederick Cecil Wright, St. Bartholomew's Hospital.

* Diploma of M.R.C.S. previously conferred on Oct. 12th.

† Diploma of M.R.C.S. alone conferred.

The Council also conferred the Licence in Dental Surgery upon Donald Henry McDonald, Charing Cross and Royal Dental Hospitals, who has now complied with the by-laws for such licence.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the Primary Examination for the Fellowship in Anatomy and Physiology held on Nov. 2nd, 3rd, 7th, 8th, 9th, and 10th, 127 candidates presented themselves, of whom 32 were approved and 95 were rejected. Among the successful candidates was one lady—Miss E. A. Ashby, of Birmingham University. The following are the names of the successful candidates:—

Gerald Graham Alderson, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and University College and St. Thomas's Hospitals; Arthur Beeny Appleton, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Elizabeth Labrey Ashby, Birmingham University; Gerald Waddington Beresford, M.R.C.S., L.R.C.P., London Hospital; Edmund Boyd, B.A., M.B. Toronto, L.R.C.P., M.R.C.S., Toronto University and Middlesex Hospital; Gordon Normanby Brandon, M.R.C.S., L.R.C.P., St. Thomas's Hospital; Robert Markham Carter, Captain I.M.S., M.R.C.S., L.R.C.P., D.T.M. Liverp., St. George's and King's College Hospitals; James Clark, M.D., Ch.B. Aberd., M.R.C.P., D.P.H., Aberdeen University and King's College; Raymond John Clausen, University College Hospital; Arthur Rawdon Carrington Doorly, St. Thomas's Hospital; Philip Geoffrey Doyne, B.A. Oxon., Oxford University and St. Thomas's Hospital; William Gilliatt, M.D., B.S. Lond., M.R.C.S., L.R.C.P., Middlesex Hospital; John Richard Griffith, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Thomas Sydney Shaw Holmes, M.B., B.Ch. Belfast, Belfast and London Hospital; Henry Julyan Hoyte, King's College; John Kennedy, M.D., B.S. Melb., Melbourne University and Middlesex Hospital; Henry Rylands Knowles, Leeds University; Archibald Campbell Magarey, M.B., B.S. Adelaide, M.R.C.S., L.R.C.P., Adelaide University and St. Mary's Hospital; Nanalal Maganlal Mehta, L.M.S. Bombay, Bombay University and Middlesex Hospital; Hubert Lewis Clifford Noel, M.R.C.S., L.R.C.P., London Hospital; Vernon Charles Pennell, B.A. Cantab., Cambridge University and St. Thomas's Hospital; John Lansdowne Perceval, Guy's Hospital; Maurice Nasmith Perrin, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Julian Lionel Priston, London Hospital; Martin Owen Raven, B.A. Oxon., Oxford University and St. Mary's Hospital; Henry Goulding Rice, B.A., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and Guy's Hospital; Walter Salisbury, Bristol University; Wilburn Smith, M.R.C.S., L.R.C.P., Jefferson Medical College and King's College; Arthur Hughes Southam, B.A. Oxon., Oxford and Manchester Universities and London Hospital; Harold Foster Strickland, M.R.C.S., L.R.C.P., L.D.S., Charing Cross and Middlesex Hospitals; Geoffrey Viner, M.D. Lond., St. Bartholomew's Hospital; and Ivan Stuart Wilson, M.D., M.B., Ch.B. New Zealand, M.R.C.S., L.R.C.P., New Zealand University and London Hospital.

At the First Professional Examination for the Licence in Dental Surgery held this month the following candidates were approved in the subjects indicated below:—

Mechanical Dentistry and Dental Metallurgy.—Arthur Wilfrid Adams, Bristol University; Leslie Alabone and Arthur James Barber, Guy's Hospital; Philip Blake, Royal Dental Hospital; Alfred Allwright Brown, William Allen Bulleid, Stephen Walter Coffin, and Louis Charles Cohen, Guy's Hospital; Walter Tyrrell Cooper, Royal Dental Hospital; Walter Alexander Crane, Liverpool University; George Lambert Cutts, Guy's Hospital; Arthur Thomas Dally, Royal Dental Hospital; Arnold Thomas Densham, M.A., B.C. Cantab., M.R.C.S., L.R.C.P., Guy's Hospital; James Douglas Dimock, Royal Dental Hospital; Ernest Francis Doubleday, Birmingham University; Cyril Henry Edwards, Guy's Hospital; Reginald Fox, Liverpool University; William Henry Churchill Gordon, Guy's Hospital; Percy Gordon Barlow Griffin, Liverpool University; Alan Basil Hacking and Arthur James Horniblow, Royal Dental Hospital; Philip Hutson, National Dental Hospital; Bernard Isaacs, Edward Eastaugh Johnson, Archibald Daniel Marston, Harry Millett, and Frederick Humble Morrell, Guy's Hospital; Harold Robert Parkes, Liverpool University; Edward Pitt, D.D.S. Pennsylvania, Pennsylvania University; Reginald Harry Rix, Guy's Hospital; Stephen Archibald Rodda, Royal Dental Hospital; Alan Filmer Rook and Ernest Charles Rycroft, Guy's Hospital; Thomas William Stark, Royal Dental Hospital; Cecil Ernest Thomas, Guy's Hospital; Harold Treleaven, Royal Dental Hospital; Percy James Wakley, Birmingham University; William Thomas Williams, Liverpool University; and Paul Bernard Wood, Royal Dental Hospital.

Mechanical Dentistry.—Sidney Adams, Guy's Hospital; Ronald William Anderson-Jardine and Carl William Reeves Bater, National Dental Hospital; Vincent Clifford Carrington, Sheffield University; Henry James Cavanagh, National Dental Hospital; Frederick Scott Cooper, Leeds University; William John Curtis, Royal

Dental Hospital; Wilfred Angel Easton, Guy's Hospital; Francis Malcolm Timothy Flintan, Royal Dental Hospital; John Langley Garrard and Walter Henry Glover, Guy's Hospital; Melville St. Clair Hamilton and Hubert Humphrey, Royal Dental Hospital; Aubrey Thomas Madin, Birmingham University; Arthur Helmuth John Miller, Royal Dental Hospital; Wallis John Milton, Bristol University; Norman Mulliner, Liverpool University; Gustavus Leigh Pemberton, Guy's Hospital; Alan Douglas Edward Shefford, National Dental Hospital; and Robert William Spong and Leonard Duncan Windemer, Guy's Hospital.

Dental Metallurgy.—Alexander Douglas Ball, Royal Dental Hospital; Harold Bridgwater Bramley, Liverpool University; Debenham Stuart Coombs and Frederick Andrew Craine, Royal Dental Hospital; Herbert James Edwards, Guy's Hospital; Frank Keith Hayman, Bristol University; Walter Owen Hughes, Liverpool University; Reginald John Inder, National Dental Hospital; Launcelot Machin, Guy's Hospital; Charles Wyndham Martin and Alan Edward Meeson, Liverpool University; Alan Lawrence Miller, Birmingham University; Frederick James Neal Guy's Hospital; Winifred Amelia Oaten, Royal Free and National Dental Hospitals; Clifford Thomas Plimsoll, Royal Dental Hospital; William Earle Starkey, Liverpool University; Stanley Stevens, Guy's Hospital; Norman David Swayne Straton, Royal Dental Hospital; Frederick Edward Alan Thorman, Birmingham University; and Thomas Huddlestone Urwin, Durham University.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Hagenbach-Burckhardt, Professor of Pædiatry, will retire at the close of the current winter session.—*Berlin:* Dr. Georg Axhausen has been appointed Oberarzt of the Surgical Clinic of the Charité, in succession to Dr. Pels Leusden.—*Bonn:* Dr. F. Heiderich, Extraordinary Professor in Göttingen, has been appointed Extraordinary Professor of Anatomy, in succession to Dr. Schiefferdecker. Dr. Alfred Machol, *privat-docent* of Surgery, and Dr. Hugo Selter, *privat-docent* of Hygiene, have been granted the title of Professor.—*Breslau:* Dr. Ludwig Tobler, of Heidelberg, has declined the offer of an Extraordinary Professorship at Bonn, but has been appointed to the chair of Pædiatry in Breslau, in succession to Dr. Freiherr von Pirquet, who is going to Vienna. Dr. J. Strasburger, *privat-docent* of Medicine in Bonn, has been appointed Extraordinary Professor of Medicine, in succession to the late Dr. R. Stern.—*Budapest:* Dr. Aladár Fischer has been appointed Surgical Primararzt in the Adele Bródy Children's Hospital, in succession to the late Dr. Jonas Baron.—*Burlington (University of Vermont):* Dr. F. U. Albee has been appointed to the chair of Orthopædic Surgery.—*Clausenburg (Koloswár):* Dr. Nikolaus Jancsó has been appointed to the chair of Medicine, in succession to Dr. S. Purjesz, retired.—*Dresden:* Dr. Kehrer, of Berne, has been appointed Director of the Obstetric and Gynæcological Clinic, in succession to the late Dr. Leopold.—*Greifswald:* Dr. Pels Leusden, of Berlin, has accepted the chair of Surgery, in succession to Dr. König.—*Grenoble:* Dr. Jacquemet has been appointed Professor of Medical Pathology.—*Innsbruck:* Dr. Hans Rabl, of Vienna, has accepted the chair of Histology in succession to the late Dr. Kerschner.—*Naples:* Dr. A. Bevacqua has been recognised as *privat-docent* of Pathological Anatomy.—*New Orleans (Tulane University):* Dr. Creighton Wellman has been appointed to the chair of Hygiene.—*Philadelphia (University of Pennsylvania):* Dr. Howard Fussell has been appointed Professor of Hygiene.—*Rouen:* Dr. Guerbet has been appointed Professor of Materia Medica.—*Stuttgart:* Dr. Heinrich Schmidt, assistant in the Medical Clinic at Tübingen, has been appointed Oberarzt of the Katherine Hospital.—*Toronto:* Dr. Graham has been appointed lecturer on Bacteriology.

THE MEDICAL PROFESSION AND MUNICIPAL HONOURS.—The following are the names of the medical men who have so far been announced as having been elected or re-elected to the headship of their corporations:—London: Sir Thomas B. Crosby, M.D. St. And., F.R.C.S Eng. (Lord Mayor). Barnstaple: Mr. J. R. Harper, M.R.C.S. Eng., L.R.C.P. Lond. Bolton: Mr. J. Young, M.R.C.S. Eng., L.R.C.P. Lond. Congleton: Mr. W. I. Fern, L.R.C.P. Irel., L.R.C.S. Edin. Exeter: Mr. C. J. Vlieland. M.D. Durh., M.R.C.S. Eng., L.S.A. Faversham: Mr. S. R. Alexander, M.D. Lond., M.R.C.S Eng., L.S.A. (re-elected). Hartlepool: Mr. W. S. Gibb, M.B., C.M. Edin. (re-elected). Hertford: Mr. J. Burnett Smith, M.B., C.M. Edin., L.R.C.P. & S. Edin., L.F.P.S. Glasg. Leamington: Mr. H. Mason, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond. (re-elected). Lewes: Mr. H. Stott, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Montgomery: Mr. N. W. Fairless-Humphreys, M.R.C.S. Eng., L.S.A. (re-elected). Newport (Mon.): Mr. J. McGinn, F.R.C.S. Irel., L.R.C.P. Edin., L.F.P.S. Glasg. Pwllheli: Mr. O. W. Griffith, L.R.C.P. & S. Edin. Saffron Walden: Mr. J. P. Atkinson, M.D. Glasg., L.R.C.P. Lond., L.R.C.S. Edin. (re-elected). Wallasey: Mr. J. Oldershaw, M.D. Brux., L.R.C.P. Irel., L.R.C.P. & S. Edin., L.F.P.S. Glasg. Warrington: Mr. C. W. Joseph, M.D. Durh., L.R.C.P. Irel., M.R.C.S. Eng., L.S.A. (re-elected). Wimbledon: Surgeon-Major E. L. McSheehy, A.M.D. (ret.), M.D., M.Ch. R.U.I., F.R.C.S. Irel.

Dr. William Arthur Brailey, consulting ophthalmic surgeon to Guy's Hospital, and a former Fellow of Downing College, has been elected to an honorary Fellowship at Downing College, Cambridge.

THE DEATH OF DR. W. P. MARSHALL.—We greatly regret to report the death of this young and promising physician under tragic circumstances. On the afternoon of Nov. 10th, Dr. Marshall was walking with his wife, to whom he had been married only a few months, across the swing bridge which spans the Ship Canal at Old Trafford. A heavy motor-lorry was crossing at the time, and for some unexplained cause it suddenly swerved and pinned Dr. Marshall against the iron framework of the bridge. The result was such serious internal injuries that he died in Salford Hospital three days later. Dr. Marshall was the only son of the president of the Baptist College, Rusholme, and he took his degrees in medicine three years ago at the University of Manchester.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next general or quarterly meeting of this association will be held at 3 o'clock on Tuesday, Nov. 21st, at 11, Chandos-street, Cavendish-square, London, W., under the presidency of Dr. W. R. Dawson. At 4 o'clock, during the same afternoon, the meeting will be resolved into a joint session with the Section of Obstetrics and Gynæcology of the Royal Society of Medicine (of which section Dr. Amand Routh is president), when a discussion will be invited upon a paper dealing with Amenorrhœal Insanity by Dr. C. T. Ewart. A paper by Dr. Geoffrey Clarke on Sterilisation from the Eugenic Standpoint will also be read and discussed. Members will subsequently dine together at the Café Monico Restaurant at 7 P.M. Cost of dinner 7*s.* 6*d.*, exclusive of wine. Evening dress optional. All communications should be made to Dr. C. Hubert Bond, honorary general secretary, 11, Chandos-street, Cavendish-square, London, W.

THE VAGRANCY QUESTION.—It is a matter of much gratification to the boards of guardians in Sussex that the vagrancy returns are showing a great decrease. The way-and-food ticket system was introduced into the county at the latter end of 1906, at which time Mr. J. S. Davy, who was then the Local Government Board inspector for the district, took great interest in it, but it was some years later ere the scheme became practically general throughout the county, Brighton coming in in 1909. The aims of the system are: (1) Assistance for the genuine workman in search of employment; (2) decrease in the number of professional beggars and habitual vagrants; (3) the support of the general public by informing them that there is no necessity for the indiscriminate giving of alms to wayfarers. As proof of the success of the system the Steyning Union, one of the largest unions in the county, provides some remarkable figures covering the year just completed. The number of vagrants dealt with at the workhouse of that union was 4810 in 1908, whereas the number in 1911 was only 1103 (898 men, 152 women, and 53 children). The way bills, bread and cheese tickets, and bread tickets diminished from 2180 to 508 in the same period. These figures show that the "in-and-outs" of our workhouses dislike the system and that they have been driven out of Sussex—into Surrey one guardian suggested at the recent board meeting. But why cannot the system become a general one all over the country? If it were so the tramping fraternity would soon find that their mode of life was receiving a very serious check everywhere, and not in a single district or districts, and that instead of the present administration of the Poor-law offering them encouragement in their habits it was proving to be an obstacle difficult of negotiation. The system is deserving of success because its working differentiates between the genuine working man and the real loafer.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill.

SEVERAL matters of deep interest to the medical profession were discussed by the House of Commons in connexion with the National Insurance Bill. As briefly recorded last week, the Government on Wednesday, Nov. 8th, brought forward amendments extending the size of the Local Health Committees and giving a preponderating representation on those committees to the Friendly Societies and the deposit contributors. Sir PHILIP MAGNUS made a vigorous protest against the change. He said that in the amendment which he had understood was accepted by the Chancellor of the Exchequer, the representation of the medical profession on the Health Committees was to have been 3 out of a maximum of 30. It had now been reduced without consultation with anyone to 3 out of a maximum of 80. He felt quite certain that the members of the medical profession would regard that as nothing less than the betrayal of their interests, and it certainly must be regarded, unless some explanation could be given, as a breach of faith. It was understood that part of the duties of the Health Committees would be to collect statistics of health conditions in the neighbourhood and to draw inferences from those conditions. That was not an easy matter, but it required some amount of scientific knowledge and experience.

Sir ROBERT FINLAY said that one of the points which the medical profession had always considered vital was that the control of the medical arrangements should not be committed to the Friendly Societies. It was arranged with the medical men that the control should not be with the Friendly Societies but with the Health Committees. The increase of the size of the Health Committee was simply part of an arrangement for, under another name, sending back the control of the medical arrangements to the Friendly Societies, from whom it was to be withdrawn.

Mr. LLOYD GEORGE, at a later stage, said that it was in the interests of the insured persons, of the medical men, and of every class of the community that there should be larger rather than smaller committees.

Mr. H. W. FORSTER: I do not suppose there would be any objection so long as the proportion which the doctors understood they were to have on the old committee is maintained.

Mr. LLOYD GEORGE: There was no question of proportion at all. The doctors asked for two and one, but nothing was said about proportion.

Sir ROBERT FINLAY at a later stage remarked that it was a vital point with the doctors that the control of the medical benefit should not rest with the Friendly Societies, and it had been understood that that was conceded by the Chancellor of the Exchequer.

Mr. LLOYD GEORGE: Does the right honourable gentleman say that I agreed with the medical profession that the Government should not give a majority on the Local Health Committee to approved societies?

Sir ROBERT FINLAY: That is another point altogether. What I was saying was that the Chancellor of the Exchequer was understood to have agreed with the medical profession that the control of medical benefit should not rest with the Friendly Societies. If I am wrong I will be glad to be corrected.

Mr. LLOYD GEORGE: It is important that there should be no possible mistake about this. What I did agree to and what is now provided by the Bill as amended was that the Local Health Committee should have the control of medical benefit save in existing rights. That is already incorporated in the Bill. I certainly never agreed to anything but that the majority of the committee should be elected by the insured persons.

Sir ROBERT FINLAY: The right honourable gentleman has really not in any way qualified what I have said. I do not think that he has made it all clear. What I said was—and the fact remains uncontradicted—that the right honourable gentleman agreed with the medical men that the control of the medical benefit should not rest with the Friendly Societies but with the Health Committees. We are now told that medical benefit should not rest with Friendly Societies but with a majority of the Health Committee representing insured persons. That is precisely the same thing.

Mr. LLOYD GEORGE: This is a question which involves, if I may say so, a matter of faith between the medical profession and myself. What I understood the right honourable gentleman to say was that I agreed that the control of medical benefit was to be left to the Local Health Committee and not the Friendly Societies. I want to make it clear that that did not involve, as the right honourable gentleman now puts it, that I agreed that the control should be with the Local Health Committee and not the majority of the insured persons.

Sir ROBERT FINLAY: The right honourable gentleman propitiated a great many medical men who thought the pledge would be observed in the spirit as well as the letter. Now it turns out that by manipulation of the Health Committee the control is to be given to the insured persons—namely, the Friendly Societies and the deposit contributors

Mr. LLOYD GEORGE: Does the right honourable gentleman sugges that a breach of faith is involved in giving a majority on the committee to the insured persons? If he does, will he quote a single note or any statement made to a responsible medical man in which I said that the control was to be given to the Local Health Committee without having regard to the majority of insured persons being represented?

Sir ROBERT FINLAY: The right honourable gentleman certainly never told the medical men that such a change as this was going to be made in the constitution of the Health Committee, and if he had told them they would not have been so satisfied as they were at the time. What I do say was that this change vitally alters the conditions on which the medical men were disposed to be satisfied with what the right honourable gentleman said. The right honourable gentleman has transformed at the last moment the composition of the Health Committee. He has transformed it by increasing the number to 80 from 22, and whereas the medical men were necessarily to have 2 out of the 22, out of this maximum of 80, which the amendment proposes, they are entitled necessarily only to 3. That is a totally different state of things from what the medical men thought they had got. The fact that an amendment of this kind was in contemplation ought to have been revealed to the medical profession when they accepted the statements of the Chancellor of the Exchequer. The truth is that the Chancellor thinks he has made his peace with the Friendly Societies and at the expense of the medical representatives who had trusted to what they understood he said. I make no apology for referring to this matter at some little length, because the cooperation of the medical men is absolutely essential to the working of this Bill. I am very much mistaken if the feeling in the profession is not that in this matter it has not been treated fairly.

Dr. C. ADDISON said that the version of the right honourable gentleman, the Member for Edinburgh and St. Andrews Universities (Sir ROBERT FINLAY), had been given somewhat under a misapprehension. The medical men fully realised that the representatives of insured persons should be in a majority on these committees, and they never, so far as he knew, at any time demurred to that proposition. What they were anxious for was that their case should be properly and fairly stated before these committees. So far as that went, he quite recognised that the alteration of the numbers of the committees did make a very material difference in the position as it stood originally and when the arrangement was originally made. The medical men believed that their case was strong enough to stand its ground, but they were anxious that it should be considered without prejudice as far as possible, and as this amendment introduced a material alteration he would ask the Chancellor of the Exchequer to assure the House that, so far as the precise numbers were concerned, he did not commit himself finally, but would leave it open for representations to be made before the report stage to see whether the profession was satisfied with this alteration, which perhaps it had not yet had full opportunity to consider. The medical profession was perfectly satisfied that it had a good case. All that he wanted was to have it fairly stated, and he would ask the right honourable gentleman, in view of the altered circumstances, to give the profession an opportunity of making representations before the report stage if it wished to do so.

The clause was amended in the terms indicated in THE LANCET of Nov. 11th.

It was also agreed to make provision for the appointment of auxiliary Health Committees. It is now laid down in the clause that the regulations made by the Insurance Commissioners "shall require the Local Health Committee of every county (except in cases where, owing to special circumstances, the Commissioners consider it unnecessary) within six months after the commencement of this Act to prepare and submit for approval to the Commissioners a scheme for the appointment of an auxiliary committee for the county and prescribing the area to be assigned to each such committee, and in particular the scheme shall provide for the appointment of an auxiliary committee for each borough (including the City of London and a metropolitan borough) within the county having a population of not less than ten thousand, and for each urban district within the county with a population of twenty thousand, unless the Local Health Committee consider it expedient in the case of any such borough or urban district that there should not be a separate auxiliary committee for the borough or urban district, or that any adjoining areas should be grouped with such borough or urban district for the purpose of the appointment of an auxiliary committee." Clause 44 (Powers and Duties of Local Health Committees) was passed without discussion under the closure resolution.

The Excessive Sickness Clause.

Some interesting speeches were delivered on Thursday, Nov. 9th, when Clause 46, which deals with excessive sickness in a locality, was considered. The object of the section is to throw upon local authorities, house owners, and employers the liability to make good the cost of excessive sickness in a district attributable to bad housing, insanitary conditions, or contaminated or insufficient water-supply. A general debate took place on the question whether the approved Societies and Local Health Committees should have their powers limited to insurance matters so far as possible or whether they should have power over Local Government matters.

The Chancellor of the Exchequer made a very spirited defence of the

proposals of the clause. He contended that it set up machinery not for interfering with the local authorities, but to enable the societies which were damnified by the inaction, the illegal action, or the neglect of authorities, owners, or employers, to carry out the provisions of the law. What were the main complaints of the Friendly Societies with regard to the extra causes of ill-health which added to their expenditure? They were bad drainage, bad water-supply, bad housing, factories not in accordance with the conditions of the law. The offenders were local authorities and private individuals. There had been years of Public Health Acts in this country and local government inquiries without number. There had been recommendations of medical officers of health and inspectors of the Local Government Board. He was able to prove that they were absolutely helpless in hundreds of cases and had been so for years, not because the Local Government Board had neglected its duty. It was purely because it was armed with the clumsiest, rustiest weapon in the whole armoury of British law—the *mandamus*, a perfectly worthless weapon. He would read to the House an extract from the pen of the chief medical officer of the Local Government Board in his review for the year 1909. He said: "A story of neglect of elementary sanitary work outstands in a large proportion of the current reports by medical inspectors of the Board on local sanitary circumstances. A not inconsiderable number of the smaller towns and urban districts and many of the rural districts which have within their area portions presenting urban characteristics are characterised by continuance, more or less, of the filth nuisances which were fairly general 50 years ago, but which have since then been abolished in the larger and better governed towns."

If anyone would go through these reports, Mr. LLOYD GEORGE continued, he would find that there were local authorities by the score which never prosecuted offenders against the Public Health Act, which kept no records and never even investigated insanitary conditions, which had no sanitary committee, which systematically refused to carry out the recommendations of their sanitary officials, which had in force neither by-laws nor adoptive Acts, and which neglected to apply such by-laws and Acts when adopted. So far from interfering with any existing authorities, he simply proposed to assist them to put the law in force. The clause would be of enormous value to the Local Government Board. Instead of threatening to issue a *mandamus* it would be able to say to a local authority, "Well, if there is an epidemic you will be mulcted in damages." The clause would be a help to county councils, who had general supervision over health all over the country. It would be of enormous benefit to the medical officers of health of counties, who were practically powerless. All that they could do was to expose the evil. Their position was a very difficult one. They had often to report upon insanitary conditions when the proprietors of the properties were strongly represented on these councils. He had a letter last week from a medical officer of health who gave his name and address. He said to him: "It is as much as my place is worth to report faithfully on the conditions prevailing." So far from causing overlapping and weakening, the clause was a source of strength. He wanted to make insanitary property and neglect of public duties unremunerative.

Some doubt was afterwards expressed whether the Chancellor of the Exchequer was adopting the best method to deal with authorities and persons who neglected to enforce sanitary laws. One suggestion was to the effect that in cases of default the county council should have power to enter and do the necessary work. Another was to increase the powers of the Local Government Board.

However, the clause was carried, after the introduction of some amendments. Owing to its importance the essential part of it may be reproduced in its amended form. It is as follows:—

"1. Where it is alleged by the Insurance Commissioners or by any approved society or Local Health Committee that the sickness which has taken place among any insured persons being, in the case where the allegation is made by a society or committee, persons for the administration of whose sickness and disablement benefits the society or committee is responsible, is excessive, and that such excess is due to the conditions or nature of employment of such persons, or to bad housing or insanitary conditions in any locality, or to a defective or contaminated water-supply, or to the neglect on the part of any person or authority to observe or enforce the provisions of any Act relating to the health of workers in factories, workshops, mines, quarries, or other industries, or relating to public health, or the housing of the working classes, or any regulations made under any such Act, or to observe or enforce any public health precautions, the Commissioners or the society or committee making such allegation may send to the person or authority alleged to be in default a claim for the payment of the amount or any extra expenditure alleged to have been incurred by reason of such cause as aforesaid, and if the Commissioners, society, or committee and such person or authority fail to arrive at any agreement on the subject may apply to the Secretary of State or the Local Government Board, as the case may require, for an inquiry, and thereupon the Secretary of State or Local Government Board may appoint a competent person to hold an inquiry.

2. If upon such inquiry being held it is proved to the satisfaction of the persons holding the inquiry that the amount of such sickness has—(i) during a period of not less than three years before the date of the inquiry; or (ii) if there has been an outbreak of any epidemic, endemic, or infectious disease, during any less period—been in excess of the average expectation of sickness by more than 10 per cent., and that such excess was in whole or in part due to any such cause as aforesaid, the amount of any extra expenditure found by the person holding the inquiry to have been incurred under this part of this Act by any societies or committees where the allegation is made by the Insurance Commissioners, or if the allegation is made by a society or committee, by the society or committee in question, by reason of such cause shall be ordered by him to be made good in accordance with the following provisions: (*a*) where the excess of such part thereof as aforesaid is due to the conditions or nature of the employment or to any neglect on the part of any employer to observe or enforce any such Act or regulation as aforesaid, it shall be made good by the employer; (*b*) where such excess or such part thereof as aforesaid is due to bad housing or insanitary conditions in the locality, or to any neglect on the part of any local authority to observe or enforce any such Act or regulation as aforesaid, it shall be made good by such local authority as appears to the person holding the inquiry to have been in default; or if due to the insanitary condition of any particular premises shall be made good by the owner or occupier of the premises who is proved to the satisfaction of the person holding the inquiry to be responsible; (*c*) where the excess or such part thereof as aforesaid is due to an insufficient or contaminated water-supply it shall be made good by the local authority or company by which the water is supplied, or which having imposed upon it the duty of affording a water-supply has refused or neglected to do so, unless the local authority or company prove that such insufficiency or contamination was not due to any default on the part of the authority or company, but arose from circumstances over which it had no control."

There are several other subsections of the clause, but they relate to procedure and machinery.

Sanatoriums.

Clause 47, which relates to the erection of sanatoriums, was also passed with several amendments. On the motion of Mr. LLOYD GEORGE words were inserted to enable county councils to manage and maintain sanatoriums (as well as to erect them as provided by the clause), and for that purpose to make arrangements with Local Insurance Committees and other authorities. It was also agreed to insert the following new subsection: "A Local Health Committee may, with the consent of the Insurance Commissioners, enter into agreements with any person or authority that, in consideration of such person or authority providing treatment in a sanatorium or other institution or otherwise for persons recommended by the committee for sanatorium benefit, the committee will contribute out of the funds available for sanatorium benefit towards the maintenance of the institution or provision of such treatment, such annual or other payment, and subject to such conditions and for such periods as may be agreed, and any such agreement shall be binding on the committee and their successors, and any sums payable by the committee thereunder may be paid by the Insurance Commissioners and deducted from the sums payable to the committee for the purposes of sanatorium benefit."

Scotland and the National Insurance Bill.

As the result of the amendment of the clause applying the National Insurance Bill to Scotland, a separate National Insurance Commission is to be set up for that country and also a national fund. County councils have been given the power to set up approved societies in districts where no organisation of the kind exists Local Health Committees have also been given power to modify or suspend certain benefits and give their equivalent in other benefits in districts where the conditions render this course advisable. Several honourable Members spoke in appreciation of the work of medical men in the remote Highlands and Islands of Scotland. It was suggested that a mileage rate should be paid to them. The Chancellor of the Exchequer recognised the importance of this problem, but pointed out that the amended clause might permit arrangements to be made in favour of these medical men.

Ireland and the National Insurance Bill.

Extensive changes have been introduced into Clause 59 of the National Insurance Bill (which applies the measure to Ireland). There is to be a separate insurance fund for Ireland, and a separate Insurance Commission will be set up for that country. Medical benefits have been eliminated from the Bill so far as it affects Ireland, and certain modifications have been introduced into the constitution of the Local Health Committees. The debate on the Irish clause extended over Tuesday, Nov. 14th, and Wednesday, Nov. 15th. On the latter day Mr. LLOYD GEORGE moved a long amendment, a portion of which was to the following effect:—"An insured person in Ireland shall not be entitled to medical benefit under this part of this Act, and the provisions with respect to medical benefit shall not apply; Provided that medical benefit for an insured person being a member of an approved society shall be deemed to be included amongst the additional benefits specified in Part II. of the Fourth Schedule to this Act." The excision of the medical benefit was accompanied by a diminution of contributions.

In some quarters of the House some misgivings were expressed at the decision to remove the medical benefit from Ireland. Mr. DILLON

for instance, admitted that whilst public opinion in that country was in favour of excision of medical benefit, he hoped that the day was close at hand when it would be adopted. Mr. BIRRELL, the Chief Secretary to the Lord Lieutenant, spoke in a somewhat similar strain. He described to the House the conditions under which the poorer classes in Ireland received medical attendance from the dispensary doctors. These gentlemen, 810 in number, received a salary averaging about £160 or £170 per annum, but they had also the right of private practice. Last year 479,644 cases were attended to by these medical men at the dispensaries and 163,115 cases at the private houses of the patients, and the cost of the service, which fell about equally on the rates and the local taxation fund, was £193,153. Personally he regretted that the medical benefit was to be struck out of the Bill in favour of the retention of the dispensary system, but he thought that public opinion in Ireland was already veering round on this question. He hoped as time went on that the dispensary system might be removed and the salaries of these medical men largely increased by their being able to come under the Bill on some reasonable basis. The right honourable gentleman acknowledged the excellent work done by the dispensary doctors, whom he characterised as "as decent and kind-hearted a set of men as were to be found in the United Kingdom."

Sir JOHN LONSDALE asked the Chief Secretary whether these medical men would receive a fee for furnishing such medical certificates as might be necessary for the purposes of the administration of the benefits still to be given under the Bill. Mr. BIRRELL replied that the dispensary doctor would be entitled to the same fee as any other medical man.

Dr. C. ADDISON, whilst he admitted that the change was being made in response to opinion in Ireland, deplored the step. He pointed to the very large number of uncertified deaths in that country as evidence that great improvement in the organisation of medical aid was to be desired. The present system could not, in his view, lead to the prevention of disease in the same way as the Bill with medical benefit in it would do. Sick pay and medical benefit were as a scientific arrangement inseparably associated. A vital objection to the excision of medical benefit in Ireland was that the ultimate success of the scheme depended on the development of preventive medicine. Sir E. CARSON suggested that the question of medical benefits for Ireland should be made the subject of further consideration.

The Chancellor of the Exchequer stated that he regretted leaving out medical benefit for Ireland, but the change was being made in deference to the wishes of the people in that country. However, if there was a feeling in Ireland that medical benefit should be included in the Bill he would not resist it on behalf of the Government. The matter was not an actuarial question, but was one of bargaining with the medical profession. He did not find that the Irish medical men were easier to bargain with than the English. If the Members from Ireland could make some arrangement with the medical profession in that country he would not resist a proposal to recommit the Bill in regard to the question of the medical benefit. Mr. M. HEALY, intervening, suggested that an option might be given to districts to adopt the medical benefit, but Mr. LLOYD GEORGE put aside the suggestion on the ground that it would be fatal to the finance of the Bill. He was inclined to agree, he proceeded to say, that eventually Ireland would come in for the whole of the benefits. What he thought would happen would be this. A great many workmen in Ireland objected to going to dispensary doctors because they thought that their action in doing so carried a suspicion of pauperism. He was told that that was the case in respect to the Belfast and Cork workmen. He anticipated that such workmen would join societies which for an increased contribution gave medical benefit. But they would lose the employer's contribution. Members from Ireland would then press Parliament for an extension of the full benefits to their country. Sir JOHN LONSDALE asked the Chancellor to consider the advisability of granting superannuation allowances to dispensary doctors who had reached the age of 65, but the Chairman ruled that that question did not arise under the amendment. After some further discussion the Chancellor's amendment was agreed to, and the clause as amended was passed.

The Rag Flock Bill.

The Rag Flock Bill has been read a second time in the Commons and committed to a committee of the whole House.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 8TH.

Colonial Chemists and British Registration.

Mr. KELLAWAY asked the Secretary to the Treasury whether he was aware that the negotiations between the council of the Pharmaceutical Society of Great Britain and the colonial representatives with a view to formulating a by-law providing for the admission to the Register of Chemists of persons holding colonial certificates of qualification equivalent to the British qualification had now been in progress for about three years; whether he had any reason to suppose that these negotiations would be completed by the time the National Insurance Bill became operative; and, if not, how he proposed to prevent chemists holding colonial certificates, and who were now in business in this country, being excluded from the lists of chemists qualified to dispense medicines under the Bill.—Mr. MCKINNON WOOD replied: I am aware of the fact stated in the first part of the question. I am unable at present to say when the negotiations will be completed or what alternative plan may be adopted in the event of their proving abortive, but the honourable Member may rest assured that the matter will not be lost sight of.

Mr. GLYN-JONES: Is the right honourable gentleman aware that such a by-law has been passed at three meetings of the Council of the Pharmaceutical Society, and that at the last meeting, held a week ago, a by-law providing for the recognition of colonial certificates was passed for the first time?—Mr. MCKINNON WOOD: I have been informed on good authority that that is the case.

Chinese Pork.

Mr. FELL asked the President of the Local Government Board when the report of the inspector employed to inquire into the conditions of the production of pork in China would be published.—Mr. BURNS answered: The report has been published and I am sending the honourable Member a copy of it.

Industrial Fatal Accidents.

Mr. ARTHUR HENDERSON asked the Secretary of State for the Home Department whether he could give the number of fatal accidents in places under the Factory Acts during the first nine months of 1911 and the corresponding period of 1910; also the number of cases of lead poisoning and other industrial diseases reported to the Home Office inspectors during the same periods.—Mr. MCKENNA said in reply: The figures asked for are as follows:—Fatal accidents in the first nine months of 1910, 780; in the first nine months of 1911, 819; cases of industrial poisoning in the same periods—in 1910, 412; in 1911, 560.

THURSDAY, NOV. 9TH.

Parliamentary Inquiry into Patent Medicines.

Mr. C. BATHURST asked the Secretary of State for the Home Department whether he was aware that the yield of stamp duty in respect of patent medicines during the year ended March 31st last was £325,646, which was an increase of £12,532 on the receipts from this source for the previous year; and whether, in view of the present consumption by poor persons of worthless concoctions of this description possessing no curative properties, he would, without further delay, introduce legislation dealing with the matter.—Mr. MCKENNA replied: I agree with the view of my predecessor that the subject of the conditions of the sale of patent medicines might usefully be considered by a Select Committee next session. I do not understand the honourable Member to suggest that all patent medicines are worthless concoctions.

The Teeth of School Children.

Baron DE FOREST asked the President of the Board of Education whether, in view of the condition of affairs set forth in the report of the chief medical officer of the Board, he would require every local education committee to provide for the regular inspection, by a properly qualified dental surgeon, of the teeth of the children under its care.—Mr. PEASE said in reply: I do not think that there is any necessity at present to place dental inspection on a different basis from other parts of the medical and physical examination of the child. Examination of the mouth, including the teeth, is made in all cases by the school medical officer and his medical assistants. In a number of areas dentists have also been appointed to aid the school medical officer in this part of the work, which the Board is carefully watching. The Board does not think it advisable at the present moment to place the additional burden suggested by the honourable Member upon local authorities.

Health at Osborne College.

Lord CHARLES BERESFORD asked the Civil Lord of the Admiralty whether there had been many cases of blood poisoning at Osborne College; and, if so, whether these cases had occurred through the foulness of the river Medina owing to the sewers running into it near the Kingston workshops.—Mr. LAMBERT answered: There have been only two cases among cadets at Osborne College which could be described as "blood poisoning" since the College was opened in 1903. There is no evidence to connect either with the condition of the river Medina.

Hospital Surgeons and National Insurance.

Sir PHILIP MAGNUS asked the Chancellor of the Exchequer whether a physician or surgeon in receipt of a salary, on account of his services to a hospital, of £50 a year, but whose professional income exceeded £1000 a year, came under the compulsory insurance clauses of the National Insurance Bill.—Mr. LLOYD GEORGE replied: The answer is in the negative.

Vaccination of Children.

Mr. LANSBURY asked the President of the Local Government Board whether his attention had been called to the fact that at an inquest held at Leigh on two children who died about 13 days after vaccination with Government lymph, it was stated that the recommendations of the Local Government Board were that Poor-law children should be vaccinated within seven days from birth; whether these recommendations were made by the Local Government Board; and, if not, whether he would consider the desirability of informing all Poor-law medical officers of the present views of the Board in the matter of vaccinating workhouse children at such an early age.—Mr. BURNS wrote in reply: The Local Government Board has made no recommendation to the effect suggested. It has always held the view expressed by the Royal Commission on Vaccination that, although under favourable conditions vaccination may be carried out within a few days of birth, the practice is to be deprecated unless there is at the time obvious danger of small-pox contagion, or unless the parent specially requests that the operation may be performed. My medical inspectors have been instructed to communicate this view to boards of guardians and their officers when needful, and I do not think it necessary to make any general communication to Poor-law medical officers on this subject.

The Advisory Committee to the Insurance Commissioners.

Dr. ADDISON asked the Chancellor of the Exchequer whether it was his intention that at least one of the women members of the Advisory Committee to the Insurance Commissioners should be a registered midwife. Mr. LLOYD GEORGE furnished the following reply: The answer is in the affirmative.

MONDAY, NOV. 13TH.

The Teeth of School Children.

Baron DE FOREST asked the President of the Board of Education whether he was aware that, at the centres in London where dental treatment had been provided for children attending council schools, it

had been found at an early stage to be necessary to supplement the work of the school doctors by special dental inspections; whether he had any information showing that the incidental examination of the teeth in the course of the ordinary medical inspection was any more adequate in other areas; and whether, in view of the experience of these London centres and of the condition of affairs revealed by the report of the chief medical officer of the Board, he would reconsider his decision that there was no necessity to insist upon a special dental inspection.—Mr. PEASE said in reply: The answer to the first part of the question is in the affirmative. With regard to the second part, the examination of teeth varies in degree and character in different areas. With regard to the last part, I am fully alive to the importance of this matter, but I am unable to add anything at present to my answer to the honourable Member's question on the subject on Nov. 9th.

Proposed Sanatorium at Abergele.

Sir HERBERT ROBERTS asked the President of the Local Government Board whether he had considered the practically unanimous representations made by the ratepayers of Abergele and by the Abergele urban district council and other local bodies, supported by the medical officer of health of the county of Denbigh, against the acquisition by the South Manchester board of guardians of Plas Ucha, Abergele, for the purpose of a sanatorium; and whether, in view of the evidence as to the injury which the establishment of a sanatorium would inflict upon Abergele as a residental neighbourhood and summer resort, he could postpone his decision as to the Order until consideration had been given to the proposals under the Insurance Bill for conferring upon local authorities special powers of joint action in respect of the erection of sanatoriums and the distribution of sanatorium benefits.—Mr. BURNS answered: I have given very careful consideration to this matter from every point of view, and I have come to the conclusion that, subject to the observance of certain conditions, assent should be given to the proposal of the guardians. I have sent to my honourable friend a copy of the letter I have addressed to the guardians on the subject.

Royal Army Medical Corps.

Mr. BENNETT-GOLDNEY asked the Financial Secretary to the War Office what was the present shortage of the Royal Army Medical Corps, of all ranks, in the Regular Army, in the Reserve, and in the Territorial Force; at the last three examinations of candidates for commissions in the Royal Army Medical Corps had the numbers of those who had duly qualified exceeded the number of vacancies; and how many candidates were there at present for existing vacancies in the commissioned ranks of the Royal Army Medical Corps.—Mr. TENNANT replied: The present shortage is as follows:—

	Officers.	Other ranks.
Regulars	22	208
Reserves	—	3174
Territorial Force	283	1759

There is no definite establishment of officers of the Special Reserve, but the present strength amounts to 114. At the last three examinations for commissions the numbers of candidates qualified exceeded the number of vacancies. For the examination to be held next January for not less than 20 vacancies, three candidates have already entered, but the list will not be closed until Jan. 15th.

Royal Naval Medical Service.

Mr. BENNETT-GOLDNEY asked the Secretary to the Admiralty whether he would state if the shortage of medical officers in the Royal Naval Medical Service at the present time was less than it was 12 months ago, and what was the shortage according to the last available figures in all grades, from inspector-general down to the junior surgeons.—Mr. MACNAMARA said in reply: The shortage is practically the same as it was 12 months ago—20 have entered and 22 have gone, owing to retirements or deaths. The shortage is 60 of all ranks.

Mr. BENNETT-GOLDNEY asked the honourable gentleman what were the names of the service and other members of the Consultative Board of the Royal Naval Medical Service; whether this committee had hitherto been habitually called together to carry out the work entrusted to it during the customary working hours of the Admiralty staff, or had it been called together on an officially appointed early closing day and after normal closing hours; and at what hour did this committee meet now and on what day.—Mr. MACNAMARA answered: The names of the members of the Medical Consultative Board are as follows: President: the Medical Director-General of the Navy. Civilian members: Sir W. Watson Cheyne, Sir Dyce Duckworth, and Professor W. J. R. Simpson; naval member, Surgeon-General Howard Todd; and secretary, Fleet-Surgeon James L. Smith. The Admiralty has no officially appointed early closing day. The Medical Consultative Board is called together when occasion arises, and usually meets about 5 P.M., as that hour has been ascertained to be most convenient for the civilian members irrespective of Admiralty working hours. There are no routine meetings. Meetings take place as and when found necessary.

TUESDAY, NOV. 14TH.

Conscientious Objections in Scotland.

Mr. WILKIE asked the Lord Advocate whether he could state the total number of declarations of conscientious objection to vaccination made in Scotland in the years 1907, 1908, 1909, and 1910; and whether he could also give the percentages of these declarations to births.—Mr. URE replied: The information desired by my honourable friend for the years 1907, 1908, and 1909 is as follows:—

Year.	No. of births registered.	Declarations of conscientious objections to vaccination.	
		No.	Percentage.
1907	128,891	7,258	5·631
1908	131,406	15,846	12·059
1909	128,720	22,746	17·671
Total	389,017	45,850	11·786

The corresponding information for 1910 is not yet available.

Plague in India.

Mr. KEIR HARDIE asked the Under Secretary of State for India what special measures, if any, were adopted for dealing with the plague in and around Delhi; or whether he could say to what he attributed the practical disappearance of the plague from that district.—Mr. MONTAGU replied: In the Delhi district the ordinary measures for dealing with plague have been applied. The freedom of the district from plague during the third quarter of the year is not unusual. In 1910 no case was reported from July 1st up to the third week of September. This year the whole of the Punjab from July up to date has been exceptionally free from plague.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BOAL, J. G., M.B., Ch.B. Edin., has been appointed House Surgeon at the West Kent General Hospital, Maidstone.

BUSHNELL, F. G., M.D., B.S. Lond., D.P.H., has been appointed Deputy School Medical Officer to the West Sussex Education Committee.

EVANS, DOUGLAS GORDON, M.B., B.S. Lond., has been appointed Medical Superintendent of the Children's Memorial Hospital, Cedar Avenue, Montreal, Canada.

HAMER, W. H., M.D. Cantab., F.R.C.P. Lond., M.R.C.S. Eng., D.P.H., has been appointed Medical Officer of Health and School Medical Officer for the County of London.

HILEY, R. MELVILLE, M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer at the Royal Hospital for Diseases of the Chest.

JONES, EDITH A., M.B., B.S. Lond., has been appointed Assistant School Medical Officer to the Swansea Education Committee.

MACARTNEY, DUNCAN, M.B., M.Ch. Glasg., has been appointed Full Visiting Surgeon of the Western Infirmary, Glasgow.

MCEWEN, J. D., M.B., B.Ch. Edin., has been appointed House Physician and Casualty Officer at the Walsall and District Hospital.

O'NEILL, JAMES J., M.B., B.Ch., B.A.O. R.U.I., has been appointed House Surgeon at the Carnarvonshire and Anglesey Infirmary.

PINTO-LEITE, HUBERT, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Anæsthetist to the London Throat Hospital.

TODD, F. R., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon at the West Kent General Hospital, Maidstone.

WALLACE, JOHN, M.B., C.M. Edin., has been appointed Medical Officer of Health and Medical Superintendent of the Isolation Hospital by the Weston-super-Mare (Somerset) Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £100 per annum, all found.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Second Anæsthetist.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM CITY ASYLUM, Winson Green.—Junior Assistant Medical Officer. Salary £150 per annum, with board, laundry, &c.

BRENTFORD UNION INFIRMARY.—Second Assistant to the Medical Superintendent, unmarried. Salary £125 per annum, with apartments, rations, washing, &c.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

BRISTOL, COSSHAM MEMORIAL HOSPITAL, Kingswood.—House Surgeon. Salary £50 per annum, with board, lodging, and washing.

BRISTOL ROYAL INFIRMARY.—House Physician. Salary £100 per annum, with board, apartments, and laundry.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CARDIFF, KING EDWARD VII.'S HOSPITAL.—Three Honorary Assistant Anæsthetists.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Resident House Surgeon. Salary £50 per annum, with board and residence. Also Registrars and Clinical Assistants.

COLCHESTER EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £250 per annum.

DERBY, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £140 per annum, with board and residence.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Physician.

FLEETWOOD, ROSSALL SCHOOL.—Resident Medical Officer, unmarried. Salary £250 per annum, with board and residence.

HASTINGS, EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary at rate of £70 per annum, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Physician to Out-patients. Also Surgeon to Out-patients. Also Medical Registrar. Salary £127 10s. per annum. Also House Surgeon for six months. Salary £30, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

INDIAN MEDICAL SERVICE.—Twelve Commissions.

KENSINGTON DISPENSARY AND CHILDREN'S HOSPITAL.—Vacancy on the Honorary Medical Staff.

LICHFIELD, BURNTWOOD COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, and washing.
LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, residence, and washing.
LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Resident Medical Officer. Salary £250 per annum, with board and residence.
LONDON HOSPITAL DENTAL SCHOOL.—Two House Anæsthetists. Salary £40.
LONDON LOCK HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.
LONDON TEMPERANCE HOSPITAL.—Resident Medical Officer. Salary £120 per annum, with board, lodging, and washing.
MAIDSTONE, WEST KENT GENERAL HOSPITAL.—House Surgeon and Assistant House Surgeon, both unmarried. Salary £100 and £80 per annum respectively, with board, lodging, and laundry.
MANCHESTER CHILDREN'S HOSPITAL (OUT-PATIENTS' DEPARTMENT), Gartside-street, Manchester.—Medical Officer. Salary £180 per annum.
MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer. Salary £100 per annum, with board, apartments, and washing.
MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board and washing.
MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN—Two House Surgeons. Salary at rate of £50 per annum, with board and residence.
NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, lodging, and washing.
OXFORD UNIVERSITY.—Readership in Pharmacology.
PORTSMOUTH, MUNICIPAL TUBERCULIN DISPENSARY.—Assistant Medical Officer. Salary at rate of £250 per annum.
POWICK, WORCESTER COUNTY AND CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £180 per annum and all found.
PRESTON, COUNTY ASYLUM, Whittingham.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, apartments, and washing.
QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Surgeon-in-Charge of Out-patient Department for Ear, Nose, and Throat.
RICHMOND, SURREY, ROYAL HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board and apartments.
ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon. Salary £60 per annum, with board, lodging, and washing.
ROYAL COLLEGE OF PHYSICIANS.—Milroy Lecturer for 1913.
ROYAL DENTAL HOSPITAL OF LONDON, Leicester-square.—Morning House Anæsthetist. Salary £25 per annum.
ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Honorary Ophthalmic Surgeon. Also Honorary Dental Surgeon.
ST. THOMAS'S HOSPITAL.—Resident Assistant Physician. Also Surgical Registrar.
SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.
SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.
SUNDERLAND CHILDREN'S HOSPITAL.—Resident Medical Officer. Salary £80 per annum, with board, residence, and laundry.
THROAT HOSPITAL, Golden-square, W.—Honorary Assistant Surgeon.
TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, and washing.
UNIVERSITY OF LONDON.—Examiners.
WEST LONDON HOSPITAL, Hammersmith, W.—House Physician for six months. Board, lodging, and laundry allowance.
WIGTON, COUNTY OF.—Medical Officer for the Medical Inspection and Supervision of School Children. Salary £250 per annum, with travelling expenses.

Births, Marriages, and Deaths.

BIRTHS.

BALLANCE.—On Nov. 12th, at All Saints Green, Norwich, the wife of Hamilton A. Ballance M.S. Lond., F.R.C.S. Eng., of a son.
CLARKE.—On Nov. 5th, at Amphill, Reading, the wife of Fielding Clarke, M.R.C.S. Eng., L.R.C.P. Lond., &c., of a daughter.
GABB.—On Nov. 7th, at Cornwallis-gardens, Hastings, the wife of Harry Gabb, B.A., M.B., B.C., of a son.
LAING.—On Nov. 13th, at Husbands Bosworth, Rugby, the wife of G. D. Laing, M.D., of a son.
O'FLAHERTY.—On Nov. 9th, at Mount Edgcumbe-terrace, Stoke, Devonport, the wife of A. R. O'Flaherty, Major, R.A.M.C., of a son.
WORTHINGTON.—On Nov. 7th, at Nuwara Eiliya, Ceylon, the wife of Captain Frank Worthington, R.A.M.C., of a daughter.

MARRIAGES.

MACKINNON—ROWELL.—On Nov. 11th, at St. Paul's Church, Upper Norwood, Murdoch Mackinnon, M.D., D.P.H., Medical Registrar of Seamen's Hospital, Greenwich, to Isabella Irvine (Lily), third daughter of the late David Rowell and Mrs. Rowell, of Wallington Lodge, Upper Norwood.

DEATHS.

BUCKELL.—On Nov. 11th, Francis John Buckell, M.B., B.S., aged 67 years.
NEATBY.—On Nov. 12th, at Brookfield, Highgate, Thomas Neatby, M.D., aged 76 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

HEALTH AND CRIME OF CYPRUS.

ACCORDING to the Cyprus Blue Book for the year ending March 31st, 1911, the general health and sanitary condition of the island have been most satisfactory. There was no serious outbreak of infectious or contagious disease until the conclusion of the year, when an outbreak of small-pox occurred, which was kept in check by vigorous measures of isolation and energetic vaccination. Plague still menaced the island as in previous years, and the outbreak of cholera in neighbouring countries caused anxiety, but fortunately the island escaped both these serious dangers. A marked reduction took place in the number of cases of cerebro-spinal meningitis, only 84 patients, as against 1000 in the previous year, being mentioned in the returns. The cases showed a milder form of infection, and there is every indication that the disease has assumed a sporadic form. Malarial fever was less prevalent than in former years, 6074 cases being returned, against 7450 in 1909 and 10,476 in 1908. The people are beginning to recognise the value of the various prophylactic measures recommended; the use of mosquito nets, improved sanitation, and quinine is becoming more general. The hospitals of the island show an all-round increase in attendance and admissions. The total number of in-patients treated at the Government Central Hospital at Nicosia and the five district-aided hospitals was 2201, with 125 deaths (5·67 per cent.). The out-patient departments were also well attended; the patients numbering 23,859. 298 surgical operations were performed, to which must be added 316 minor operations among out-patients. The Central Hospital, the only purely Government hospital in the island, had a most successful year. The beds now number 53 and provide accommodation for men, women, and children. There are wards for the treatment of poor and paying patients. Medical, surgical, eye, and isolation beds now exist, and the general utility of the hospital is improving year by year. Nearly 200 surgical operations were performed at this hospital alone, and patients from all parts of the island received the skilful and careful attention of an efficient and well-trained medical and nursing staff. In all the other district hospitals also advancements and important improvements have been made; among these the Larnaca Hospital, built from funds raised by private effort and in great measure supported in the same manner, is noteworthy. The number of in-patients treated during the year was 232 and of out-patients 3603. Useful structural additions have been made and an English nurse's services have been secured in place of those of a native. The hospital is well equipped as regards beds, bedding, instruments, and other arrangements for the comfort of patients. The returns of the 12 rural medical officers show that 10,461 patients were treated by them. The services of these officers are much appreciated by the inhabitants of the more remote towns and villages of the island.

At the close of the year the inmates of the leper farm numbered 99. Their lot has been considerably relieved by a substantial increase in the grant allowed them by Government. Each year, on account of the extension of the Government Medical Service and the increasing number of medical practitioners, fewer cases of the disease escape notice and segregation. One child was admitted to the home, there being now 11 of both sexes thus removed from the farm, and it is interesting to report that in no case so far has any sign of the disease appeared. The education of these children is receiving attention, and they are being taught trades. A lunatic asylum is being built outside Nicosia, and it is hoped that it will be completed next year. Twenty cases of insanity were admitted to the lunatic wards of the hospitals during the past year; six inmates died, 20 were sufficiently recovered to be released to the care of relatives or friends, and at the end of the year 56 patients remained under treatment. Vaccination, although not compulsory, was extensively carried out. Fresh imported glycerinated vaccine was the medium used. 6332 of these operations were carried out; 6197 were primary vaccinations. It is difficult to over estimate the value to the island of the work carried out by the analyst at the Government laboratory. Under the head of criminal investigation 240 samples were examined, chiefly relating to murder and poison cases, and expert evidence was given by the Government analyst in many criminal trials.

In the section of the report devoted to "Crime and Criminal Statistics" the following passage occurs: "The most disquieting feature is the increase in the number of cases of murder and manslaughter." In commenting upon this unsatisfactory feature the Chief Justice brings to notice some interesting traits in the character of the villager which tend to account to some extent for the prevalence of this class of crime. The majority of the inhabitants of Cyprus live in villages and are as a rule poor, while their habitations are for the most part comfortless and insanitary. Their pursuits are almost entirely pastoral or agricultural. These people are very sensitive and ready to take offence. Any insult

rankles, and their minds seem to brood over any slight, real or imaginary, however small, until it has assumed proportions which, for their self-esteem, they consider they must revenge by murder. Conversely there are men in some of these villages who for no personal reason whatever, but solely in response to a small reward, say £10, will murder a man against whom they have no grievance or whom they have never seen before. In many cases if an inhabitant is obnoxious to the community they will have him killed by common agreement. They are very quick-tempered and many homicides occur in brawls in cafés and at weddings where men are under the influence of drink. Without reflection a knife is drawn and their natural impulse is to kill. "I have tried many murderers in this island," writes the Chief Justice, "and I cannot recall one who was sorry for his victim or showed remorse for his crime. As a rule, a murderer boasts of his crime. It is a source of pride to himself and gives him power over his neighbours." There are many ways, both direct and indirect, of dealing with such a state of affairs in a community where life appears to be held so lightly. Religion and education both have their part to play and are complementary rather than antagonistic to repressive measures. The legislature declines to pass any law effectually enabling the carrying of dagger-knives to be suppressed and strongly opposes any prohibition of carrying firearms. Small punishments are not likely to stop the practice. It is a question how far heavy penalties are desirable. In the case of intentional killing without premeditation the only punishment is 15 years under the Ottoman Penal Code, and the term has been practically cut down to 11 years and 3 months by the rules made for the remission of sentences. There is a large volume of evidence to show that the passions and jealousies raised at elections are the direct or indirect cause of many of the crimes of violence.

THE DANGER OF USING ELECTRICAL BED-WARMERS.

To the Editor of THE LANCET.

SIR,—Whilst in no way being desirous of exaggerating the danger of fire from electrical contrivances intended to minister to the comfort of modern man, I think that at this season a word of warning should be addressed to the many elderly people and invalids who are being fascinated by the handy and practical advantages of electrical bed-warmers—i.e., the substitute for the hot-water bottle, and which are intended to retain heat as long as they are attached to the local electrical supply service. These electrical bed-warmers are extremely dangerous, as they easily ignite when kept under cover in such a manner as not to freely radiate heat—i.e., if kept tightly covered under bedclothes or the like. I have before me the remains of one of these appliances, well devised and attractively made, recently purchased by a medical man for the use of a lady. After use of about three hours on the 240 volt circuit of one of our London electrical supply companies the bed-warmer ignited the bedclothes, and it was entirely a matter of chance that the user escaped with her life owing to the heat created by the smouldering bedclothes waking her before asphyxiation. I have since tried several similar appliances purchased in the open market on a 110 volt current, and I have not so far found one that can be described as free from danger. I trust this timely word of warning at this season may be the prevention of unnecessary deaths from fire.

I am, Sir, yours faithfully,

Nov. 10th, 1911. CAVE.

POOR CHILDREN'S YULE TIDE ASSOCIATION.

To the Editor of THE LANCET.

SIR,—The work of the Poor Children's Yule Tide Association has my very heartiest sympathy, and I desire to commend it to all readers of your columns as deserving of support. By means of this association the poor little slum lasses and lads of our city have each the certainty of a real Christmas gift, and those to whom this season annually brings numerous presents can hardly understand the joy of these unfortunate little ones at being remembered by Santa Claus in this kindly way. Last year there were 103 Christmas-trees and 30,000 toys distributed by the association in 321 of the poorest districts of London. This year we not only wish to do as well, but to reach even a larger number than before, in order that not one little child shall be left out of the distribution.

Christmas comes but once a year, and only once a year is this appeal made. While busy with one's own plans for the festive season, it is but fitting that a thought hould be spared for the many toyless and joyless little bairns of our streets. Subscriptions should be sent to the Hon. Sec., Poor Children's Yule Tide Association, 32, John-street, Theobalds-road, W.C. I am, Sir, yours faithfully,

Hyde Park Barracks, S.W., Nov. 10th, 1911. COMPTON.

A NEW ORDNANCE MAP.

Mr. Edward Stanford, official agent for the large-scale ordnance maps, announces the publication of the first 165 sheets of a new issue on the scale of 50 inches to a mile (1:1250). Hitherto, apart from the town plans, the largest scale on which urban districts have been obtainable has been the well-known 25 inches to a mile, and the new issue is based on an enlargement of that map. The larger scale map has been specially prepared for use primarily in connexion with land valuation, and the area covered by each sheet is one quarter of that of a 25-inch sheet. The size of the sheets is 40 × 27 inches, and the price 2*s.* 6*d.* each. The sheets already issued deal with various districts in Cheshire, Durham, Hampshire, Lancashire, Leicestershire, Northumberland, Sussex, and Yorkshire. They may be inspected at Mr. Stanford's Geographical Establishment, 12, 13, & 14, Long-acre, W.C.

THE BRITISH MEDICAL MAN ABROAD: TURKEY.

To the Editor of THE LANCET.

SIR,—When recently turning over your last Students' Number I observed the statement on p. 656 under this title: "It has not yet happened that a European physician failed to pass the colloquium." This, I fear, is not correct. Unfortunately a medical missionary of this society—M.D., Ch.B. Dub.—failed to pass in December, 1909. The actual examination was really nothing, the gentleman being asked to enumerate the varieties of abscesses found in the liver, their treatment, diagnosis, symptoms, &c., and the symptoms, diagnosis, and treatment of dysentery. Various conjectures were made by Constantinople friends as to the reason, and whether it was due (1) to the fact that his name had a termination which in the Turkish mind suggested the possibility of his being an Armenian; (2) in order to show the authority of the examiners that they were not bound to pass all applicants; (3) or whether "nerves" and "French" were in any way responsible (the doctor admitted being very nervous), the fact remains that he was "ploughed." I thought you would probably be glad to be corrected on this point. I might perhaps add that he was not permitted to sit a second time for the colloquium.

I am, Sir, yours faithfully,

SAML. W. W. WITTY.

Church Missionary Society, Salisbury-square, E.C.,
Nov. 8th, 1911.

J. C. H. L.—The "wonderful specific," according to our analysis, contains chalk, menthol, and sugar, but no alkaloid.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Nov. 10th–25th (Manchester).—Smoke Abatement Exhibition.
,, 21st–23rd (Montreal).—Canadian Public Health Association (First Annual Meeting).
November (Rome).—Fourth International Congress of Physical Education.
Dec. 4th–9th (Havana, Cuba).—American Public Health Association.
,, 19th–23rd (Moscow).—Third Pan-Russian Therapeutical Congress.

In 1912:—

Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
March 23rd–April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
,, (London).—First Congress of Pure Food and Health Society of Great Britain.
,, (Berlin).—Thirty-third Balneological Congress.
April 1st–7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
,, 14th–20th (Rome).—Seventh International Congress on Tuberculosis.
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.

The following journals, magazines, &c., have been received:—

Archives Générales de Médecine, Dublin Journal of Medical Science, Archives Internationales de Neurologie, Archives de Médecine et de Pharmacie Militaires, Magazine of the London (Royal Free Hospital) School of Medicine for Women, Bulletins et Mémoires de la Société de Radiologie Médicale de Paris, Revue de Gynécologie, Folia Therapeutica, Quarterly Journal of Experimental Physiology, Jahrbuch für Kinderheilkunde und Physische Erziehung, St. Paul Medical Journal, International Journal of Surgery, Journal of the Royal Institute of Public Health, Aesculapae, Archivos Españoles de Neurologia, Psiquiatria y Fisioterapia, Indian Medical Record, Indian Medical Journal, Local Government Chronicle, Ash's Monthly, Military Surgeon.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—J. H. Targett, W. W. H. Tate), at 4 P.M.

JOINT MEETING with the MEDICO-PSYCHOLOGICAL ASSOCIATION, at 11, Chandos-street, W.

Discussion:
Amenorrhœal Insanity (opened by Dr. C. T. Ewart).

THERAPEUTICAL AND PHARMACOLOGICAL SECTION (Hon. Secretaries—H. Charles Cameron, H. H. Dale): at 4.30 P.M.

Papers:
Dr. F. Ransom: The Effects of Adrenalin.
Dr. A. R. Jordan: Urinary Antiseptics

PATHOLOGICAL SECTION (Hon. Secretaries—J. C. G. Ledingham, A. E. Boycott): at 8.30 P.M.

Dr. W. Langdon Brown: The Bundle of His from a Case of Heart-block (with specimens and lantern slides).
Dr. A. E. Boycott: Sahli's Hæmoglobinometer.
Dr. H. Priestley: The Differentiation of the Diphtheroid Group of Organisms.
Dr. H. R. Dean: Further Experiments on Complement-fixation and Precipitation.
Dr. J. Henderson-Smith: Some Experiments on Lysis.
Dr. J. C. G. Ledingham: Some Experiments on Phagocytosis regarded as an Adsorption Phenomenon.

THURSDAY.

NEUROLOGICAL SECTION (Hon. Secretaries—Wilfred Harris, T. Grainger Stewart): at 8.30 P.M.

Dr. Boyer: Systematic Examination of the Central Nervous System in a Case of Obstetrical Paralysis.
Mr. Sydney Mann: Method of Colouring Brains to Demonstrate Cortical Localisation and Arterial Supply, for Teaching Purposes.
Dr. F. W. Mott, F.R.S.: Colour Photographs of Microscopic Specimens of the Nervous System.
Dr. Lind: Experimental Lead Poisoning (Sir Thomas Oliver). Examination of the Brains of Two Animals.

FRIDAY.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—T. R. Whipham, H. S. Clogg, Percy G. Lewis), at 11, Chandos-street, W.: at 4.30 P.M.

Cases:
Dr. Vincent Dickinson: Infantilism.
Dr. R. H. Miller: (1) Chronic Interstitial Nephritis with Infantilism; (2) Intracranial Tumour.
Mr. D. C. L. Fitzwilliams: Cases to Illustrate his Paper.
Dr. F. J. Poynton: Psoriasis and Flexion of the Terminal Phalanx of the Thumb.
Dr. A. C. D. Firth: A Family (Mother and Three Children) showing Congenital Absence of the Patella and Deformities of the Nails.
Dr. R. S. Trevor and Dr. H. D. Rolleston: Pathological Specimen—Cerebral Aplasia and Hydrocephalus.

Papers:
Dr. H. D. Rolleston and Dr. J. B. Molony: Purpura in Acute Infective Diarrhœa of Infants.
Mr. D. C. L. Fitzwilliams: Congenital Flexion of the First Interphalangeal Joints of the Fingers.

EPIDEMIOLOGICAL SECTION (Hon. Secretaries—W. H. Hamer, G. S. Buchanan): at 8.30 P.M.

Paper:
Dr. Sandilands: Small-pox in London, 1885 to 1935.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Adjourned Discussion on the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System. Speakers:—Sir Victor Horsley, Dr. R. Russell, Dr. T. B. Hyslop, Major French, R.A.M.C., Dr. W. Harris, Dr. F. Buzzard, and Mr. A. Fleming.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

TUESDAY.—3 P.M., Dr. G. Clarke: Sterilisation from the Eugenic Standpoint.—Dr. C. T. Ewart: Amenorrhœal Insanity.

MEDICO-LEGAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

TUESDAY.—8.30 P.M., Dr. C. G. Grant: The Sydney Street Affair from its Medico-Legal Aspect.

CHELSEA CLINICAL SOCIETY, St. George's Hospital Medical School, S.W.

TUESDAY.—8.30 P.M., Dr. A. G. Buchanan: Psycho-therapy. A Discussion will follow.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—8.30 P.M., Council Meeting. 9 P.M., Dr. W. M. Ettles: Some Recent Developments in Ophthalmic Therapeutics.—Dr. H. R. Andrews: Pyelo-nephritis in Pregnancy.—Dr. Langdon Brown: A Brief Appreciation of Hughlings Jackson's Work.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne-street, Edgware-road, W.

THURSDAY.—Dr. J. Taylor: Early Signs and Symptoms of Nervous Disease.—Mr. D. C. L. Fitzwilliams: Syphilitic Affections of Bones met with in Childhood.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. J. G. Little: Clinique (Skin). 5.15 P.M., Lecture:—Dr. H. French: Hypothyroidism.
TUESDAY.—4 P.M., Dr. E. Winter: Clinique (Medical). 5.15 P.M., Lecture:—Dr. W. C. Brown: Protozoon Dysentery at Home and Abroad.
WEDNESDAY.—4 P.M., Mr. C. Ryall: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. O. Grünbaum: Methods of Making an Accurate Prognosis in Renal Disease.
THURSDAY.—4 P.M., Dr. E. Cautley: Clinique (Medical). 5.15 P.M., Lecture:—Dr. F. Taylor: Pleuritic Effusion, its Diagnosis and Treatment.
FRIDAY.—4 P.M., Dr. StClair Thomson: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Edwards: Urinary Surgery.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Low: Yellow Fever.
WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M.. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Ll. Williams: Oral Conditions in their Relations to General Conditions of Health or Disease.
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture IV.)
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. S. Taylor: The More Serious Forms of Valvular Disease of the Heart.
SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Dr. C. O. Hawthorne: The Meaning of Sphygmomanometric and Sphygmographic Records.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.15 P.M., Special Lecture:—Dr. Rankin: Neurotic Dyspepsia.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. E. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies).
TUESDAY.—2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. G. F. Hadfield: Post-anæsthetic Vomiting.
WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. Stewart); 5.30 P.M., Eye Operations (Mr. Brooks).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappell). 4.30 P.M., Demonstration:—Selected Medical Cases (Dr. G. P. Chappel).
FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Bosanquet: Tuberculosis in its Relation to Injuries and Accidents.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard: Encephalitis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard: Epilepsy.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY AND FRIDAY.—3.45 P.M., Lectures:—Mr. W. Stuart-Low: Methods of Examination.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Dr. W. Griffith: Pathology of the Epidermis.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Tuberculosis of the Skin—I., Lupus Vulgaris; II., Tuberculosis Verrucosa Cutis; III., Scrofuloderma.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., A Demonstration of Clinical Cases will be given by Members of the Honorary Staff. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 15th, 1911.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 9	29·51	S.	0·25	71	50	39	41	41	Overcast
,, 10	29 55	S.	...	48	45	41	42	43	Cloudy
,, 11	29·81	S.W.	0·11	55	47	38	38	38	Overcast
,, 12	29·30	W.	0·43	77	57	38	42	46	Cloudy
,, 13	29 79	S.W.	0·34	65	52	42	44	46	Raining
,, 14	30 31	S.W.	0·06	79	56	44	46	48	Fine
,, 15	29 89	S.W.	...	59	53	48	47	49	Overcast

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Two Lectures
ON
UNICELLULA CANCRI:
THE PARASITE OF CANCER.

Delivered before the Royal College of Surgeons of England

BY SIR HENRY BUTLIN, BART., F.R.C.S.,
PAST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; HUNTERIAN PROFESSOR.

LECTURE I.—THE PROTOZOA.

MR. PRESIDENT AND GENTLEMEN,—In the Bradshaw lecture of November, 1905, I put forward the proposition that "the carcinoma cell is an independent organism, like many a protozoon; that it lives a life which is wholly independent and proper to itself; and that it lives as a parasite in the body of the animal which is affected with carcinoma, deriving its nourishment from this host, and doing nothing to repay the host for the sustenance of which it robs him."[1] Until shortly before I delivered the lecture I thought that I was the first person to suggest that the cancer cell is itself the parasite of cancer, but I found that Hauser had done so in 1903.[2] And a couple of years ago Dr. Powell White showed me that he had done so in the Erasmus Wilson lectures at the Royal College of Surgeons as long ago as 1902.[3] But I think that neither White nor Hauser had carried the matter to its logical conclusion, so far as to insist that the cancer cell is a new organism—a new creation of animal being—not a mere changed cell.*

INTRODUCTORY REMARKS.

So far as I know, then, I stood alone in the belief that the cell of carcinoma is a new creation of living beings, consisting of a single cell, and governed by natural laws just as clear and just as defined as those which govern single-cell organisms which are recognised by naturalists. In 1905 I maintained this view only for the cells of carcinoma. For the last five years and more the matter has been constantly before my mind. A great deal of new information and material has been provided during that period, and I am able now to maintain the view, not only for carcinoma, but for every variety of malignant disease.

I am quite aware that my ignorance of biology and of the lowest forms of animal life may render my attempt ridiculous in the eyes of naturalists. And I should never have ventured to undertake the task had there been any person particularly fitted for it, and willing to accept it. A wide grasp of three kinds of knowledge is required—a knowledge of the protozoa, experience of experimental investigation of cancer, and experience of the clinical pathology of cancer in the human subject. I do not know any one person who combines these three kinds of knowledge in himself.

There is only one distinguished protozoologist, so far as I know, who is engaged in the investigation of cancer—Professor Calkins, of the Columbia University, of New York—and he is not a medical man. And it is, I am sorry to say, notorious that the masters of experimental investigation are, for the most part, very ignorant of the clinical pathology of cancer, while it is equally true that the physicians and surgeons who have studied cancer from the clinical and microscopical aspects are not acquainted with protozoology or with experimental investigation.

The class to which I have the honour to belong—the clinical pathologists—is looked down upon by the other two classes, and I have been told that its day is past. But I claim a right to present my theory on the ground that I have spent a great deal of time in the course of many years in the study of the clinical pathology of cancer, and that I have been closely observant of the actual work of the Imperial Cancer Research since its foundation, have constantly associated with the staff, and have been a member of the Publication Committee of all the scientific reports which have been published by the Research On the other hand, I am wholly dependent for my statements on the life-history of the protozoa on the works of Calkins and Doflein, and the references which I have found in them, and to some pretty sharp criticism of my views in a letter which Professor Calkins was kind enough to write me.

I shall divide the subject into two parts. In the first part I shall endeavour to show that there is no essential difference between cancer cells and certain other parasites in the relation to their host. In the second part I shall show that almost all the phenomena of cancer with which I am acquainted can be readily explained on this theory. The parasites of which I am going to speak are the protozoa; I am not going to speak of such micro-organisms as bacilli and bacteria. I use the protozoa not because I intend to insist that the cancer cells must be included amongst the protozoa, but because they most closely resemble the protozoa in their relation to the body of the host, and perhaps in their mutual relations.

SOME CHARACTERISTICS OF PARASITIC PROTOZOA.

Certain of the protozoa appear only to live as parasites, whilst others of them are never parasitic, and others, again, are able to exist either as parasites or external to the body of any host. The powers of the parasites are strangely and strictly defined. Doflein[4] (of whose work I am going to make very free use) says:—

> When a protozoon gets into another organism there begins at once a fight between the two, which ends in an easy victory of the larger, many-celled beast if the protozoon is not a parasite, and if the many-celled beast enjoys its normal natural resistance. But if the protozoon is fitted for parasitism then the fight is in earnest. And in this fight that organism conquers which is able to overcome the other with its fighting weapons.[5]

But it is quite certain that every parasitic protozoon which finds its suitable host does not succeed in holding its own against the resistance of the host.

Many groups of parasites are limited to certain groups of hosts—the Sarcosporidiidæ, for instance, to air-breathing vertebrates—whilst the Gregarinidæ have not been found in vertebrate hosts.[6] But the limitations are much more strict than this. For, of the same species of parasite, different varieties are found in different varieties of a species of host. Thus, the Sarcosporidiidæ, which are believed to be exclusively found in mammals,[7] and which have been found in horses, cows, buffaloes, mice, rats, man, &c., do not all occur equally and at random in all these animals, but certain varieties of the Sarcosporidiidæ occur only in certain varieties of mammal. *Sarcocystis miescheriana* inhabits the body of the pig; *Sarcocystis tenella* loves the sheep; while *Sarcocystis muris* is a parasite of the house-mouse and the rat. And those varieties of parasite which are particular to certain varieties of mammal, as the *Babesia bigemina* is to cattle, cannot be implanted in other mammals. Experiments which have been made on rats, guinea-pigs, sheep, and pigeons have always failed.[8] On the other hand, there are parasites which can exist in several or many varieties of host, yet even these exhibit strange powers of selection. Thus, *Trypanosoma brucei* and *Trypanosoma lewisi* can breed in dogs, in the blood of the same animal, but if they are injected from this blood into rats, *Trypanosoma brucei* disappears, and only *Trypanosoma lewisi* lives and thrives.[9]

Just as particular varieties of protozoa are limited to particular varieties of host, so they are often limited in like manner to particular parts of the bodies of their hosts. Thus, the Sarcosporidiidæ are parasites of muscles; Trypanosoma is a blood parasite; the Coccidiidæ are parasites of cells, particularly of epithelial cells.[10] But they exhibit powers of selection much more marked than this. *Myxobolus cyprini* is a parasite of the kidney epithelium of the carp. The Sarcosporidiidæ not only affect the muscles, but most of the varieties affect particular muscles or groups of muscles. Thus, *Sarcocystis miescheriana* takes to the muscles of the larynx, to the diaphragm, and intercostal muscles; *Sarcocystis muris* affects the muscles of the trunk. And although several varieties of Sarcosporidiidæ are chiefly found in the muscles in the neighbourhood of the alimentary canal, which they may have easily reached from the mouth or œsophagus, others of them are found in muscles far distant from the alimentary canal, such as the intercostal muscles or the muscles of the trunk. Other parasites appear to be equally at home in several or many tissues of the host. *Nosema bombycis* (which produces the pébrine disease of the silkworm) occurs in the intestine, the fat bodies, the sexual organs—in short, in all the organs of the *Bombyx mori*.

* "All the phenomena of malignant and other tumours can be explained on other grounds—viz., on the view that the cells take on an independent mode of growth, and behave as parasites themselves." "Once the cells have acquired this habit (Adami's Habit of Growth) they behave as independent parasites." (White, loc. cit.)

And, far more remarkable and interesting than this, is the generalisation which may take place of parasites which are usually limited to a single structure of the host. Thus, *Myxobolus pfeifferi*, which is usually a harmless parasite in the kidney of the barbel, makes terrible havoc of the same fish in the water of certain rivers (the Seine, the Marne, the Maas, the Rhine, and Mosel), where it attacks almost all the organs of the body of the fish—the connective tissue of the intestine, the kidney, the spleen, the liver, but, above all, the muscular system, in which it forms great lumps and tumours, which stand out on the surface of the animal, and are quite characteristic of the barbel-sickness (*Barbenseuche*)[11] (Figs. 1 and 2).

Migration of Parasitic Protozoa.

It is possible that the protozoa, which are parasitic (some of them, at least), take an active part in their migration. But they are also carried in the blood and lymph to the organs and tissues in which they are generalised. Thus, *Isospora lieberkühni* (a parasite of the frog) first attacks the epithelium of the intestine, then penetrates into the vessels of the mucous membrane, and is carried by the blood to the lungs, liver, spleen, and other parts. *Entamœba histolyca*, the parasite of dysentery, makes its way through the walls of the rectum, and is supposed to be conveyed through the ductus choledochus into the liver. *Lymphosporidium calkins* (which produces severe epidemics in fish) appears in the form of small amœboid bodies in the lymph, attacks the muscles of the intestines and other organs, passes again into the lymph in its developed form, and produces numerous spores, which are conveyed to all parts of the body. It is interesting to observe the changes which take place in many of the protozoa, either to adapt them to parasitism or to altered conditions of life in the bodies of different hosts. Thus the Trypanosoma will vary in size, in the situation of its nucleus, &c., according to the medium in which it lives. *Trypanosoma lewisi* loses its undulating membrane in certain artificial cultures, and the Sarcosporidiidæ are not constant in form, for the cells, closely packed together during their development, mutually deform one another.[12]

Of liability of animals of the same species to a particular parasite, the evidence goes to prove that some individuals of a species are immune to the attack of a parasite, other individuals recover from the attack of a parasite, while other individuals again suffer badly from it or die. Take, as an example, the hæmoglobinuria of cattle (Texas fever), which is attributed to *Babesia bigemina*, a parasite which is not directly transferred from cow to cow, but is introduced into the cattle by a beetle (*Boophilus annulatus*).[13] Whole herds are attacked in the plains of Texas. But all the animals do not show symptoms of the disease, and some of those which are attacked recover. Pigniéres gives an account of a herd of 1000 adult cattle and 450 calves. Of the adults 630 died—an enormous mortality—but only 10 of the 450 calves perished of the disease. Calves, if they suffer at all, suffer mildly. There is generally no hæmoglobinuria, and at the end of a fortnight they are often quite recovered. Nevertheless, the *Babesia* may still be found in the blood of these recovered calves, so that they appear to have acquired immunity against the poison of the parasite. Whether they can be artificially immunised by the injection of the blood of beasts which have been cured of the disease has not yet been clearly ascertained.

Liability of Parasitic Protozoa to Death.

Although some of the parasites are able to take formed nourishment, most of them, and all the cell parasites, live by osmosis.[14] The Sporozoa, for instance, live exclusively by the osmotic taking of fluid nourishment.[15] Many of them perish with their host, for even if they escape from the dead body of the host, they may be unable to exist outside the body of a host. But they often exhibit a marked tenacity of life; for they may live for days after the death of the host, and of every tisue and cell of the host.

With regard to the liability of parasitic protozoa to death, it is held by Weismann and his school that the protozoa are immortal, in the sense that the young animals are in part composed of the substance of the parent. As a matter of fact, they undergo degeneration, are liable to disease, fade, waste, and die, like other living creatures; and they are often killed by the invasion of their bodies by micro-organisms—the bacteria—which are then parasites of parasites. I must ask you to bear this in mind when we come to consider the cells of cancer presently.[16] It appears probable that the body of the host contains, or may produce on demand, a substance dangerous to the life of the parasite which is in it. Of this the parasite may die. But if it can withstand the dangerous substance it seems to gain greater strength. It has acquired immunity by its successful resistance to the dangerous substance, and may flourish more actively than before. But the activity of a parasite is probably not always the same. For, as they show alternate periods of activity and depression in cultures, eating more, growing faster, multiplying abundantly at one time, and displaying sluggard qualities at another (Actinosphæria, Infusoria, &c.), so it is probable they are subject to similar periods of activity and depression in the body of the host.[17] Whether, during these periods of depression they are devoured alive by phagocytes I do not know, but their dead bodies appear to be eaten by phagocytes.[18]

Effects of the Parasites on their Hosts.

The effect of parasites on their hosts depends largely on whether they produce toxins dangerous to the host or not. Many of them (such as the parasite of malaria) are toxic. And these are naturally much more dangerous to the host than the non-toxic parasites. But their virulence varies, like their vital activity; they are seldom or never so actively virulent as the bacteria and bacilli, and take much longer to produce serious or fatal illness in the host. The non-toxic parasites are much less dangerous to life. They are often unperceived—are mere "commensales." But they may destroy the cells and tissues which they attack to such an extent as to produce serious effects upon the health of the host. They may destroy the host by enormous increase in numbers, and particularly by interfering with the working of vital organs. I have already mentioned the barbel-sickness, which is so fatal to the fish in France and Germany. The tumours sometimes ulcerate. The Coccidiidæ appear to produce their effects by destruction of the tissues they invade. *Eimeria stiedæ*—a common coccidium of the rabbit—causes the formation of tumours which may grow as large as a hazel-nut, and contain fluid, in which are found quantities of epithelial cells and coccidia.[19] *Lymphosporidium calkins* (a parasite of fish to which I have already referred) is apt to fill the lymph vessels so full that serious disturbance, the formation of ulcers, and death result from the stoppage of the flow of lymph.[20] *Sarcocystis tenella* sometimes chokes sheep by producing great sarcosporidian tumours in the neighbourhood of the air passages.[21]

It seems probable that some parasites are capable of existing during long periods of time, even when they are not living their usual life, in the sense that a parasite which is, under ordinary circumstances, toxic to the host, may cease to be toxic, yet still exist. Thus, *Babesia bigemina* is often found in the blood of calves which have long recovered from the disease which it produces. It is well known that human beings who have contracted malaria may recover from it and may live for years without an attack, and then may be suddenly and unexpectedly attacked, even when they have been living meanwhile in non-malarial regions. It is evident the parasite is living in the body of the host during this long period, but it is almost equally evident that it just maintains its existence, and has lost its activity in the face of the increased resistance of the host.

Explanation of Power of Selection.

It will be noticed that I have used the term "power of selection" in speaking of the predilection of particular parasites for particular species of animals, for particular varieties of those species, and for particular organs and tissues of their hosts. The only reasonable explanation of these predilections is that the parasite finds the nourishment suitable to it in the particular host and parts of the host which it infests, or encounters less resistance there. *Eimeria stiedæ*, for instance, which is contained in the grass on which many animals are feeding, must have an opportunity of entering the alimentary canal of cows, of horses, of sheep, and other animals. And undoubtedly it does enter it. But the only one of the animals which feed on the grass in which they are so abundant which harbours and nourishes the parasite is the rabbit. The waters which contain *Myxobolus pfeifferi* also contain *Myxobolus cyprini* and *Myxobolus neurobius*, and all kinds of fish which inhabit these waters must swallow myriads of all three varieties of parasite. But only the one particular parasite thrives in the one particular

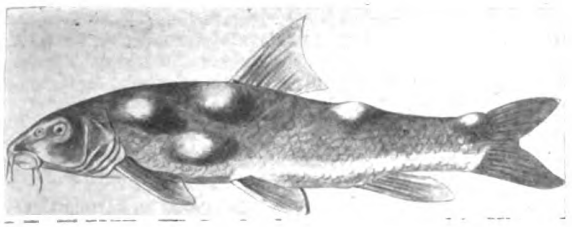


FIG. 1.—Barbel suffering from *Barbenseuche*; tumours formed by *Myzobolus pfeifferi* (after Doflein). *Protozoenkunde*. II. Aufl., Jena, 1909, Fig. 730.

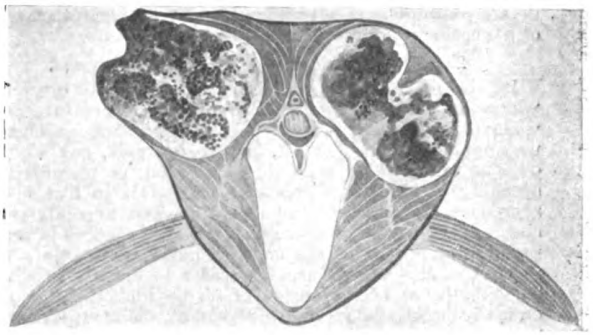


FIG. 2.—Section of a barbel, showing symmetrical tumours, that on the right side ulcerated (Doflein, Fig. 731).



FIG. 3.—Squamous carcinoma of tongue, the cells of which are elongated like spindle-cells.

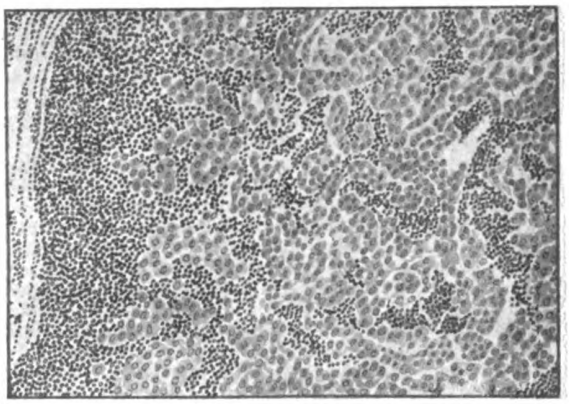


FIG. 4.—Axillary glands removed 20 years after successful removal of the breast.*

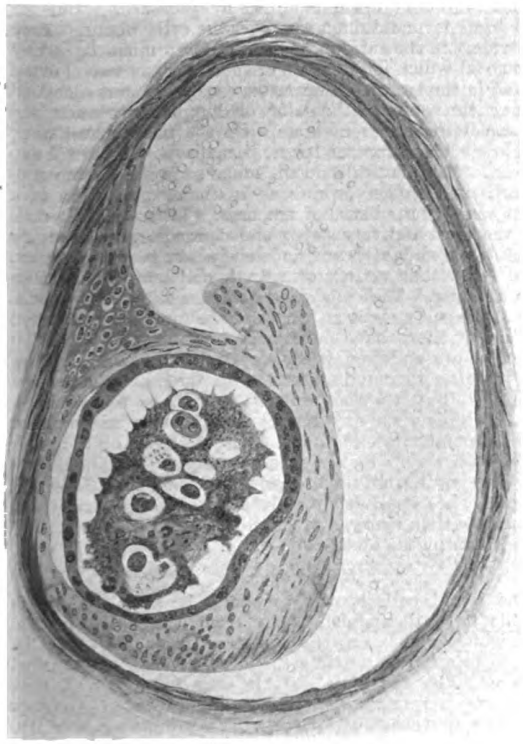


FIG. 5.—Degenerated cancer cells in an organised thrombus in a blood-vessel (after Martin B. Schmidt). Die Verbreitungswege der Karzinome, Jena, 1903. Plate, Fig. 3.

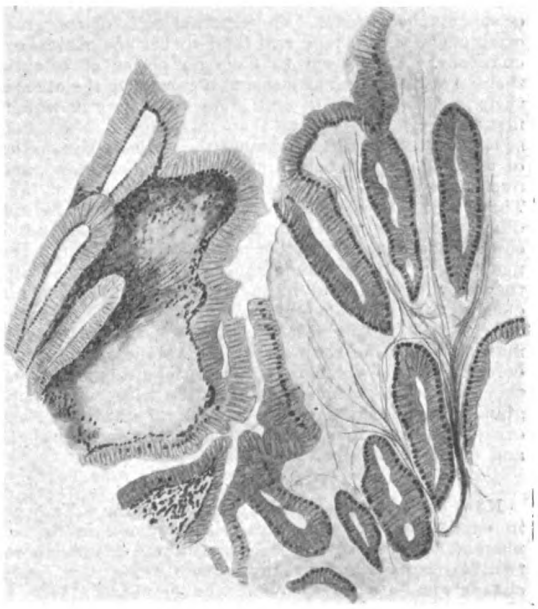


FIG. 6.—Columnar-celled cancer of the rectum (after Cripps). Diseases of the Rectum and Anus, 1884, Pl. VI.

* The history of this case is very interesting. In 1895 Sir James Paget sent me a lady whose left breast he had amputated for carcinoma about 1875. The glands had not been removed. About 1885 Mr. Stephen Paget destroyed with the cautery "some carcinomatous tubercles in the right breast." When I saw her in 1895 there was no recurrence in either breast, but a mass of glands in the left axilla, which were easily removed. She came to see me in 1898. There was no recurrence either in the breast or in the axilla on the left side, but there was recurrence in the right breast, for which I amputated the breast (XI., 201).

variety of fish which it affects. I would keep constantly before your minds this explanation of the power of selection of parasitic protozoa.

Two Characters Common to Parasitic Protozoa.

Before leaving the parasitic protozoa, two characters which they have in common should be referred to. First, whatever office the parasite may serve, whatever effect it may produce on the host, it, for its own part, has only two objects in view, if such an expression is permitted in speaking of so lowly a creature. It strives to live and to reproduce—to maintain the individual and to continue the species. If, in a suitable host, it does not succeed in reaching a suitable part of the body within a reasonable period it will die, and the species will cease to exist in that host. The rapidity and completeness of its destruction will depend on many circumstances, but the general statement is correct. Second, it breeds true. The young animals are always of the same species as the animals from which they were derived. I believe some doubt has been expressed whether Hæmosporidiidæ may not be derived from Flagellidia.[22] I am not competent to speak on this, but it may be stated quite certainly that Sporozoa are not bred from Rhizopoda or Rhizopoda from Ciliata—that *Sarcocystis miescheriana* does not become *Sarcocystis muris*, and that *Nosema bombycis* never produce *Nosema destruens* or the reverse.†

I now come to the

COMPARISON BETWEEN THE CANCER CELL AND THE PARASITIC PROTOZOA

in their life-history and their relation to the host. And I propose to treat it in the reverse order, taking the individual cells first, and dealing with the characters which they have in common afterwards. First, I must premise that there is no one cell for every kind of malignant disease, nor is there one cell for the carcinomata and another cell for the sarcomata. Every variety of malignant tumour has its own typical cell, and the characters, the selection of locality, and relations of each variety of cancer cell to the host are sharply defined, and differ as widely as, though not more widely than, those of the varieties of protozoa which belong to the same species.

Characters of Cancer Cells.

Take first the cells which resemble the cells of the deeper layers of the epidermis or of the appendages of the skin. They are very regular in size and shape, and are collected in masses in spaces of the connective tissue, usually of the skin or subcutaneous tissue. The external cells of the group are often modified in shape and tend to become cubical or even columnar. They seem to have no power of establishing themselves in distant tissues and organs. On the other hand, their tenacity of life in and around the part in which they first appeared is little less than marvellous. Next, take the squamous cells. They resemble the cells of the epithelium of the skin, but are not so regular in size and shape, and the nuclei are large—out of proportion to the size of the cell. They form masses which sometimes recall the natural dipping of the epithelium between the papillæ, but often seem to be massed together with no further design than to find sitting, or even standing, room. And in this attempt they are often squeezed in such a manner that they may be elongated and look more like spindle cells than squamous cells (Fig. 3). They extend into the spaces between the muscular fibres as they grow beneath the surface, forming columns of cells which are easily distinguishable. Whenever they are in close and easy relation with the lymphatic glands, it may be accepted as a rule to which there are few exceptions, that they will find their way into those glands, and will grow and multiply there.

Cells of Spheroidal Type.

Now, consider the cells of spheroidal type. They collect in spaces of the connective tissue, sometimes in such a manner as to recall the structure of the gland whose epithelium they pattern. They spread along the lymphatic channels and are conveyed into the lymphatic glands, where they are well received and flourish. They are conveyed by the blood into other organs. They can live and multiply in many organs; but they select, by preference, the liver and lungs, and the medullary tissue of the bones, particularly of the femur and vertebræ of the lumbar region, just as certain sarcosporidiidæ have a liking not merely for muscles, but for certain muscles or groups of muscles. They exhibit a wonderful tenacity of life, for, after lying dormant for many years (as many as nine or ten or more), they may suddenly thrive and multiply and produce large masses of their like in the space of a few weeks or months (Fig. 4). Although they are probably chiefly conveyed to different regions of the body in the form of single young cells, it is also well known that masses of them grow into the interior of blood and lymphatic vessels,[23] and that emboli of them may be carried into parts which are favourable to their reception. It is also known that many of them perish in their journeying. They may be found in blood-vessels and in the thoracic duct in a condition of degeneration and decay (Fig. 5).

Columnar or Cylindrical Cell.

One of the most interesting and favourable objects of study is the columnar or cylindrical cell. It resembles the cells of the columnar glands of the alimentary tract (Fig. 6). Its tendency is to arrange itself in the same fashion as the columnar cells are arranged in the glands of the stomach and intestine, sometimes so precisely that it is difficult to believe that the section of the carcinoma is not a section of normal glands. But the imitation is usually much coarser, and there is evidence of slovenly work in the characters and disposition of the cells. As in the previous case, the cell makes its way into the surrounding and subjacent tissues, into the lymphatics and lymphatic glands, and is there speedily at home. It also has a great fancy for the liver, and, in a less degree, for the lung, and it now and then grows in the medullary tissue of one of the long bones—the humerus, for example—or such a flat bone as the ilium.

Spindle Cells.

Now consider the group of spindle cells. They are elongated, tapering at each end. They vary much in size, and their form is often modified by pressure. But the general form is maintained wherever the cells occur. They spread widely in the surrounding tissues. It must be a very wide removal which is to get rid of them. They travel in the blood and in the lymph, so far as we can judge, but although they may thrive in the interior of lymphatic glands, the glands are often free from them. On the other hand, they have a great liking for the lungs, perhaps more than for any other part. They multiply in the lungs so rapidly as to produce large and numerous masses in them, and that is a frequent cause of the death of the host. These spindle cells are for the most part very strong and vigorous, grow quickly and multiply abundantly, and find subsistence in many organs.

There is another variety of spindle cell which multiplies to form tumours. The cells are often of small size, and the outline of the cell may be so faint and the nucleus so distinct that some of them have been called "fibro-nucleated."[24] These cells are endowed with very limited powers. They spread into the surrounding parts; in these parts they live and thrive. But they appear quite unable to effect a successful attack upon any distant part, for they are not met with in the neighbouring glands, or in the liver, or lungs, or bones, or elsewhere. It is no excuse to say that their form and size are not favourable to transference by the blood and lymph. They are small and of convenient shape for transfers, much more so than many large spindle cells which are readily conveyed both by the blood and lymph.

Round Cells.

Of the round cells it may generally be said that it is very difficult to distinguish them from the cells of the masses which make up the infective tumours (Fig. 7). Indeed, it is often impossible to do so by their anatomical characters. For the most part it may be affirmed that they possess a remarkable vitality, not exceeded (seldom equalled) by any other cancer cell. They multiply rapidly, so rapidly that in some cases they produce immense masses in a few weeks, and the growth of the mass may be associated with symptoms of general fever. They seem much less influenced by the resistance of the host, or much more capable of finding nourishment, or less dependent on a very special diet, than most other cancer cells. For they seem very little limited to particular organs and tissues compared with most other varieties of cell. They flourish in

† There are other properties on which I must not touch, such as the periodicity which some of the protozoa exhibit in relation to their vitality. Time will not permit me to do so. (Calkins, Protozoology, 1909, p. 106.)

the lymphatic glands, if they reach them, in the bones, skin, and subcutaneous tissue, kidneys, liver, lungs—indeed, like *Nosema bombycis*, almost everywhere. I believe they would spread all over the body if the host were not destroyed by them before they have had the opportunity to do so.

Giant Cells.

There is one variety of cell which I must not pass over without notice—the giant cell. These cells only form a certain proportion of the masses in which they occur—less than one-half—and the remainder of the mass is composed usually of spindle cells. Having regard to their size alone it is not surprising that giant cells travel with difficulty in the blood and lymph. It would be expected that the spindle cells of which the mass is chiefly formed might travel and establish themselves in other places. But it is notorious that they seldom do so.

Resemblances of Cancer Cells to Parasitic Protozoa.

These examples will suffice to illustrate some of the resemblances of the life-history of the cancer cell to that of the parasitic protozoa. It will be seen that they are as careful in the selection of locality as are the varieties of parasitic protozoa. They spread in the interstices of the tissues in which they first appear, as do certain of the protozoa. They are conveyed in the blood and lymph, as the parasitic protozoa are. They are deposited in distant tissues and organs, like the parasitic protozoa, and they show just the same predilection for certain tissues and organs as do the protozoa. They are like many of the parasitic protozoa in the fact that they live almost entirely by osmosis. Like the protozoa, they sometimes live for long periods of time in the body of the host without any sign of their presence, and perhaps in a state of lethargy, until their vigour and activity are restored to them by some lowering of the resistance of the host, or by some change in the part in which they had been lying, which renders it more suitable to their necessities. They do not appear to furnish toxins which are dangerous to the health of the host, so that their effects are produced (like the effects of such parasites as *Myxobolus pfeifferi*) by mechanical causes—destruction of the tissues in which they live and multiply, the stoppage of blood and lymphatic vessels, and

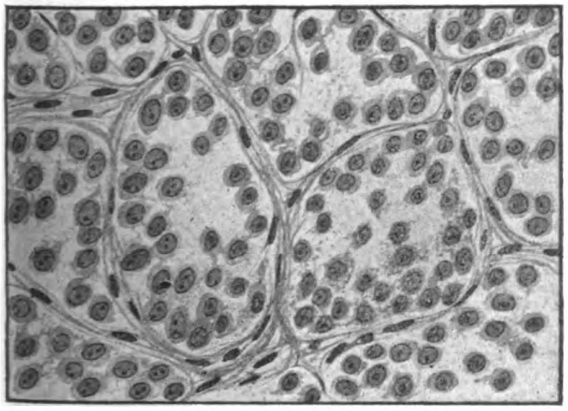


FIG. 7.—Large round-celled sarcoma of testis.

the changes consequent on this stoppage. These conditions are naturally more dangerous when they affect the vital parts. On the other hand, when like the protozoa the cancer cells are attacked by pathogenic organisms, bacteria and bacilli (as is almost invariably the case when they become exposed), they are rapidly destroyed, sometimes in great masses, and the effect upon the host is disastrous.

Some cancer cells can live for a long time outside the body of the host, although they do not, so far as we know, belong to the class of organisms which are sometimes parasitic, sometimes not parasitic. I am not aware of any investigations to discover the longest period during which cancer cells can exist outside the body of the host. We want further information on this point. But it is certain that they can live for weeks in glass tubes and then be implanted, as if they were just taken from the mass in which they lived. At present the cancer cells can only be implanted with success in animals of the same species as the animal from which they were taken. In this respect, again, they resemble certain of the protozoa. It may be that, with greater practice and experience, they will be induced to grow and multiply in animals of a different species, but I very much doubt it, just as I doubt whether *Babesia bigemina*—a parasite of cattle—will be successfully implanted in a sheep. Cancer cells, like the parasitic protozoa, are never transformed into tissues of the host, and the structures which they cause to be built up are for their own service, not for the service of the host. They are not themselves transformed into any other kind of tissue, nor do they transform the cells of the body into cancer cells. From the moment they are first unmistakably cancer cells, they remain cancer cells, and from that moment they pursue only those two objects which are pursued by the protozoa—to live and to reproduce. And if they fail in these objects both the individual and the species perish. Of this ample evidence has been furnished in these last years, particularly by the Imperial Cancer Research for animals, and by Sir Alfred Pearce Gould for man.[25] In reproduction they breed as true as any protozoon. Not only do carcinoma cells reproduce carcinoma cells and not sarcoma cells, but it is invariably the same variety of cell which is reproduced, with the same properties and powers and characteristics. It has been said that the cancer cells differ from the protozoa in the circumstance that they are not constant in their method of reproduction, that they multiply by budding or by mitosis, as pleases them, and that the protozoa never do so. If all the protozoa were thrown into a common receptacle for study they would also be found to vary in their method of reproduction. I believe it is only because the cancer cells have been treated in this fashion that they seem to be subject to no method. But separate them and study them in families, and I think it will be found that they are just as bound in this respect as the families of protozoa. I suspect that the old rule which was laid down (I do not remember by whom or exactly when) is as correct now as it was—that the cells of carcinoma multiply by endogenous multiplication, and that the cells of sarcoma multiply by fission or by budding. The terms used may be different, but I suspect the facts will be the same.

Physiological Characters of the Cancer Cell.

I will not describe the physiological characters of the cancer cell in my own terms, for fear it should be thought that I exaggerate. I will quote Professor Calkins[26]:—

> Functionally the carcinoma cell is a more perfect type than its orderly colleagues of the epithelium. It takes in and assimilates abundance of food, grows rapidly (especially when near the immediate source of food—that is, at the growing edge), and reproduces its kind through the same complicated processes that characterise free living cells. In short, it is a complete animal organism in itself, simulating in many ways the parasitic protozoon, but differing in some of the most important respects connected with the continued life of the latter.

I understand that the important respects in which the cancer cell differs from the parasitic protozoa are:—

> 1. "That the cancer cell, so far as we know, undergoes no processes analogous to fertilisation."[27] 2. "That it cannot live apart from the organism in which it grows; it cannot be cultivated on artificial media, as we cultivate amœbæ and flagellates."[28]

To the second of these objections it is already claimed by two workers in the Rockefeller Institute that they have cultivated cancer cells in artificial media. To the first, one can only say that if in the future no process analogous to fertilisation is discovered in the life-history of the cancer cells, it is evident that the import of the process of fertilisation will have to be reconsidered. If the cancer cell does not conform in all respects to the laws which are believed to govern the protozoa, it will still remain "a complete animal organism in itself." A new phylum will have to be founded for it, and laws drawn up appropriate to its life.

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An Introductory Address

ON

THE MEDICAL ASPECTS OF SOME SOCIAL QUESTIONS.

Delivered before the Forfarshire Medical Association on Oct. 13th, 1911,

BY G. A. GIBSON, M.D., LL.D.,

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GENTLEMEN,—It is possible—nay, even probable—that on such an occasion as this our thoughts are apt to be reminiscent of the past, rather than expectant of the future. It is my intention to-day to seize the opportunity which your kindness affords me in order to ask you to look forwards, rather than backwards.

INTRODUCTORY REMARKS.

The present is so full of social projects—some of them of a truly adventurous kind—that it is well for—nay, incumbent upon—us to consider whither we are going. Closely connected with such thoughts is the question whether the world, as a whole, is improving. In spite of the material progress and luxurious habits of our age, we often feel it necessary to ask ourselves if the accumulated wealth which has been heaped up in this country during the past century is to be taken as evidence of greater health of our nation. We must endeavour to ascertain whether our success in amassing riches has brought any real improvement in the condition of the people. It seems in my humble judgment that such subjects are at least open to debate, and it has been borne in upon me (who cannot in any way be regarded as *laudator temporis acti*) that, in some respects, we are really in no better condition than we were before.

Our great aim, as belonging to the medical profession, is to do what we can for the good of all. We are all members of one body politic, and, whether we believe in the principles of Individualism or of Socialism, we desire the welfare of the people at large—*salus populi suprema lex.*

In the remarks about to be made, let me make it quite clear that they are addressed by a working man to other working men. We are in the habit of speaking of those who labour with might and main as "working like blacks." Assuredly the medical man who desires to fit himself for the performance of his duties, and who is reasonably successful in his aims, may justly be regarded as working like ten blacks.

It will be difficult in this address altogether to steer clear of politics; but even if a political bias should show itself, there will certainly be a total absence of any attempt to impute unworthy motives, or to impugn the personal sincerity of any of the politicians from whom we cannot fail, as men of science, to differ.

It must also be premised that in entering upon any consideration of the subject which is to occupy us we must, above everything, avoid all that savours of flippancy. Professing, as we do, the healing art, which leads us to spend our lives, as it were, "in sight of the very Gate of Eternity"—as my dear old friend, Sir William Gairdner, expressed it in one of his most beautiful addresses—we shall always approach such matters in the reverent spirit of men engaged in a holy calling. Righteous indignation or noble rage we may well feel at the sight of wrongs, or the sound of lies, and when stirred in this way we would be false to our better selves if we held our peace; this is quite other than the satirical cynicism of the light-minded.

The advance of democracy is steadily increasing the influence of the working man, and signs are not wanting that he will use his power. We may well believe that he will employ it, on the whole, wisely. It is evident that he will not much longer support the longshore loafer, the sturdy beggar, and the professionally unemployed; it is likewise clear that he is tired of witnessing the sentimental pauperising of the picturesque (and often criminal) alien, as well as the reprehensible toleration of all types of our own home-grown Weary Willies. How to prevent the increase of the unemployable is a matter which many intelligent artisans have discussed with me.

We need not, in my opinion, fear the swelling waves of democratic thinkers in our country. Judging by the past, the modes of social and political thought in the future, with some temporary aberrations from time to time, will return to sane channels. The strongest discipline that this country ever had was that under the Commonwealth. Many of us feel that it were well for our country to enjoy—if such a phrase may be employed—something of the kind again. It is our bounden duty to use such influence as we have with our other working brethren to help them to use their power in the right direction. There is a general rule, to which few exceptions can be found from the study of history, that no nation can retrace its steps. It therefore behoves us to use our best endeavours to see that the direction in which we are tending is along the lines of safety.

Before taking up the topics upon which you will allow me more particularly to dwell, it seems necessary to make a few preliminary remarks regarding a subject which has been and will be much in our minds.

NATIONAL INSURANCE BILL.

Criticism of the National Insurance Bill is rendered somewhat difficult by a sincere sympathy with most of its declared aims. Many of us on the introduction of the Bill welcomed it as an attempt to lead a large proportion of our population to make provision against the accidents of life; this has notoriously been left undone in the past. We would have wished to have gone further in some directions, particularly in making provision for the widows and children of deceased workmen. We rejoiced, nevertheless, to think that a serious attempt was at last being made to introduce a contributory scheme of national insurance, in which those in whose interest it was introduced should be taught the benefit of self-help.

But most of us have been led to view the Bill with suspicion, on account of its preposterous sections in respect of medical benefits. The amazing proposal that attendance should be rendered by the medical profession on terms, under the circumstances, almost gratuitous, to voluntary insurers of unlimited wealth, was in itself enough to make any reasonable being suspicious of the sanity of its author. Under the unanimous pressure of common-sense, this attempt to foist the well-to-do on us as recipients of charity has already faded away like the snow on a dyke in the morning sun.

The *income limit* of those now suggested as entitled to medical benefits is still a vexed question. The original proposal, after the elimination of the voluntary clauses, dealt severely, as usual, with the unfortunate payer of income-tax. The clauses proposing to enact that all those who do not pay income-tax should enjoy medical benefits was, we have been told, due to the fact that the wit of man was unequal to the effort of devising any other basis. What a humiliating confession of political incapacity and legislative ineptitude! In the storm and stress of medical criticism, the suggested solution is to leave the determination of the question to the local authorities. Does such a suggestion bear any mark of real statesmanship? It is only a compromise, and a feeble compromise; it would undoubtedly have been far wiser from the first to have suggested a scheme of graduated payments for medical assistance.

Little need be said about *freedom in the choice* of a doctor. Such freedom was demanded by everyone. We have not yet reached a belief in equality of intellect. The Hibernian Socialist of the ancient chestnut put the matter in a nutshell when, to his leading statement: "One man is as good as another," he added, in a burst of confidence, "and sometimes, indeed, even better."

Few words are required in regard to the absolute necessity of *adequate medical control.* Sufficient medical representation upon all committees is, and must be, the basis for all efficient medical service. This, also, has been conceded as the result of powerful medical representations.[1]

[1] The hopes expressed when this address was delivered with regard to the amendments to the National Insurance Bill have been almost entirely disappointed. Of all the points in respect of which the medical profession insisted on modification only one has been yielded—that allowing free choice of the doctor; it was so obvious that the nation would tolerate nothing else that we have no reason for any particular gratitude on this head. As the Bill in its present condition is an outrageous violation of the justice we have every reason to expect at the hands of the State, there is nothing left for us but to decline, in the most absolute way, to take part in carrying out any of its provisions. There can be no doubt that in Scotland we shall be able to stand fast in passive resistance to intolerable tyranny.—G. A. G.

Most of the points which have been referred to may be, let us hope, regarded as mainly of historic interest. It will not do, however, to slacken our vigilance, as in Committee, or on its third reading, some of the discredited clauses may, perchance, find their way back again, and until the Bill has been thoroughly mended or completely ended we must be on our guard.

To us there is one gratifying feature. The discussions which have been held have not only taught us our power but shown our solidarity. Many of us here have engaged in agitation, forced upon us by the dangers to which numerous colleagues have been exposed. It has indeed been a matter of heartfelt gladness that we have stood, and shall stand, shoulder to shoulder in the crisis of our profession.

General Criticism of the Bill.

In thinking over schemes for the good of the people one of the humorous yet touching scenes in the twenty-second chapter of the third book of Sterne's masterpiece will probably present itself to many of you:—

Pray what's the matter? Who is there? cried my father, waking, the moment the door began to creak.—I wish the smith would give a peep at that confounded hinge.—'Tis nothing an' please your honour, said Trim, but two mortars I am bringing in.—They shan't make a clatter with them here, cried my father hastily.—If Dr. Slop has any drugs to pound, let him do it in the kitchen.—May it please your honour, cried Trim, they are two mortar-pieces for a siege next summer, which I have been making out of a pair of jack-boots, which Obadiah told me your honour had left off wearing.—By Heaven! cried my father, springing out of his chair, as he swore—I have not one appointment belonging to me, which I set so much store by as I do by these jack-boots—they were our great grandfather's, brother Toby—they were hereditary. Then I fear, quoth my uncle Toby, Trim has cut off the entail.—I have only cut off the tops, an' please your honour, cried Trim.—I hate perpetuities as much as any man alive, cried my father—but these jack-boots, continued he (smiling, though very angry at the same time) have been in the family, brother, ever since the civil wars:—Sir Roger Shandy wore them at the battle of Marston-Moor.—I declare I would not have taken ten pounds for them.—I'll pay you the money, brother Shandy, quoth my uncle Toby, looking at the two mortars with infinite pleasure, and putting his hand into his breeches pocket as he viewed them—I'll pay you the ten pounds this moment with all my heart and soul.—

Brother Toby, replied my father, altering his tone, you care not what money you dissipate and throw away, provided, continued he, 'tis but upon a siege.—Have I not one hundred and twenty pounds a year, besides my half pay? cried my uncle Toby.—What is that—replied my father hastily—to ten pounds for a pair of jack-boots?—twelve guineas for your pontoons?—half as much for your Dutch draw-bridge?—to say nothing of the train of little brass artillery you bespoke last week, with twenty other preparations for the siege of Messina: believe me, dear brother Toby, continued my father, taking him kindly by the hand—these military operations of yours are above your strength;—you mean well, brother—but they carry you into greater expenses than you were first aware of;—and take my word, dear Toby, they will in the end quite ruin your fortune, and make a beggar of you.—What signifies it if they do, brother, replied my uncle Toby, so long as we know 'tis for the good of the nation?—

My father could not help smiling for his soul—his anger at the worst was never more than a spark:—and the zeal and simplicity of Trim—and the generous (though hobby-horsical) gallantry of my uncle Toby, brought him into perfect good humour with them in an instant.

Generous Souls!—God prosper you both, and your mortar-pieces too! quoth my father to himself.

Here we have the whole gist of the matter—so long as we know it is for the good of the nation. It must be owned that it would be a hard task to find any resemblance between the demagogue orator and one of the most delightful characters of English classical fiction. There is, however, one aspect which the rampant politician and the genial soldier have in common. As the military operations of the latter were above his strength, so are the financial adventures of the former beyond his ability.

In a recent communication the author of the Bill has made a statement which throws a painful light upon the reason for its introduction. He tells us that its object is not to teach the people how to help themselves in any noble efforts, but simply to help themselves out of other people's pockets. In case there should be any suspicion of a parody let me give his exact words:—

The Insurance Bill provides that for every 4*d.* paid by the workman he shall receive benefits worth 9*d.* To aid the workers' contribution a sum of £17,000,000 per year is to be subscribed by the employers and tax-payers.

It is difficult to find phraseology adequate to meet such an admission as this.

But this doctrine of plunder is in itself based upon falsehood. The statement that for every 4*d.* paid by the workman he is to receive benefits of the value of 9*d.* is absolutely and grotesquely untrue. Every penny will in the long run be paid by himself. The specious inducement offered to the electors to vote for candidates of the same political complexion as the author of the Bill is a grotesque travesty of the truth. This, indeed, is now generally understood, and it is beginning to be recognised that the proposed legislation, if it requires such commendation, although containing some principles to which we all assent, must have a basis of hopeless immorality. When we reflect upon the crafty ways and the shifty tricks of this legal luminary we may well envy the inhabitants of Utopia. You remember, with a wide tolerance of most men, they drew the line at lawyers. In the Second Book of Sir Thomas More's famous work you will find it stated:—

Furthermore they utterlie exclude and banishe all attorneis, proctours, and sergeauntes at the lawe: whiche craftelye handell matters, and subtelly dispute of the lawes. For they thinke it moste meete, that every man should pleade his own matter, and tel the same tale before the judge that he wold tell to his man of law. So shall there be less circumstance of words, and the trueth shal soner come to light, whiles the judge with a discrete judgement doethe waye the woordes of him whom no lawyer hath instructe with deceit, and whiles he helpeth and beareth out simple wittes against the false and malicious circumventions of craftie children.

Two Great Dangers to the Profession.

Many of us in Scotland have spent time, and energy, and money in struggling against some of the clauses which would be disastrous to the medical profession. In regard to a good many of these provisions, concessions have been promised by the author of the Bill, but it is absolutely necessary that we should watch over its progress. If placed on the Statute Book as an Act it can only be brought into operation with our sympathy and assistance.

To the members of our profession there are two great dangers. It is possible, on the one hand, that the emoluments of a large number of our brethren may be so reduced as to render conditions of life too hard for the successful prosecution of medical practice; and, on the other hand, that a new and subordinate class of practitioners may arise, who have neither the instincts nor the education of the present generation. We earnestly hope that neither of these contingencies may arise. We glory in our medical brotherhood, and have good reason to do so. The discussions on the Bill have taught our profession its power, and have shown its solidarity. If we remain as at present, shoulder to shoulder, the Government must come to terms with us and alter the obnoxious clauses of the Bill.

IMMIGRATION.

There are important matters with which Parliament has been engaged within recent times, with which it is even now occupied, or with which, before long, it must concern itself. Along certain definite lines, in respect of these subjects, we should, in my judgment, use our influence in order to assist social progress. To some of these let me now ask your attention.

As regards the health of the people, let us begin at the beginning, and the obvious commencement is with the addition of inhabitants to this country. For generations we have been the refuge and asylum, not merely of the political exiles, but of the criminal outcasts of other countries. It is high time that this should be put an end to. An Act was passed some years ago regulating the entrance of undesirables into this country; but it is very largely a dead letter, and we still remain the dumping-ground of the rascality of the world. We should learn a lesson from our children in Canada and our brethren in the United States. They do not accept with an equanimity, possibly benevolent, but certainly facile, the entrance of every criminal, lunatic, and degenerative derelict from other countries. They are perfectly right, and the wisdom of their stern regulations is more and more manifest every year.

We have to admit that we are a people of mixed blood; but we need not try to be more mongrel than we really are. We used to be at least a white race, but now there are far too many black and brown and café-au-lait complexions in our streets. It would be a decidedly hopeful indication did we see some more pride of race manifest amongst us to-day. It cannot be said, however, that there is much indication of a growth of common-sense in these directions amongst a nation like ours which seems positively to welcome the introduction of goods manufactured in foreign prisons, to the detriment of our own workmen at home.

EUGENICS.

In this century it is probably inconceivable that any nation can ever attain to such a scheme of marriage as is depicted in the Fifth Book of the Republic; but we can use

mouth and pen in order to further the propagation of our race only along lines dictated by common sense. We must admit that, in such questions, there are enormous difficulties. Heredity and environment are both at work in the formation of character, physical as well as psychical. It is part of the study now termed Eugenics to inquire into and sift out the facts connected with these subjects; and we must remember that in this study we have not merely scientific problems, but we have social duties.

It is probable that each one of us now present is a believer in the doctrines of Weismann. Although the principles he has enunciated are most helpful to us in our conceptions of many phases of evolution, it must be allowed that they in the meantime somewhat increase our difficulties in the way of practical application. The general result, however, is to increase our hopefulness that, by improving the environment, we possess the means of elevating the race. The persistence of the germ plasm, and its independence of all accidental circumstances, furnish cheerful anticipations, could we but have the power of removing the organism from evil surroundings.

One of the most admirable illustrations of this subject is to be found in a very interesting address on the Eugenics Question and its Limitations by Macalister. Macalister prosecuted an inquiry concerning all the marriages in Liverpool between couples both of whom were deaf-mutes and discovered 62 such unions. From these marriages there resulted 219 children, to say nothing of a large number of grandchildren, and there was not a deaf-and-dumb child in the whole of these descendants. He tells us also that in the further investigation into the histories of the children in the Liverpool School for the Deaf and Dumb, where for 15 years records had been kept regarding the parents of those afflicted by these affections, the surprising result was discovered that there had been no deaf-and-dumb child whose parents had been deaf and dumb in the whole of that period. Such facts as these show us how persistence of type in the germ plasm tends to a hopeful view, provided the individual is placed in a satisfactory environment.

We now know how much may be made of Mendelism in breeding certain physical characteristics; but we know nothing of what will lead to the production of higher types. This has been exceedingly well put in an admirable address, "On the Aim and Scope of Eugenics," by Sir James Barr:—

> The difficulty is to know what characters lead to the elevation of the race; but if we do not know all the characters we want, we do know many of those which we do not want, so we should begin our campaign by eliminating the undesirables, the idiots, the imbeciles, the insane, the useless wastrels, the professional pauper, the habitual drunkards, the habitual criminals. There are, of course, certain criminals, such as the burglar, the highwayman, and the forger, who are very clever, and if we are breeding for intelligence it might not be well to exclude them. Many of these men are misdirected geniuses, much more clever and often more honest than your company promoter. Some of these men might make or produce an excellent Chancellor of the Exchequer; scarcely one of them would stoop to a hen-roost, and nothing short of a jeweller's shop or a bank would tempt some of them.

How are we to set to work in order to make use of the forces of heredity and environment? Although the former is largely beyond our control, we may take advantage of our knowledge so far as it goes in order to see that only those who have inherited, and who are likely to transmit, healthy characters are to be the parents of the race of the future. With this end in view, let us segregate the undesirables of every kind in labour colonies, let us treat them with firm kindness, but let us see that they do not give hostages to fortune. It is often held that the practical difficulties are overwhelming, and that it is impossible to carry out such a scheme as this. Plans of this kind have, however, been adopted successfully both in America and on the Continent. There is at least one labour colony in America which costs the community less than half a dollar—about eighteenpence—a year for each inmate, and there is a similar institution in Switzerland, which is entirely self-supporting. Such facts as these point the way for useful legislation in our own country.

We must set our faces against the union of good and pure women with depraved and vicious brutes—this is, indeed, a libel on the lower animals—in order to reform them; or, with decadents and degenerates, in order to develop and elevate them. Some of you will probably remember a series of six plaster casts that used to adorn the retiring room of Professor Laycock in the University of Edinburgh. Two of the casts were taken from a man and a woman who had been inmates of one of the county asylums. The directors or managers of the institution, in their supreme wisdom—or in their benevolent altruism—thought that the two obvious degenerates would either work better, or that they would be more happy, if they became husband and wife. They were married; and the four other plaster casts represent the four offspring—each of which, in a descending series, became more simian, or degenerate.

The celebrated case of "Ada," whose surname has been judiciously hidden from the gaze of the curious, is a terrible instance of the production of the criminal type. Ada was the progenitor of something like 1200 individuals, of whom at least 1000 were criminals, or lunatics, or paupers, or prostitutes, or drunkards. It has been attempted quite recently to prove that the unfortunate Ada was not as black as she has been painted; but the facts are undoubted—that nearly 85 per cent. of her numerous descendants were hopeless degenerates.

Much may be said for the old monastic and conventual system. The frail Ada might have done well either in the choir or in the kitchen of a sisterhood of perpetual adoration; while the elusive Crippen would have been far better occupied as a gardener or even a cellarman in some working order than in exercising his misdirected energies without guidance and restraint. It is to be remembered that even the best of us may be faulty in practice—albeit sterling in principle. You remember how Samuel Johnson, in speaking of his great friend, Dr. John Campbell, makes the remark:—

> Campbell is a good man, a pious man. I am afraid he has not been in the inside of a church for many years; but he never passes a church without pulling off his hat. This shows that he has good principles.

In another part of the same charming work the ponderous Doctor once more speaks of his good friend as—

> A man of good religious principles, though I am afraid he has been deficient in practice. Campbell is radically right, and we may hope that in good time there will be good practice.

And yet again, this time after the death of his friend:—

> I loved Campbell; he was a solid, orthodox man; he had a reverence for religion. Though defective in practice, he was religious in principle

If the practical outcome in the case of even the best of men falls so far short of a correct standard, what can we say of the worst of them?

Some of our friends are not in favour of the idea that the weak should be taken care of and that the wicked should be kept from working mischief. They believe that Nature should be allowed a free hand—that we ought to trust to the survival of the fittest. They are of opinion that debauchery and disease should be allowed to carry out their work of extermination without hindrance. They tell us that we are hopelessly wrong in rescuing the unfortunate inebriate from the gutter, instead of allowing him to snore away his life in a hard frost or in a sleety storm. Our good friends of this way of thinking (and many of them, it may be said, are most genial and kindly souls) altogether forget that the survival of the fittest is not necessarily the survival of the best.

If we are to enter upon any socialistic legislation we must do it thoroughly—half measures are of no use. The better classes of our fellow working men are now much concerned about social problems of this kind, and we who exert wide influence upon large numbers of them should consider well how we are to use it for further social reform. The supreme importance of a healthy stock; the marriage in the prime of life of the highest types of our fellow men and women; the due performance of every paternal and maternal duty—such are, it seems to me, the most pressing social responsibilities which we have to impress at the present moment upon our lay brethren.

PHYSICAL DEVELOPMENT.

In respect of the education of the people, we have, as medical men, for a long time wisely taught the absolute necessity of caring for physical development and bodily health. The early correction of inherited or acquired defects is an aim worthy of our best endeavours. The system of school inspection by medical officers now affords a basis for concerted action. The healthy training of the body is the only foundation on which the healthy development of the mind may be built. All methods of training the muscular system are of practical utility.

One of the best courses open to us is to emphasise the usefulness of military training, which at once tends to the health of the body and to fitness for defence of the

country. Many of us now present here must have regretted that, when the old age pensions were instituted, the legislature did not make it necessary that those who are, in 20 years or so, to receive those pensions, should have performed the elementary duty of being thoroughly drilled. When we look at the Territorial Force of to-day we find it is composed of the same types of men with public spirit as those who constituted the Force which it has superseded. Would that it were extended! One of the most hopeful features of the present day is the institution of the youthful scouts of both sexes. They, and the school cadets, somewhat raise our anticipations for the future.

Again, general emulation in games is vastly better than standing around gazing at a professional combat by hired gladiators, where the spectators render the mental atmosphere as lurid as they make the ground filthy. Each of the spectators would certainly be much better employed in some healthy game, or, in a walk in the country, than in betting and swearing and spitting while watching a contest of professional performers.

INSTILLATION OF SOUND IDEAS IN CHILDREN.

We should like to see the existence of high ideals, even in infant schools. The example of our brethren in the United States is entirely admirable. From their earliest years the children are taught to have pride in their country and love for their flag. Many of us who have spent long periods away from our native land know well what a warm rush of feeling arises when we catch sight of "the old rag." All of us delight in seeing it waving on the breeze. One of the weakest acts of our present Prime Minister was to discourage the hoisting of our flag upon our public buildings on Victoria Day.

Our children in Canada, and probably in every other Commonwealth, Dominion, or Union of the Empire, can teach us lessons in this respect. Just the other day, on the declaration of the results of the elections in Vancouver, an excited alien seized one of the British ensigns adorning a building, tore it down, and danced upon it in the mud. He was immediately the centre of an interested crowd. Forced upon his knees, he was compelled to offer the most abject apology to the flag, and thereafter, before being allowed to seek retreat, he was obliged to sing "God Save the King" three times from beginning to end, prompted by word and deed; he then received a somewhat forcible dismissal. It is doubtful whether such an incident in this country would arouse more than a shrug of the shoulders.

In the cities a love of rural life may well be inculcated. Some of you may have read the interesting work of Canon Horsley upon his labours amongst the poor in London. He has done a great deal of loving work for the children by sending them out to enjoy holidays in the country. He tells a pathetic story of one youngster whom he met on his return from a day in a beautiful country place. On asking the boy how he enjoyed it, he was astonished to get the reply that it was "beastly"; and when pressed for a reason for this opinion the boy said there were "no rows, no fights, no funerals—no nothing."

It often seems to me that the schools of to-day do not foster the acquirement of gentle manners as well as was the case with our old parish schools. On speaking, not merely to schoolmasters, but to inspectors of schools, upon this matter, they have told me that it is the fault of the present system; that the schoolmaster is not expected—nay, he is even forbidden in many instances—to take any interest in, or to influence the conduct of, the children out of school hours. If this be the case, what can we expect of many of the children living in the dens of our great towns? Once, not very long ago, a benevolent old lady met a small boy, who was a member of a children's fresh-air holiday expedition. She stopped and said kindly to the little mite: "I suppose you are one of the fresh-air children?" His reply was startling to the poor old lady. What he said was: "Not so very damned fresh neither"!

Is it too much to expect that before the children leave school they should not only be brought within the influence of refining agencies, but that they should also be subjected to patriotic impressions? It seems to me that they never can be too young for the instillation of sound views. We must use all our influence in order to impress on each and all within our sphere of influence that there are no rights unaccompanied by duties: no privileges unattended by responsibilities.

PRACTICAL BEARINGS.

What are the practical bearings of these points on the treatment of the medical aspects of social questions? The reply is easy. We have to answer to our fellow-citizens and to the Commonwealth for our conscientious discharge of every trust reposed in us. One of our duties is to speak what we believe to be the truth, frankly and fearlessly.

Much of our work is in direct opposition to the obvious tendencies of nature. We labour day and night to compel the unfit to survive. Undoubtedly the ordinary dictates of humanity demand this course. The common-sense of humanity, nevertheless, does not suggest that the unfit should be the parents of the future race.

Just four weeks ago Lord Rosebery took occasion to ask, in his brilliant rectorial address, whether we are not in danger of becoming a "spoon-fed nation." He is not alone in his fears. The belief is entertained, not only by the lovers of our land, but by those who cannot be looked upon as particularly friendly. In his later years, that man of blood and iron, the late Prince Bismarck, remarked contemptuously, "England! Pooh! England has run to flesh." Is there no truth in his powerful gibe? We are striving to make the bed of everyone too soft. We attempt to construe crime as a symptom of disease. We labour to rescue the unfit from extinction. We encourage our degenerates to flourish. We stimulate the breeding of hooligans. We even unite our lunatics in the bands of holy wedlock.

If the sturdy old individualism by which our nation was fashioned is to be superseded by a brand-new Socialism, let us see to it that the new order is, as far as may be possible, based upon scientific principles. By all means let us persevere along the fruitful lines of public health reform followed during the last two centuries—improving the dwellings and bettering the conditions of the working men. Above all, let us care for the children not merely by providing them with education, but also with food when necessary.

To one point you will perhaps let me, in this place, briefly refer. It is assuredly a foolish arrangement to allow the tainted offspring of the criminal classes to sit side by side with the innocent children of the respectable artisan. This is another cogent reason for segregating the criminal and the degenerate, and for State rearing of their offspring when they unhappily have any.

By using all our influence in such directions we can greatly aid social reform, and certainly it will be better for this country if we can carry out such improvements. Progress can never be attained by allowing the alien to crowd out our better-class workmen; by favouring the free entry of foreign goods—especially those manufactured by the criminals of other countries, whom we therefore assist to maintain—or by enacting crushing taxes upon the land, so that it is impossible to sustain a healthy population upon it. No, the British workman is already showing signs that he is tired of such futile expedients; and if we can help him with the result of our wide experience we shall be doing our best for the future of our nation. We have, no doubt, many different ways of regarding such problems, and most varied methods of solving the questions before us; but our aims are one—the elevation of the race.

ROYAL SOCIETY OF ARTS.—The current session of the Royal Society of Arts was opened on Nov. 15th with an address by Lord Sanderson, a vice-president of the Society and chairman of the council. Taking for his principal subject the modern development of international intercourse, he dated its origin from the fifteenth century when the maintenance of permanent diplomatic agents at foreign courts became general in Europe, simultaneously with the establishment of permanent armies. Many illustrations of the recent increase of international intercourse were drawn from the work of the post-office, the telegraph service, oversea passenger traffic, statistics of imports and exports, and international exhibitions and congresses. After concluding his address Lord Sanderson presented a number of medals to various recipients. Three of these were Fothergill medals for mine rescue apparatus—a gold one each to Mr. H. A. Fleuss and Mr. W. E. Garforth, and a silver one for apparatus submitted by the Mining Engineering Company. Dr. Leonard E. Hill received a Royal Society of Arts medal for a paper read by him on Caisson Sickness and Compressed Air. Mr. James Cantlie received a similar medal for a paper on Plague and its Spread.

THE TREATMENT OF CLEFT PALATE.

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AN endeavour to trace any surgical procedure to its origin is interesting, and often very instructive. Anyone engaged in such a pursuit soon discovers that the true course of surgery is by no means smooth and straight; in fact, to retrace any surgical footpath is not always an easy matter, the way is so tortuous, the milestones so many, and the light so often fails. However, many surgical procedures can be traced to their origin, and probably none with greater certainty than that relating to the operative treatment of cleft palate.

There can be no doubt that M. J. P. Roux, Professor in the Faculty of Medicine of Paris, was the first surgeon to close a cleft of the palate. The way in which the operation was suggested to him, and the brilliancy of the result, is one of the romances in surgery. One morning early in September, 1819, Mr. Stevenson, a young Canadian, studying medicine in Paris, who had a cleft of his soft palate, called upon the professor, who was then one of the luminaries in Paris, and asked him if he could stitch his palate and so improve his speech. Roux said he would try; he pared the edges of the cleft and brought them together with sutures. Union followed; the palate became like a normal one, and when the youth appeared amongst his former friends the change in his voice was such that he could scarcely be recognised as the same person.

It seems strange that so remarkable an achievement should not have made more stir in the surgical world. No doubt other surgeons tried, but the operation was tedious, painful, and exhausting, and as failure was more frequent than success few persons had the courage to submit to such an ordeal. Liston, writing in 1831, said only fissures of the soft palate could be operated upon. "In some cases the extent of the separation is great; in others the edges are readily approximated by making the patient throw the muscles into action. The latter class admit of operation with a view to permanent union of the edges of the fissure." He considered the operation very liable to failure.

During the next ten years no real interest appears to have been taken in the matter, but in 1840 the whole surgical world was stirred by the brilliant results obtained in subcutaneous surgery by Dieffenbach and Stromeyer, the former by subcutaneous myotomy for strabismus and the latter by subcutaneous tenotomy for club-foot. This was the birth of plastic surgery. Tenotomy and myotomy at once attained popularity and were generally recognised as sound surgical procedures.

In this movement attention was again directed to the treatment of cleft palate, and to Dieffenbach and Sédillot we are indebted for a distinct advance in this branch of surgery based upon the principle of myotomy and tenotomy, for they were the first surgeons to make lateral incisions parallel to the cleft in order to lessen the tension on the stitches. Though surgical interference was at this time strictly limited to fissures involving the soft palate only, still lateral incisions rendered success more frequent in the slighter cases, and enabled some of the wider gaps to be closed successfully. It was, however, Sir William Fergusson who first explained the real object of these lateral incisions, which had been made without any definite anatomical reason. In 1844 Fergusson read a paper before the Royal Medical and Chirurgical Society in which he explained how the muscles of the palate act when it is cleft. From an actual dissection he was able to demonstrate that the levator palati, the palato-pharyngeus, and palato-glossus widen the cleft when they contract, and consequently the action of these muscles was responsible for many failures after the operation of Roux, who never made lateral incisions. Fergusson advised tenotomy of these muscles, which he did by passing a specially constructed knife through the cleft and divided the muscles on the posterior aspect of the palate. He thus placed the incisions for the relief of tension on a sound scientific basis. Up to that time no English surgeon had succeeded in closing, or even had attempted to close, a cleft of the hard palate.

The next conspicuous advance originated in the mind of an American surgeon. In 1843 Dr. T. Mason Warren of Boston published an account of several cases in which he had succeeded in closing congenital clefts which involved both hard and soft palates. Sir William Fergusson, referring to this in the first edition of his "Practical Surgery," published in 1852, says, "Until a very recent date no attempt has been made by surgeons to close a gap in the hard palate, excepting by means of an obturator, which has always been supplied by a dentist. Dr. T. Mason Warren of Boston has, however, closed the fissure here, as well as in the soft palate, by a proceeding strictly surgical; he dissects the soft tissue from the hard vault of the mouth, between the margins of the cleft and the alveoli, and then closes them in the mesial line by a proceeding analogous to the operation in the soft parts, and reports (in the *New England Quarterly Journal of Medicine and Surgery* for April, 1843) most favourably of the result. I have resorted to the operation in several instances, but without success; yet the plan seems so clever and reasonable that I cannot but recommend it for further trial."

When, in 1847, chloroform was introduced to surgical practice one would have thought that its administration would have greatly facilitated operations upon the palate, and would soon have rendered the operation feasible in childhood; but it was not so. The reasons probably were the want of an efficient mouth-gag, without which the surgeon could not perform the operation with the patient under an anæsthetic, and the high mortality attending the administration of chloroform in operations about the mouth and throat.

Writing so late as 1864 Sir William Fergusson says: "I have never operated under chloroform, and whilst I do not deny the possibility of doing so, I am of opinion that as a rule it is absolutely necessary to have the patient conscious so that he may facilitate the steps of the operation in various ways."

It should be noticed that Dr. Mason Warren, in order to close a cleft of the hard palate, separated the soft tissues from the hard vault, beginning at the margin of the cleft and working gradually outwards towards the alveolar margin. The difficulty of the operation and the uncertainty of the results soon induced surgeons to modify the procedure. Mr. Pollock of St. George's Hospital, who paid great attention to this branch of surgery, recommended that after separating the soft parts from the bone lateral incisions should be made as far from the margins of the cleft as possible in order to avoid the chance of sloughing. "The edges being pared, sutures should be passed into the slips of soft tissue which now lie between the opening and the lateral incisions. An improvement to the support given by these sutures is obtained by passing a broad suture through the lateral incisions and then including with its embrace both flaps. This not only serves to support the flaps, but it prevents the healing of the lateral incisions until union has had time to take place between the margins of the opening."[1]

A further and very important modification was made by Langenbeck. Instead of beginning the separation of the soft parts from the bone at the margin of the fissure, he made lateral incisions parallel with the alveoli through the soft parts down to the bone and raised the muco-periosteum towards the margin of the fissure, his object in raising the periosteum being that new bone might be developed which would fill the gap. It is Langenbeck's modification of Warren's operation which is commonly practised to-day.

Sir William Fergusson suggested another modification of the operation, in which an incision was made on each side of the fissure and the bone divided longitudinally with a chisel, the two edges being forced into contact. Although in his own hands some satisfactory results were obtained, further experience has led to the abandonment of the operation, which is unnecessarily severe and liable to be followed by necrosis of the divided bone.

Jan. 14th, 1868, is a very important date in the history of the surgical treatment of cleft palate, for on the evening of that day Mr. (afterwards Sir) Thomas Smith, who was then assistant surgeon to St. Bartholomew's Hospital and surgeon to Great Ormond-street Hospital for Children, read a paper before the Royal Medical and Chirurgical Society on the Cure of Cleft Palate by Operation in Children. In the course of the paper he said: "The advantages of being able to cure cleft palate in childhood will

[1] Transactions of the Royal Medical and Chirurgical Society, 1856.

at once be conceded by those who are familiar with the deformity and the inconvenience it entails. A resolute and intelligent adult patient, after a successful operation, may acquire by his own efforts, or with the aid of an instructor, the power of distinct and normal articulation. But in some the difficulty of unlearning an almost life-long habit is wellnigh impossible. It is probable that were the deformity of cleft palate cured in childhood, before the power of speech is being acquired, there would be less difficulty in teaching a child to articulate distinctly. At least it is certain that the earlier the cure was effected the less difficulty would the patient have in learning to speak plainly."

Up to that time the general practice of surgeons had been to postpone the operation until about puberty. Mr. George Pollock, writing in Holmes's "System of Surgery" in 1864—only four years before Mr. Smith read his paper—gives a clear and forcible expression of opinion as to the age at which a cleft of the palate should be operated upon. He says: "The age of the patient is a matter of some consideration to the surgeon who proposes to operate for the permanent closure of a cleft palate. There can be no doubt, as a general rule, that the patient should be old enough to desire the operation, should have sufficient determination to endure it, and should be able to estimate the advantages to be derived from it. For many reasons the age of 15 appears to be the earliest period for the operation; often a later period is desirable, though in some few instances it has been performed on younger children." Mr. Pollock goes on to observe that "the operation requires every assistance the patient can afford by quiet endurance of pain and keeping the mouth open even to a tedious and painful extent; that bleeding is often abundant and apt to produce fainting; that chloroform is of no assistance but inconvenient in its administration, and can never be sufficiently given to produce insensibility for the entire period required to complete the operation. When it is known that towards puberty the operation is often resolutely submitted to, the profession may feel satisfied that the use of the artificial plate to the period of puberty, with the option of the operation then, is the treatment which should be adopted by the surgeon, is a principle which if followed will give the most satisfactory results, and is a rule in surgery which, in the opinion of the author, should have no exception." This may be taken as representing the attitude of most of the surgeons in London regarding the operative treatment of cleft palate at the time Mr. Thomas Smith related his experience.

In order to render the operation possible during childhood two things were essential, an efficient mouth gag and a general anæsthetic. Mr. Smith exhibited at this meeting a mouth gag he had devised which is still known by his name. "Chloroform," he said, "can and should be used, and thus the operation may be performed with far greater rapidity and precision than when the surgeon is dependent upon the self-control of even the most courageous patient." Eleven cases were described in which chloroform had been administered and the mouth gag employed. Eight of the 11 cases were children under 11 years of age, the youngest being 2 years old. In all these 11 patients the soft palate only was dealt with, no attempt being made in any case to separate muco-periosteum from the roof of the mouth, nor to unite the fissure of the hard palate. In two cases the cleft was confined to the soft palate; the result in both was entirely satisfactory. In the remaining nine cases there was a fissure of the hard palate to a greater or less degree; of these, six were successful and three unsuccessful. The reason for closing the soft palate first was that the cleft in the hard might diminish in size.

Mr. Smith's communication forms a most conspicuous landmark in the surgical treatment of cleft palate; the operation was at once raised to a higher level, and a vision of many and better things quite clearly seen.

Though at the present time all surgeons recommend that a cleft of the palate should be closed completely during early life, there is by no means a general consensus of opinion as to how early in life the operation should be performed. Is it better for the patient that the operation be undertaken during early infancy or during early childhood?

In endeavouring to answer the above question one must above all things remember that the main reason for the operation being undertaken is that the powers of speech may be rendered more perfect than they otherwise could be. I wish to emphasise this point, because in England at the present moment there are two distinct schools of thought, or rather of practice, so far as cleft palate surgery is concerned.

Mr. Arbuthnot Lane maintains that the cleft should be closed during early infancy, in fact, as soon after birth as possible; and that in the ordinary type of the deformity, where there is a complete cleft of the lip and palate, the palate should be operated upon first. Now it must be obvious to anyone who is familiar with the state of affairs that a complete cleft of the palate cannot be closed during infancy by the usual method of operating. Mr. Lane has, however, overcome this difficulty in a most ingenious manner. He raises from one side of the palate a large flap so fashioned that it hinges on the whole of one margin of the fissure, and turning it over he tucks it under a small flap raised from the margin of the cleft on the other side. The flap which is turned over includes both hard and soft palate; its raw surface looks towards the mouth, and must, of course, heal by granulating.

Quite apart from the fact that this is the only way (except Brophy's method, about which I will speak presently) in which a cleft of both hard and soft palates can be closed during early infancy, I have heard it stated as a strong argument in favour of Lane's turn-over flap that the gap can thus be closed more easily and much more certainly than if the operation be postponed until early childhood and Langenbeck's method adopted. Even if that point be granted, surely one aims at something more than the mere closure of the fissure. The chief reason for performing the operation is not that the gap in the palate may be bridged over, but that articulation may be rendered as perfect as possible. The operation is undertaken for the ultimate benefit of the patient, and not for the immediate satisfaction of the surgeon. The end result is the true test of success.

After 20 years' experience in cleft-palate work, and with some considerable knowledge of the after-history of my cases, I am convinced that for a person to speak clearly and distinctly a well-formed and freely moveable soft palate is absolutely necessary. Now in Lane's turn-over flap the raw surface left uncovered will heal by granulating and consequently must contract; excess of scar tissue in the hard palate does not matter in the least, but makes all the difference in the world if present in the soft palate, which instead of being well formed and freely moveable will be ill formed, short, and so tightly drawn that the patient cannot move it at all; due, of course, to being composed so largely of cicatricial tissue. Consequently articulation must be sadly defective.

If, on the other hand, the operation be postponed until the child is two or three years of age, by paring the edges of the cleft and bringing them together in the middle line, not only may a well-formed soft palate be fashioned, but it will also be freely moveable, for the muscles retain their normal actions, and there is only a thin central line of scar tissue.

I wish it to be clearly understood that I do not object to the operation during infancy provided a soft palate resembling the normal one in shape and function can be made. The earlier in life such a state of affairs can be brought about the better, but speaking from my own experience I can say that when the cleft in the palate is complete and associated with a hare-lip I have obtained the best results in appearance and in speech by operating upon the lip at the age of 3 months and closing the palate by Langenbeck's method when the child is 3 years old. After all said and done, the true result, so far as speech is concerned, is entirely a question of evidence, and some years ago I suggested that a demonstration of cases should be held so that surgeons who advocate the turn-over flap (Lane's method) might produce their cases and surgeons who prefer to operate during early childhood by the ordinary method (Langenbeck's) might produce theirs. So should we learn wisdom, not from the writings of the surgeons, but from the lips of the children.

A demonstration such as I have mentioned took place at a meeting of the Surgical Section of the Royal Society of Medicine on May 9th of this year.[2] Though a great number of cases operated upon by the ordinary method were shown, for some reason or other only a few cases illustrating the results of Lane's method were brought forward. However,

[2] THE LANCET, May 20th, 1911, p. 1351.

after hearing the children speak there could be no doubt as to the respective merits of the two methods. In several instances in which a complete cleft of the hard and soft palates had been closed by the ordinary plan (Langenbeck's) during childhood the speech was natural, and the words "British constitution" repeated clearly and distinctly. On the other hand, in any case in which the cleft had been closed by Lane's method, articulation was so very imperfect that it was difficult to understand what was said. In all cases in which articulation was distinct the soft palate was seen to be normal in form and in movement; in all cases in which Lane's method had been used the soft palate was short, stiff, and stationary, accounting for the sad defect in articulation, for which unfortunately no remedy can be supplied. The evidence thus obtained from patients who had been operated upon was overwhelmingly in favour of closing the cleft in the ordinary way, whilst the extremely unsatisfactory articulation of patients operated upon by the turn-over flap method proved that it is wrong in principle, defective in practice, and to be utterly condemned.

Though I have nothing very novel to record in the way of operative detail, still from practical experience I have learnt one or two points which may perhaps be of some service to others.

Brophy's Operation.

After reading Dr. T. W. Brophy's account of his operation in the Transactions of the American Surgical Association, 1904, I determined to give it a trial. It was not long before I had a suitable case; the infant was 3 weeks old, and had a complete cleft of the lip and palate. Though I had studied carefully Dr. Brophy's instructions, my operative efforts were not crowned with success. After making the necessary incisions I tried very hard to force the superior maxillæ together, but instead of the bones sliding towards each other in the same plane, and so obliterating the fissure in the palate, in spite of all I could do they would hinge at the sides of the fissure in such a fashion that any further pressure would only have resulted in the alveolar margins of either side meeting in the middle line. The operation was, of course, abandoned. In another case I did succeed to some extent in approximating the bones in the manner Brophy describes, and after passing the silver wire sutures found I had lessened the cleft in the palate by about a quarter of an inch. The shock attending the operation was considerable, the infant never regained what it had lost, and died a few months later. I also had an opportunity of doing the operation in the post-mortem room upon an infant with a complete cleft of the palate and lip who died from gastro-intestinal trouble before being operated upon. Again, in spite of very free lateral incisions, the bones would not glide; they would hinge, and any lateral pressure I could exercise only resulted in the alveolar margins meeting in the middle line. I have never attempted the operation since. Though it is more than probable that in my case it was the operator and not the operation that was at fault, still so far as I know Mr. Edmund Owen is the only English surgeon who speaks well of the procedure.

Langenbeck's Operation.

This is the operation I perform, and it is so familiar from being described in all text-books on general surgery that I will only mention some points which I have found of practical value. Of course, no operation upon the palate must be undertaken at any age unless the general health of the patient is good and the condition of the mouth, throat, nose, and ears is beyond suspicion.

Age at which the operation should be performed.—This will depend to some extent upon the width and length of the fissure. When it is narrow and involves the soft palate only I have frequently operated with success during infancy, but as a rule prefer to wait until the second or third year. My reason for not operating during the first few months of life, even when the cleft is confined to the soft palate, is that, apart from the tissues being very friable, the bifid uvula is then so small that after paring the edges there is not much uvula left. It is very important to make a good-looking soft palate and uvula, resembling as nearly as possible the normal, and when I think I have sufficient material to do this I arrange for the operation to take place. As I have pointed out already, the future power of articulation chiefly depends upon the shape and movements of the soft palate. In the usual type of the deformity where there is a complete cleft of the lip and palate my general practice has been to operate upon the lip when the child is 3 months old, and upon the palate at the age of 3 years.

Time of year.—I prefer to operate during the summer months, and consider the cleft palate season opens on May 1st and closes on Oct. 1st.

Preparatory treatment.—As it is important to syringe the mouth and nostrils after the operation in order to keep them clean, this performance should be thoroughly rehearsed several days beforehand. Every child will not submit to it either before or after operation, but many will, and I have found it most useful—in fact, it is the only way in which the mouth and nasal cavities can be kept clean.

Anæsthesia.—Chloroform should be given, and the manner of its administration is a matter of great importance. Continuous anæsthesia, which can be produced by using Junker's apparatus, is very convenient to the operator but very dangerous to the patient. I speak not from my own experience, for I have never used this method, but from what I have seen in the practice of others. Chloroform should be given on lint in the ordinary way. The administration of the anæsthetic is necessarily intermittent, and so the period of the operation lengthened, but this is more than compensated for by the knowledge that your patient is with you all the time and not drifting to an unknown land.

Position of the patient.—I prefer to have the child lying on the back, with the head and shoulders raised. I stand at the right hand of the patient.

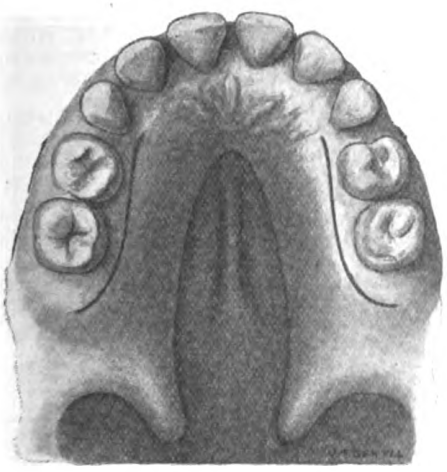
Incisions, &c.—The whole cleft is closed at one sitting. I begin by making the lateral incisions and raising a muco-periosteal flap (Figs. 1, 2, and 3). I then pare the edges of the fissure, taking pains to cut obliquely and so secure broad raw surfaces (Fig. 4). Up to this point I use gauze dabs to clear the blood and mucus from the mouth and throat, but after paring the edges I suck the blood and mucus away with a glass syringe which has a piece of rubber attached. The raw surfaces of the cleft, upon which so much depends, are thus less irritated than by sponging; besides which, the more sponging the more mucus secreted.

Sutures, &c.—In order to be quite sure that the edges of the wound are everted and raw surfaces brought together I use one or two button sutures (Fig. 5). For suture material I use silver wire and fine silkworm gut. In exceptional cases I have surrounded the flaps with tape impregnated with Horsley's wax (Fig. 6), and am satisfied it served a useful purpose. This use of tape was suggested some five years ago by Dr. Charles Mayo, of Rochester, but it is well to remember that the same idea occurred to Mr. Pollock, of St. George's Hospital, in 1863, and that he also discussed the advisability of plugging the lateral incisions with gauze. The operation completed, I have frequently, but not invariably, washed out the stomach, a tube being passed into the stomach through the nostril. It is certainly satisfactory to get away a quantity of blood and mucus which has been swallowed.

After-treatment.—This is almost entirely a question of nursing, the chief points being to keep the mouth clean and to maintain the child's general health. If on recovering from the anæsthetic the child should cry and not be pacified, a few minims of nepenthe may be given. In children over 4 years of age nasal feeding may with advantage be used during the week following the operation, but in younger children it is impracticable. In ordinary mouth feeding milk should not be given, for it clings to the stitches, is difficult to wash away, and undergoes fermentation changes. Valentine's meat juice, soups, or bovril are much to be preferred. Half an hour after each feeding the palate should be cleansed by syringing with warm water. If the child will not permit this, a drink of water must be given at the conclusion of each meal. If the bowels are not opened on the day following the operation a dose of castor oil must be given.

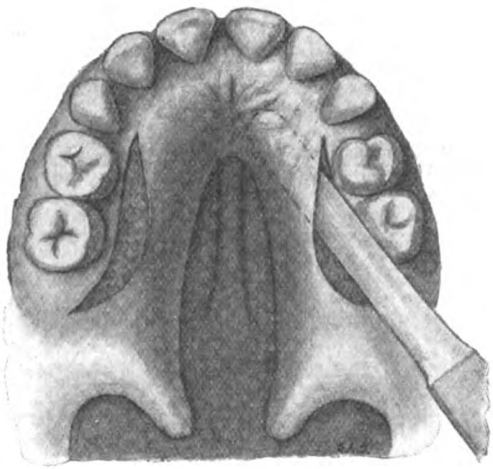
Surgeons are greatly handicapped by having to keep their patients after operation confined in the more or less impure atmosphere of a children's ward in a city hospital. It is a pity our children's hospitals are not out of town. I am sure all cases would do better, and I am convinced of this—that the results of cleft palate operations would be much more satisfactory than they are at present if after the operation the children could breathe fresh country air.

FIG. 1.



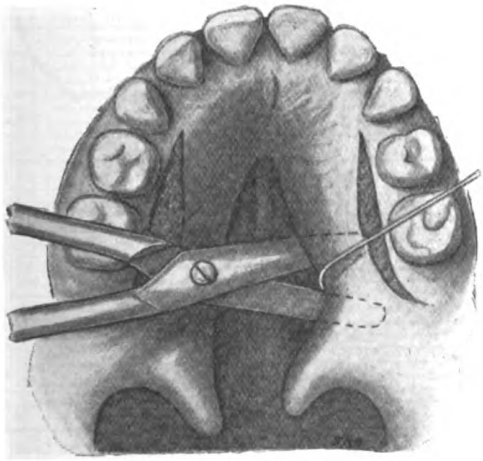
To show position and extent of the lateral incisions.

FIG. 2



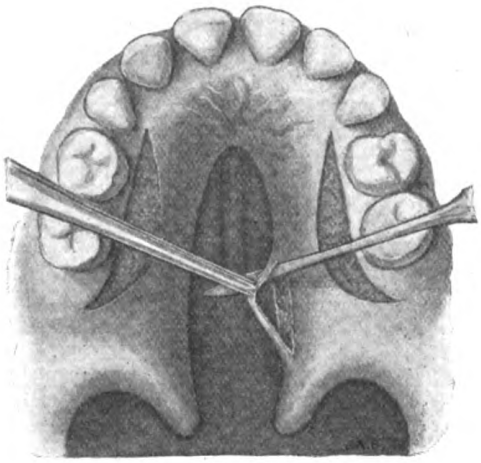
Muco-periosteal flap raised well beyond the limit of the cleft.

FIG. 3.



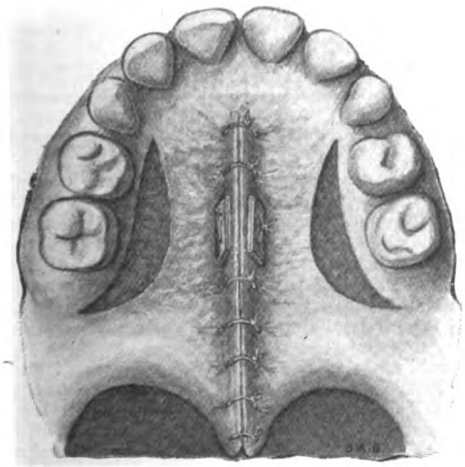
Division of posterior reflection of the soft palate.

FIG. 4



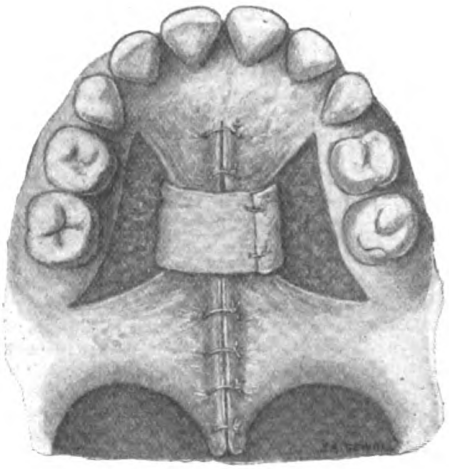
How to pare the edges of the cleft so as to obtain broad raw surfaces.

FIG. 5.



Button suture to evert edges and so place raw surfaces in appsoition. Two or more pairs may be used

FIG. 6.



Waxed tape encircling both flaps to relieve tension on the suture line (very rarely necessary).

THE EVOLUTION OF MODERN GYNÆCOLOGY.*

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WHEN I was asked to deliver this address I fell naturally to thinking of the contrast between the gynæcology of my student days and that of the present time. Exactly 25 years have passed since I began to attend a course of lectures on obstetrics and gynæcology, given at Owens College by my revered teacher and honoured friend, the late Dr. C. J. Cullingworth. As a lecturer he had few equals, and to the interest that he inspired I ascribe my subsequent decision to work in the same department of medicine as that wherein he laboured. But even his lucidity and enthusiasm could not entirely clear away the vague and nebulous atmosphere that surrounded much of the teaching of the diseases of women 25 years ago. It will be a pleasurable duty to show that he played no small part in helping to dissipate the mists and display the province of gynæcology in a fair and comprehensive perspective.

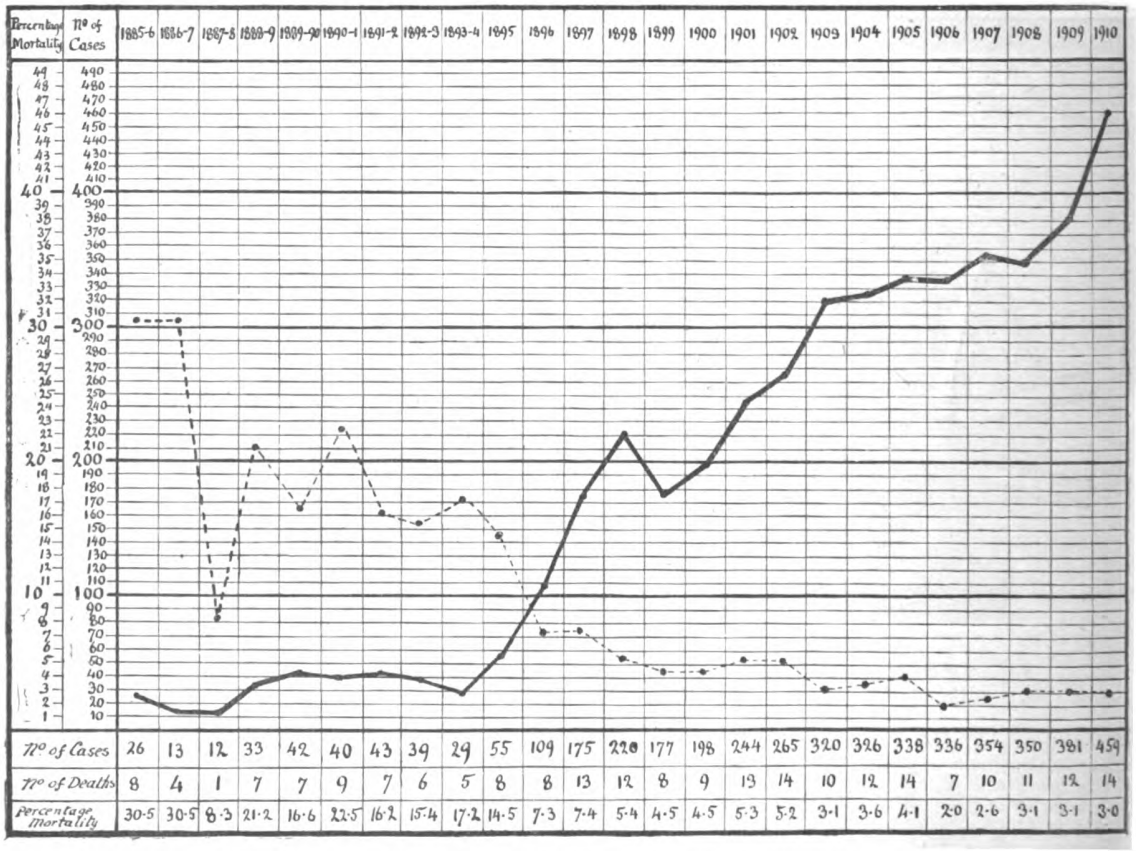
I take, then, as my subject, "The Evolution of Modern Gynæcology." It is no part of my idea to endeavour to trace the development of gynæcology in the dark ages or in the far-off past—those interested in such matters may refer to the learned work of Stewart McKay on "The History of Ancient Gynæcology." I will only call attention to a curious illustration, cited in this work, of the proverb that nothing is new under the sun. We are accustomed to think that ovariotomy was a product of the nineteenth century, but Stewart McKay [1] refers to the statement of Athenaeus, in his "Denosophists," that Xanthus relates that "Adramyttes, the King of the Lydians, was the first man who ever castrated women, and used female eunuchs instead of male eunuchs."

The evolution that I should like to speak of is that which has taken place in the last 25 years; but the origins of some of its phases must be sought in an earlier period in order to be understood, and therefore I shall have to refer to certain events that date back from 50 to 100 years.

By way of text I shall call your attention to the two accompanying charts. Chart I. shows the number of abdominal operations of all kinds performed at the Chelsea Hospital for Women yearly for the last 25 years; the continuous line shows strikingly the enormous increase in these operations. The number of deaths annually is also shown, and the dotted line shows how the percentage of mortality has progressively fallen from 30 per cent. in 1886 to 3 per cent. in 1910. In Chart II. I have selected four typical classes of operation—viz., ovariotomy, hysteropexy, operations for inflammatory tubal disease, and hysterectomy for fibroids; and in each case I have recorded the number of operations performed during five periods of five years each, together with the number of deaths and the percentage mortality during each period.

I should state in passing that the figures given for the years 1886–88 and 1890–94 are incomplete, for in those days there was no registrar, and the only way of obtaining records was to go through the case books; and some of the case books for those years are missing from the hospital archives. In the year 1895 the hospital was reorganised, and Dr. Comyns Berkeley, now surgeon to the hospital, was appointed registrar; from that year onwards there has always been an

CHART I.—*The Progress of Abdominal Surgery during 25 Years at the Chelsea Hospital for Women.*



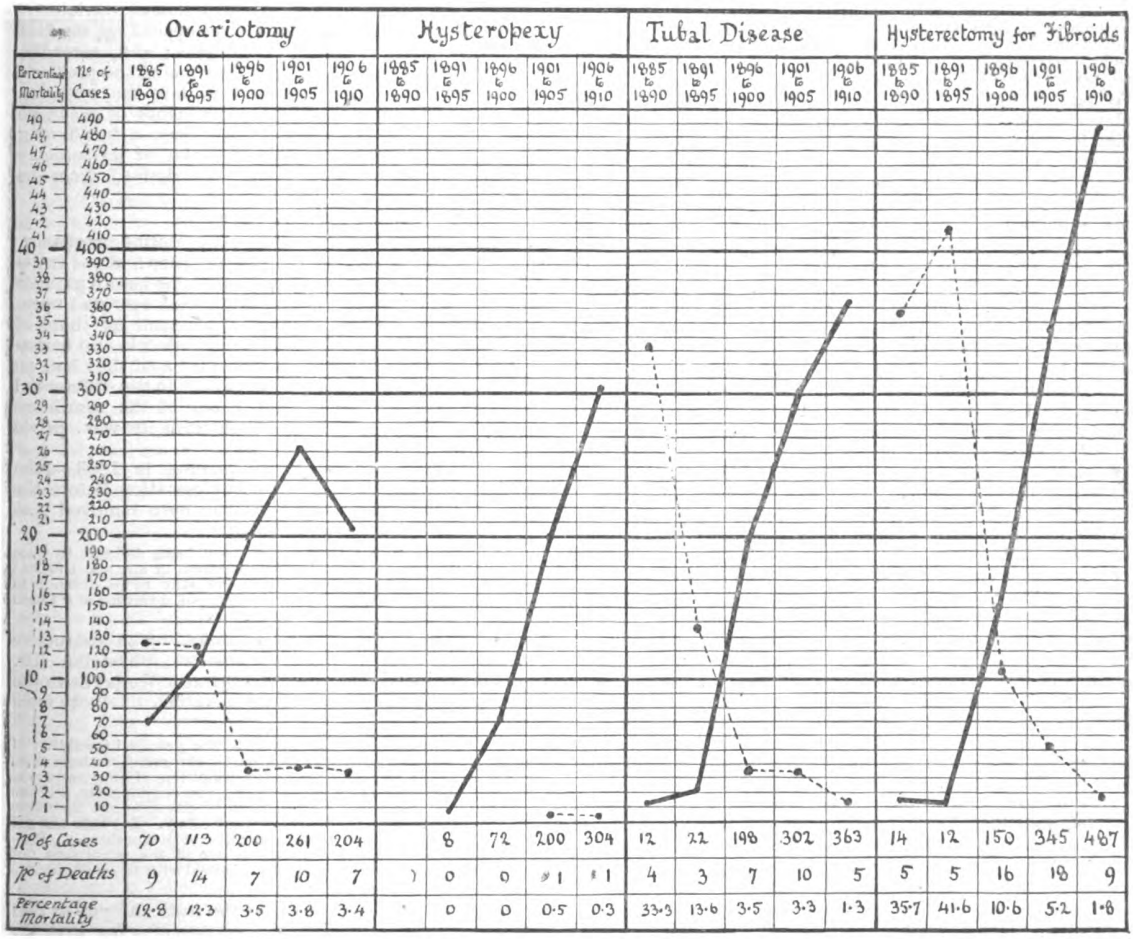
The dark line shows the total number of abdominal operations in each year. The dotted line represents the mortality per cent.

* A communication read before the Clinical Society of Manchester on Oct. 17th, 1911.

excellent summary of the medical and surgical work done, compiled by the registrar for the annual report.

Other hospitals could doubtless furnish an equally instructive picture of progress. I have chosen this hospital because I know it best, because its records are open to anyone to examine, and because I believe that it reflects the progress of gynæcology as faithfully as any hospital in the kingdom. The results shown in these charts are as startling as they are gratifying, and two questions formulate themselves for consideration. First, how has this progress of gynæcology been brought about? Secondly, what benefits has the progress of gynæcology conferred on the community? The answer to the first question is derived from a study of the evolution of modern gynæcology. In discussing the second question I hope to show that the saving of life, great as it has been, has not been the only benefit obtained—perhaps it has not even been the greatest benefit, because, while we may reckon the lives that have been saved in terms of thousands we may compute in tens of thousands those cases where suffering has been relieved, chronic invalidism has been obviated, and women otherwise destined to be a burden on their families have been restored to usefulness and activity.

CHART II.—*The Progress of Four Classes of Operation during 25 Years at the Chelsea Hospital for Women.*



The dark lines show the total number of operations in each period of five years. The dotted lines represent the mortality per cent.

Ovariotomy.

If I had to select the date from which the evolution of modern gynæcology might be reckoned I should take the year 1809, when Ephraim MacDowell, of Kentucky, performed the first successful ovariotomy. Lawson Tait gave this credit to Robert Houstoun, who was born about the year 1664, and who read before the Royal Society in 1724 a paper entitled "An account of a Dropsy of the Left Ovary of a Woman aged 53, Cured by a Large Incision made in the Side of the Abdomen by Robert Houstoun." Reading the interesting summary of this paper quoted by Lawson Tait,[2] I am led to the conclusion that the operation should properly be included in the category of tapping, as there is no internal evidence that the cyst itself was actually removed. Therefore, whilst I concur heartily in preserving the name of Dr. Robert Houstoun on the roll of fame, I feel I must accord to MacDowell the honour assigned to him by the medical profession in America, in the title "Father of Ovariotomy."

Those whose sense of nationality makes them crave for British credit in the inception of ovariotomy, may find comfort in the fact that John Hunter in 1786 was the first to point out deliberately the feasibility of the operation. In his surgical lectures, speaking of ovarian cysts, he says:—

> Tapping is only a palliative cure, and a large trocar is required, as the fluid is generally gelatinous, and then only one cell is opened. If taken in the incipient stage, they might be taken out, as they generally render life disagreeable for a year or two and kill in the end. There is no reason why women should not bear spaying as well as other animals. It would simply be opening the cavity of the abdomen, which we often do without inconvenience in healthy constitutions.

After MacDowell's case there were several others recorded from time to time. MacDowell himself operated 12 times, with eight recoveries. But the profession as a whole viewed such performances either with scepticism or with more or less veiled disapproval; and it is a pleasure to record, before a Manchester audience, the fact that the next important advance was made by a Manchester man, Dr. Charles Clay. He performed his first successful

operation in 1842, and in all he operated on 395 cases, with 101 deaths, his mortality being thus about 25 per cent. Lawson Tait paid a generous and well-deserved tribute when he said that "it was Clay of Manchester who first showed that ovariotomy could be made an operation more justifiable by its results than any of the major operations of surgery."[3]

It was while Clay was at work that chloroform anæsthesia was discovered and introduced, and there can be no doubt that anæsthesia was the first of the important factors that made abdominal surgery possible. And yet in 1863, when he had performed 108 ovariotomies with 74 recoveries, he appeared to be distinctly doubtful of the value of anæsthesia, for in a paper entitled "Observations on Ovariotomy" we find this curious passage[4]:—

With regard to the use of chloroform I am not certain if this agent has really added to the success of ovarian operations. The first 14 of my cases were undertaken before it was discovered, and of these 14, 9 recovered. But though I willingly admit the almost impossibility of obtaining the consent of females (at the present time) to submit to so formidable an operation without the aid of this valuable agent; and though I am equally convinced that chloroform is of itself one of the greatest boons to suffering humanity, yet, if it could be accomplished, I should infinitely prefer to operate without it, as the patient would bring to bear on her case a nerve and determination to meet so great a trial, which would assist beyond all value the after-treatment; it would also relieve the case from that most distressful retching and vomiting so common after all abdominal operations where it is used to the extent that it is required in ovariotomy.

We may imagine that Clay would have hailed with unfeigned gladness the discovery of spinal analgesia.

This is not so much a historical review as a meditative retrospect. I will not attempt, therefore, to name all those who with untiring patience and unfailing courage helped to win the battle of surgical progress against the forces of prejudice, partisanship, and pusillanimity arrayed against them. Let it suffice that we recall with gratitude the names of Baker Brown and Thomas Keith, who paved the way for future success by the introduction of the intraperitoneal method of treating the stump. Furthermore, I will not go into details of the steps by which the operation was gradually made safer and safer. There were the advocates of the long incision and the short incision; those who used clamps and those who used ligatures, and these again formed two camps, the long-ligature men and the short-ligature men. But while the technique of the operation was gradually being worked out and improved, the mortality still remained distressingly high. To the late Sir Spencer Wells has been justly attributed a large measure of the credit for establishing the operation of ovariotomy on a firm basis; yet in 1878, when he had completed 900 cases, the number of deaths amounted to 221, giving a mortality of 24·5 per cent. This was only a shade better than Charles Clay's mortality of 25·5 per cent. for 395 cases. In the last 100 of Spencer Wells's cases there were 17 deaths. Such results in these days would make the profession shudder, and might well send the operator from surgery to sheep-farming. In our Chelsea records the mortality from 1885 to 1890 was down to 12·8 per cent; and if we ask what brought this about I should answer without hesitation that it was the introduction of antiseptics.

The antiseptic system—or Listerism, as it used to be called—was not, of course, ideal; indeed, it had many palpable disadvantages, and if it had not evolved into something better abdominal surgery would have remained severely handicapped. Many of us can remember the ovariotomies in the old Manchester Infirmary years ago; the carbolic spray theoretically catching and killing hypothetical aerial germs, but actually drenching, irritating, and cooling the abdominal viscera; the carbolic lotions that roughened our hands and the patient's skin; the iodoform that was dusted over wounds and into cavities with a generous disregard of cost and a reckless indifference to iodoform poisoning. We can remember how these ovariotomies were performed with a kind of mystic secrecy worthy of the rites of the Masonic craft; spectators were excluded, and the general ward was too unhallowed for these patients. And yet they died with a tragic frequency.

Compare then with now. At the present time abdominal operations are performed before many spectators, and the patients in our large hospitals are nursed in the general ward. At the Chelsea Hospital for Women the mortality has dropped in 25 years from 12·8 per cent. to 3·4, and the results in general hospitals are practically as good. Comparing my own cases at Chelsea and at the Prince of Wales's General Hospital, Tottenham, I find that at Chelsea from 1906 to September, 1911, I had 71 cases two deaths, or 2·8 per cent.; whilst at Tottenham during the same period there were 91 cases with three deaths, or 3·3 per cent.

What an interesting commentary on the words of Tyler Smith, uttered just 50 years ago from the Presidential chair of the Obstetrical Society of London, when he said[5] "In the long run, I believe, the results cannot be favourable either in general or in special hospitals." If Tyler Smith was pessimistic his pessimism was at least well grounded, for it was based on the liability of patients to develop peritonitis after ovariotomy; and he recognised peritonitis as "a disease closely resembling puerperal or surgical fever and due commonly to some poisonous external agency." If he could have foreseen that this disease was preventable he would doubtless have been more optimistic; and this leads me to point out that this is precisely the key to the whole situation. Our results to-day compare favourably with those of 25 years ago because peritonitis—i.e., sepsis—has been practically conquered. Lister showed the way when he introduced antiseptics, and the crowning triumph of Lister's antisepsis was that it gave birth to asepsis.

I have dealt at some length on the evolution of ovariotomy, first, because it was this operation that opened up the field for other operations on the pelvic organs; and, secondly, because nearly all the light that has illuminated the problems of gynæcological pathology was thrown into the abdomen through surgical incisions. In the departments of medicine and surgery the post-mortem room has been a full-flowing fountain of knowledge; but in the realm of gynæcology incomparably greater results have been derived from the operating theatre.

Extra-uterine Pregnancy.

Take, for instance, the subject of extra-uterine pregnancy. In spite of necropsies, the facts that were known about extra-uterine pregnancy were meagre in the extreme before patients suffering from this dangerous condition were operated upon. In the text-books of our student days, such as those of Thorburn and of Hart and Barbour, hæmatocele and hæmatoma of the broad ligament were described as if they had no relation to extra-uterine pregnancy; in fact, in the differential diagnosis of extra-uterine pregnancy one of the conditions from which we were told to distinguish it was pelvic hæmatocele!

Nearly 50 years ago—or to be precise, in 1863—John Marshall showed a specimen of tubal gestation before the Obstetrical Society of London.[6] It had been removed post mortem, and in the words of Marshall,

An inquest was held upon the deceased, but it being difficult to trace any direct connection between the administration of any abortifacient drug and the post-mortem appearances, and still more difficult to ascertain from whom the drug had been purchased, a verdict of "Death from natural causes" was returned by the jury.

The discussion that followed was marked by an instructive difference of opinion between an obstetric physician (Dr. Graily Hewitt) and a surgeon (Mr. Spencer Wells) as to the chances of saving such a patient by operation. I quote from the Transactions:—

Dr. Graily Hewitt had grave doubts as to the practical feasibility of carrying into effect any operative measures for the relief of these cases of rupture in Fallopian pregnancy. The condition of the parts was peculiar, the number of blood-vessels to tie was considerable, and the condition of the uterus and its appendages wholly different from that present in cases where ovariotomy is practised safely. But this was not all. The chief obstacle lay in the difficulty of diagnosis. ..... Peri-uterine hæmatocele he would mention as one of the conditions not rarely presenting symptoms very closely identical with those of rupture of an extra-uterine pregnancy.

Here is a picture for us; so near the truth and yet so far; here is a man living in the dense darkness of a fog with the clear sunshine only a few yards above him. Then speaks the surgeon:—

Mr. Spencer Wells said that if it were certain that a patient was dying from internal hæmorrhage, owing to a rupture of the sac of a tubal pregnancy, he could see no sort of difficulty in the way of a surgical operation. The Fallopian tubes and vessels in the hard (*sic*) ligament would be divided and secured exactly as in every case of ovariotomy. The operation would be extremely simple; what the result would be was quite another question.

Verily, as Tennyson has it, "Knowledge comes, but Wisdom lingers." In spite of Spencer Wells's clear expression of opinion as to the practicability of operation, women went on dying unrelieved and without any attempt being made to save them. In 1876 Parry[7] could still write as follows:—

From the middle of the eleventh century, when Albucasis described the first-known case of extra-uterine pregnancy, men have doubtless

watched the life ebb rapidly from the pale victim of this accident, as the torrent of blood is poured into the abdominal cavity, but have raised no hand to help her. Surely this is an anomaly, and it has no parallel in the whole history of human injuries. The fact seems incredible, for if one life is saved by active interference, it may be triumphantly pointed to as the first and only instance of its kind on record. In the whole domain of surgery—for we cannot look to other than surgical measures under the circumstances—there is now left no other field like this. ..... The only remedy that can be proposed to rescue a woman under these unfortunate circumstances is gastrotomy—to open the abdomen, tie the bleeding vessels, or to remove the sac entire.

Even these impassioned words found no practical response till seven more years had passed, and then Lawson Tait came forward as the champion of these dying women and deliberately and successfully operated for a tubal rupture. There can be no doubt that his example led to the saving of many thousands of lives. At the Chelsea Hospital for Women, from 1895 to 1910, 156 operations were undertaken for extra-uterine pregnancy, with five deaths, a mortality of 3·2 per cent., and in my own practice I have had occasion to operate in 87 cases with three deaths, or 3·4 per cent. If we multiply such experiences by those of other operators we get some kind of idea of the debt that mankind owes to Lawson Tait.

Turning to the question of the light that surgery has thrown upon the pathology of these conditions, we find that in 1889 Bland-Sutton described for the first time the tubal mole, under the title of "An Apoplectic Ovum from the Fallopian Tube."[8] The importance of this communication cannot be over-estimated, for it was not only the first correct explanation offered of rupture of the tube, but it also gave us a definite criterion by which to judge whether or not a hæmorrhage into the peritoneal cavity was due to an extra-uterine pregnancy.

In 1894 the late J. W. Taylor, of Birmingham, described an intra-peritoneal hæmatocele as being produced by a blood-drip through the still open fimbriated extremity of the tube[9]; and I may mention in passing that this able and lamented surgeon's monograph on the subject[10] is still the most enlightening and complete account of it that we possess. His observations on hæmatocele were confirmed and expanded by Cullingworth in several valuable communications; Sampson Handley in 1902 described the para-tubal hæmatocele[11]; Catherine Van Tusschenbroek described in 1899 the first authentic case of ovarian pregnancy[12]; and by the work of Berry Hart, Freeland Barbour, Clarence Webster, and many others, there is no field in gynæcological pathology that is now so well explored and so well understood as that of extra-uterine pregnancy.

The Surgery of Inflammatory Disease of the Tubes.

Those of us who were students 25 years ago must have a vivid recollection of the confusion into which our minds were thrown when we attempted to understand the terms "perimetritis" and "parametritis." Those who wrote text-books had no clear conceptions on the subject of pelvic inflammation; how, then, could they convey any clear ideas to us? Bernutz, in 1879, was the first to call attention to the fact that "perimetritis" was due to tubal inflammation; and in the same year Lawson Tait performed the first operation for the removal of inflamed tubes. For some years he went on with these operations, encountering considerable opposition. In 1882, he showed before the Obstetrical Society of London specimens from 15 cases of hydrosalpinx and pyosalpinx, which he exhibited "to show that the criticism offered against him of removing uterine appendages unnecessarily was unfounded." In 1883 he could record 62 cases without a death; and in a discussion on this paper[13] Dr. Robert Barnes made the significant statement that "no doubt there would be some opposition to his views—timid opposition, on the one hand, from the *far niente* school; violent from the dogmatic." In this discussion several speakers took up the position that conditions such as hydrosalpinx, which did not threaten life, did not justify operation; and in his reply Lawson Tait showed how far he was in advance of current medical opinion when he said that "we could not stop short of dealing with matters that affect life only. Hydrosalpinx was a frequent cause of the most intense suffering, and, therefore, he would, and did, remove it by surgical operation without hesitation."

Ten years passed, and still Lawson Tait's views were not accepted in high places. In 1892 Cullingworth read before the Obstetrical Society of London an important paper[14] on "The Value of Abdominal Section in Certain Cases of Pelvic Peritonitis." It is most instructive to read the discussion that followed, in the light of the teaching and practice of the present time. Some of the speakers, and among them the leading obstetric physicians of the day, offered the keenest opposition to Cullingworth's views; and it is refreshing, by way of contrast, to read the enlightened remarks of such men as Mayo Robson, Peter Horrocks, Henry Gervis, John W. Taylor, and Heywood Smith. Mayo Robson, with a surgeon's insight, compared these cases with recurrent attacks of inflammation of the vermiform appendix. "If," he said, "they did not hesitate in such cases to remove the appendix, why should anyone argue that a similar, though larger, collection of pus, in the Fallopian tube, should not be treated on the same principles?" Heywood Smith recalled the fact that some months previously two of the speakers "had issued a quasi-authoritative manifesto, wherein they feebly attempted to apply the brake to the advanced gynæcology of the present day."

But the wheel of progress was already turning in such vigorous fashion that the said brake had practically no effect; and we may claim for Cullingworth that on that day he added no little to the momentum of this wheel, for afterwards no authoritative attempt was made to check its revolutions, and from that paper we may date the general adoption of the view he upheld. Cullingworth's mortality was 18 per cent. in his first 50 cases; in his second 50 it was 8; in his last 25 cases he had no deaths; and the records of the Chelsea Hospital for Women amply support his contention that experience must lead to greatly diminished mortality. From 1885 to 1890 (before Cullingworth's paper was read) the mortality at Chelsea was 33·3 per cent. on 12 cases; from 1906 to 1910, 363 operations for inflammatory disease of the appendages were performed, with a mortality of 1·3 per cent. Perchance in the Elysian fields Charles Cullingworth may be able to receive this tribute; he may "see of the travail of his soul, and be satisfied."

Hysterectomy for Fibroids.

Once more, in tracing the origin of this operation, we must dip into the semi-distant past; and once more we must bring into the light the name of Charles Clay, of Manchester. To him belongs the double record of having performed the first complete extirpation of the uterus and ovaries by the abdominal route, in January, 1844, and also of having done the first successful hysterectomy for fibroids. The plan he adopted in the latter case was to tie a ligature tightly round the cervix and cut the ends short, thus performing the first intraperitoneal hysterectomy. This was in January, 1863, and the Obstetrical Transactions for that year contain an interesting woodcut of the uterus after removal. He was led to adopt this procedure from his experience in ovariotomy; but in the hands of subsequent operators nothing but failure resulted from this method.

In April of the same year Koeberlé, of Strasburg, performed his first hysterectomy; and to him is due the credit of having brought the operation into the range of practical surgery by the introduction of the extraperitoneal method of operating by means of the serre-nœud. The method remained the best for many years, although the resulting mortality was still very high. In London, Granville Bantock and Knowsley Thornton were among the most successful of its exponents. It was practised at the Chelsea Hospital for Women as late as 1895, and as far as I have been able to trace the records from 1885 to 1895 there were 21 cases, with 9 deaths—a mortality of 42 5 per cent. In 1893 and 1894 I assisted some of my seniors at this operation, but I never performed it myself, for happily by the time that I did my first hysterectomy we had been shown a more excellent way.

Meantime, another method of operating for fibroids had been introduced by Lawson Tait—namely, the removal of the ovaries and tubes; the object of this was to cause a shrinkage of the fibroid tumours, on the analogy of what was supposed to happen at the menopause. In advocating this method, Tait was chiefly influenced by the high mortality of what appeared to be the only alternative plan—viz., hysterectomy by the extraperitoneal method; and it is interesting to note that this usually clear-sighted man was led to express a curiously erroneous forecast of the future of hysterectomy. He said, in supporting the claims of the removal of the ovaries,

Considering that hysterectomy has at present, and (as the use of the clamp in this operation is inevitable) is ever likely to have, a very heavy mortality I think we are bound in all cases of doubt to give our patients the benefit of that doubt, and to resort to the less formidable operation in the first instance.[15]

In 1892 Baer, of Philadelphia, introduced the most important change in the history of operations for fibroids by his plan of ligaturing the uterine arteries and leaving the cervix free. This, as Bland-Sutton has pointed out,[16] revolutionised the surgical treatment of uterine fibroids, and no one has done more than Bland-Sutton himself to establish the operation on a secure footing. He joined the Chelsea Hospital for Women in 1895, and his influence is clearly shown in Chart II. In 1891 to 1895 rather more than 12 hysterectomies were done, with a mortality of over 40 per cent.; in the next five years the number rose to 150, and the mortality dropped to 10·6 per cent.; in 1901 to 1905 there were 345 hysterectomies, with a mortality of 5·2; and in 1906 to 1910 the number stood at 487, with a mortality of 1·8.

I doubt if the whole range of surgery could show any other operation that presented such an extension of scope and such rapidly diminishing mortality. I feel sure that all my colleagues at Chelsea would concur with me in assigning a large share of the credit for these results at our hospital to the presence of Bland-Sutton on the staff.

Among the pathological questions on which the surgery of fibroids has afforded us valuable information we may mention the subject of fibro-adenoma of the uterus, the mode in which degenerative changes in fibroids are brought about, the association of pregnancy with the condition known as red degeneration, and the association of fibroids with disease of the ovaries and Fallopian tubes.

There are other developments of gynæcology that would afford a profitable and interesting study—for example, the evolution of operations for carcinoma of the uterus and for the surgical treatment of displacements; but I have already taken up so much time in unfolding this part of my subject that I must omit them, and pass on to a brief consideration of the second question to which I wish to invite your attention.

What Benefits has the Progress of Gynæcology Conferred on the Community?

Chart I. shows us that in the five years 1885–86 to 1889–90 the number of abdominal operations at the Chelsea Hospital for Women was something over 122; in the five years 1906–10 the number was 1880, a difference of about 1750. What happened to these 1750 women that were not operated upon 20 years ago? We can say without hesitation that a number of them died for the want of operation. Some of them would be cases of ovarian tumours, because, as we see from Chart II., about three times as many ovariotomies were done in the last five years as were done in the first five, although even in those earlier days ovariotomy was a definitely recognised operation. Other fatal cases would be those of extra-uterine pregnancy; it might be said that these did not die for want of operation, as they stood a very good chance of dying if operated upon. At any rate, the five cases done in 1886–90 all died. But in 1906–10 there were 59 such operations with one death, and a large proportion of these cases would certainly have died without the help of surgery. Then there were patients with inflammatory disease of the appendages; many of these conditions are, of course, not fatal, but there is quite an appreciable percentage of cases of pyosalpinx that destroy life. In our first five years 12 operations were done for inflammatory disease; in the last five years, 363; of these 5 died, but on the modest computation that in 10 per cent. of cases inflammatory disease proves fatal, 35 would have died without operation, against 5 in spite of it.

Operations for displacement do not come into consideration at all here, because the condition is never fatal. In the case of hysterectomy for fibroids, however, we again come to a group in which an appreciable number of patients die if not surgically relieved; and of such operations there were 14 in the first five years, against 487 in the last five. I have not gone into the question of carcinoma of the uterus, but in this department we should find a large number of cases of the direct saving of life by surgical intervention.

I think that I have said enough to show that the progress of gynæcology has led to the saving of many lives; but this could be said of the gynæcology of 25 years ago, although the proportion of lives saved to-day is much larger than it was then. The striking feature, however, in the evolution of the last 25 years is the phenomenal extension of the scope of operations, not for the saving of life alone, but for the relief of suffering. At a time when abdominal surgery of all kinds was attended by a high rate of mortality it was wise and practical advice to recommend patients to endure their sufferings with Christian resignation rather than face the risks of surgery, and patients might have quoted with justification the saying of King David, "Let me fall into the hands of God, rather than into the hands of men."

Let us look a little more closely at some of these operations designed to relieve suffering. We need not consider the cases of ovarian tumour, ruptured tubal pregnancy with free hæmorrhage, and carcinoma of the uterus. In such cases we must operate for the direct purpose of saving life. Consider such conditions as *tubal inflammation* and *tubal pregnancy with restricted hæmorrhage*. That some of these cases may prove fatal is true enough, but the important reason for operating on such cases to-day is not that the patient's life is directly threatened, but that the alternative to operation is prolonged illness, constant suffering, more or less complete invalidism, and disablement. Some of these women in the poorer classes are the breadwinners, and disablement is for them a worse evil than death.

Thirty years ago it was only the few men that had the surgical genius of a Lawson Tait who were justified in taking up the position he adopted, and in saying, in the words I have already quoted, "We cannot stop short of dealing with matters that affect life only." The majority of those who opposed his views were probably quite justified in the interests of their patients in refusing to operate on such cases; they doubtless did the kindest thing in leaving them alone. But think of the amount of suffering saved, the workers that have been restored to the position of earning their livelihood, the relief to the community in the conversion of dependent invalids into sound members of the body corporate; think of all this amount of good done as represented by the 863 cases of operations for diseased appendages in the last 15 years at the Chelsea Hospital for Women.

It was objected formerly, and I believe that the objection might be found still in some places, that these women remained chronic invalids, that they were unsexed, and rendered unfit for wifehood; that at the best they remained hysterics, and at the worst they became lunatics. These objections were theoretical, and I was able to show last year, from a detailed investigation of the after-results of these operations, based on 200 cases in which both ovaries were removed,[17] that 70 per cent. of the patients regained perfect health and vigour and retained their sex instincts, and only two patients developed mental symptoms. Further, from a study of the after-results of abdominal operations generally it was shown that these figures correspond closely to those of cases in which one or both ovaries had been preserved.

There is another aspect of the question, which we must think of in a chastened spirit, because it is a terrible reproach to the medical profession. Many patients with chronic pelvic disease suffer intermittently; they are seldom acutely ill, but they are never completely well; and because there is not much to show for their sufferings they have been treated as neurotics and almost as malingerers; they have been drenched with bromides and valerian; they have been sent from spa to spa; they have been driven to seek relief in alcohol or morphia; or they have found a doubtful haven among the faith-healers and the "Christian Scientists." I contend that we have no right to describe a woman as neurotic unless we can be certain that she has no organic disease.

A few words about *uterine displacements* and their surgical treatment. These are conditions that are not fatal, and operations undertaken for their relief should have no mortality. As a matter of fact, in the 584 cases operated upon at Chelsea in the last 20 years there were 2 deaths—one from pneumonia and one from diabetic coma. Such deaths might, of course, occur without operation. The value of these operations consists partly in the fact that many patients are cured who cannot be treated by other means (for example, cases of adherent retroversion and some cases of prolapse and procidentia); and partly in this, that patients are saved from years of pessary treatment. I hold that pessaries are a necessary evil—that is, they are necessary sometimes, but evil always. If I could avoid it, I would never use one. At present I see no prospect of consigning them one and all to the bonfire, but this may come to pass in the future, and meanwhile I take such comfort as I can from the thought that at least no pessary will be known by my name.

Now if by means of a safe operation a patient can be saved

from the unpleasantness of frequent examinations, from the discomforts of discharges and their attendant douchings, and from being chronically under the doctor's hands, and if patients desire such relief, surely they are entitled to have it. The radical cure of hernia is considered justifiable, to obviate the constant wearing of a truss; why not the radical cure of a uterine displacement to obviate pessaries? Well, the progress of gynæcology has opened up this field of relief to women, and I think that the table of hysteropexies in Chart II. represents a very great amount of benefit in the relief of suffering and in the emancipation from disablement.

If we turn to the subject of *uterine fibroids*, we again have a condition in which a directly fatal result is produced in only a minority of cases, but the amount of suffering and disablement is appalling. What a boon to the sufferers and what a gain to the community is expressed in the 982 cases of hysterectomy for fibroids performed at the Chelsea Hospital for Women in the last 15 years. Twenty years ago the mortality was 35–40 per cent., and physicians were amply justified in advising patients whose lives were not directly threatened to endure their sufferings rather than resort to operation. Of course, this procedure reacted on the mortality, because if operation for fibroids is delayed until it is a question no longer of merely relieving suffering, but only of saving life, the mortality must necessarily be much higher. Still, even in uncomplicated cases the mortality was high in those days, and patients seldom yearn for death as a means of relief from suffering: it is, after all, better to live as an invalid than to die cured.

Now when a patient with fibroids has to be told that the resources of medicine are all spent and that the succour of surgery is more cruel than kind, it is a great comfort to be able to hold out some kind of hope, however unsubstantial; and so a fairy tale was built up and decorated to represent a scientific theory to the effect that the menopause was the natural cure for fibroids. And patients were told in all seriousness and good faith, "You must wait for the change of life and then these tumours will shrink and disappear and you will get well." And the patients went on patiently draining their life-blood away, carrying about enormous tumours that prevented them from moving about, hoping against hope that the delayed menopause would arrive, like some millennium, to give them peace. Some of them survived the worst troubles and escaped with their lives, though at the price of being permanent invalids; others found that the menopause, when it came, came not to bless but to curse, bringing in its train degenerative changes, infection, sepsis, and death.

Now the tragic thing is that to-day, when the mortality after operations for fibroids has dropped almost to vanishing point in uncomplicated cases, and when the operative risks in serious cases are less than the risk of leaving things alone, the hoary myth survives; and whatever moral comfort it may have given in earlier years, it is certain that in later years it has wrought endless mischief and inflicted a grievous and totally unnecessary amount of suffering. I may be told that some fibroids settle down and ultimately cause no trouble. With all my heart I grant it; but how many? And—

> "Who can so forecast the years
> Or find in loss a gain to match?"

How are we going to tell which of our patients in this lottery are going to draw the few prizes and which are destined for the many blanks? Why should we condemn them to suffer for years with a doubtful prospect of cure and a probability that they will have to undergo operation in the end? With such a table as that in Chart II. before me, showing that in the last five years 487 hysterectomies were performed, with a mortality in all cases, serious as well as simple, of 1·8 per cent., I am emboldened to take up the position that all fibroids should be operated upon in the early stages unless some weighty reason to the contrary can be shown. If operation is safe before complications have set in (and I think that the truth of this has been demonstrated); if cases that are left suffer seriously and are severely incapacitated (a proposition that requires no demonstration); if the majority of cases that are left come to operation in the end (and I think that this proposition is equally true); and if, finally, the operative risk is much greater when complications have set in (a fact that no one will dispute),—then I hold that we are not justified in refusing relief in the early stages, in condemning patients to years of suffering and incapacity, and in exposing them after all to the much greater operative risk by waiting till life is seriously threatened.

When we look back at the evolution of gynæcology during the last 25 years we see that many things are now plain that were then shadowy and ill defined; we see that our knowledge of the pathology of ovarian and uterine tumours, of pelvic inflammation, and of tubal pregnancy has been enlarged and rendered more precise; we realise that we owe this heritage to the courage, the patience, and the insight of the pioneers of gynæcological surgery. We see, further, that this surgical activity has resulted not only in rich additions to our stores of knowledge but in an immense saving of valuable lives, in an enormous diminution in the sum-total of human suffering, and in the raising of an untold number of women from beds of invalidism to active happy, healthy life.

But if we may look back with pride we must look forward with humility; there is so much still that we do not know; there are so many lives still that are not saved. But the success of the past is the earnest of the future; and every search for further knowledge, every steadfast endeavour in applying our knowledge to our practice, will constitute

> "a closer link
> Betwixt us and the crowning race
> Of those who, eye to eye, shall look
> On knowledge, under whose command
> Is earth and Earth's, and in their hand
> Is nature like an open book."

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Upper Wimpole-street, W.

METASTATIC SUPPURATIVE CYCLITIS OCCURRING IN A WOMAN WITH PYÆMIA; ABSCISSION; RECOVERY.

BY SIR WILLIAM COLLINS, M.S., M.D., B.SC. LOND., F.R.C.S. ENG.,

SENIOR SURGEON TO THE LONDON TEMPERANCE HOSPITAL AND TO THE ROYAL EYE HOSPITAL.

A MARRIED woman, aged 54, who was admitted into the London Temperance Hospital on April 5th, 1911, complained that she had been ill for several weeks with general loss of energy, accompanied for the last fortnight by "chills and flushes" and "pains all over her." She had vomited several times. She had had rheumatic fever 20 years ago. There were scars over the right mastoid and right angle of the lower jaw dating from childhood. On admission she appeared frail, ill, and anæmic. Her temperature was 103° F.; the tongue was red, dry, and glazed; the pulse-rate was 108, and the respirations were 26. The most salient symptom was proptosis of the right eye. The conjunctiva was injected and inclined to be chemosed; tension full; cornea steamy; pupil immobile; iris woolly; some opacity on the lens capsule. Vision, large objects only; movements of eyeball restricted and very painful. An elastic tender swelling was found on the right side of the neck over the upper part of the carotid. A note made at the time said: "Suggestive of inflammation round a thrombosed jugular vein." There was some impaired resonance at the right apex. The heart sounds were clear but weak; abdomen *nil*. The patient complained of pain in the left knee, and there was some bright redness and œdema over that joint.

On April 6th, under ethyl chloride, I incised the cervical swelling, letting out half an ounce of watery pus. I diagnosed suppurative iridocyclitis of the right eye and advised abscission. The proptosis and chemosis had greatly increased, and the pain prevented sleep. On the 7th, under chloroform, I abscised and eviscerated the right eye and washed out the scleral cup with hot sterilised water. From the 8th to the 12th the patient was greatly relieved, and her temperature fell. Some fluctuating swellings in the left arm appeared

which were incised and pus was evacuated. Her general health was improving under generous diet. The pain had gone from the left knee. The abscess in the right cervical region required further opening and drainage. The right orbit quieted down and in a month the patient left the hospital quite well.

The abscised portion of the right eye showed well-marked suppurative cyclitis. There was a coronet of pustules jutting out from the intervals between the ciliary processes. The pathologist reported that short chain streptococci were found in the pus from the neck.

The sequence of events appeared to be a pyæmic condition arising from the abscess in the right side of the neck, not very acute in its character and containing watery pus, possibly of old tuberculous gland origin. Thence absorption appears to have taken place with metastatic cyclitis, which became the dominant feature of the illness, metastatic abscesses in the left arm, and a threatened synovitis of the left knee. The lungs, however, did not give any evidence of a breaking down lesion.

In such a condition of proptosis and chemosis it is not always easy to decide between an intra-ocular and an extra-ocular cause, an iridocyclitis leading on to panophthalmitis or an orbital cellulitis which may lead to meningeal complication. In this case the woolly iris, the suggestion of lymph on the anterior capsule and the absence of a "brawny" condition of the lids, despite the exophthalmos and restricted movements, led me to infer a suppurative iridocyclitis.

A careful observer of the case had not without some reason suggested septic thrombosis of the cavernous sinus and of the internal jugular vein as explicative of the associated ocular and cervical symptoms. The case was one of extreme clinical and pathological interest and the immediate relief afforded by the abscission was very marked. I prefer abscission to excision in such cases as being less likely to infect the orbital tissues.

Regent's Park, N.W.

URETERAL GRAFTS.

BY A. CHIASSERINI, M.D.

(*Laboratory of Surgical Pathology, Rome.*)

THE surgery of the ureter has lately acquired a standing of its own, as the operations and experiments upon such an important structure have become more and more frequent, in consequence either of surgical affections of the reno-vesical ducts (stones, tumours, inflammations, &c.) or, more often, of neoplasias of the pelvic organs spreading along and infiltrating at the same time the ureters.

The surgical procedures upon these range from anastomosis (end-to-end, lateral anastomosis, end-in-end, &c.), when the ureter has been cut across and the two ends can be drawn near each other, to the various methods of implantation of the ureter in the different organs (bladder, rectum or sigmoid, vagina, urethra, skin, ureter of the other side). But ureteral anastomosis, as much as implantation of the ureters, has nearly always given uncertain or unfavourable results and rarely good ones; this, either because of the formation of urinary fistulæ followed by an ascending infection or the occurrence of a stenosis with consecutive hydronephrosis and pyelonephrosis.

This being the case, many surgeons thought of replacing the piece of tube which had been cut away either with some inorganic material, as glass tubes (Casati, Baori), tubes made of silver and caoutchouc (Israel), or with whole organs taken from the surrounding structures. These were the first experiments of transplantation applied to such a vital and delicate structure as the ureter, and they were tried on men and animals. Casati, Boari, and Van Hook cut a flap out of the bladder and sutured it in the shape of a tube to the proximal end of the ureter. Rydygier did the same with a flap of skin. Fenger and Bacon, Poggi and Tizzoni, D'Urso and De Fabi, Esau, and Moskowicz employed loops excluded from the bowel but still attached to their mesentery, while Giannettasio, Rydygier, and Franke transplanted in the same way the appendix, and D'Urso, De Fabi, Flörcken, and Stubenrauch the uterine horns of bitches. The function of the ureters was generally impaired or destroyed because of the frequent stenosis and infection, but the transplantation of the uterine horns gave better results.

In the meanwhile new surgical procedures were invented in order to make the work of transplantations more practical: bones, periosteum, joints were transplanted in the regions where such structures were needed. Carrel, Guthrie, and Stich were the first to attempt successfully, with a special operative technique, vascular grafts. The tubular shape of the vessels and their different width could have made of them an excellent material for substituting several hollow structures of the body. According to this principle Payr used them to drain the cerebral ventricles in cases of hydrocephalus, while Baumgarten, having tied a piece of vessel at the two ends, so that no blood could pass through it, observed a proliferation of the cells of the intima. The conclusion was that the presence of circulating blood in the vessels did not seem absolutely necessary for their life.

Such grafts were then used for other purposes: to cure hypospadias (Tanton), to replace the common bile duct in dogs (Tietze). From this to the vascular transplantation of the ureter was but a short step. In fact, in 1908, Melchior, and afterwards Rick, Holbauer, and Klepp tried (with success according to them) to replace in dogs a piece of ureter cut off with a segment of vessel. The same thing was done by Tuffier (uretero-phlebo-enterostomy) in a woman. The last-named surgeons did not make any histological research on the graft after a certain time had elapsed, whereas Tietze and Flörcken found that the transplanted vessel soon was replaced by connective tissue. New experiments were needed to decide upon this important subject. Therefore, on the advice of Professor Alessandri, and in conjunction with Dr. Dominici, I began last November a series of experiments on the ureter of dogs with vascular grafts. Dr. Dominici gave an account (regarding 10 cases) before the Medical Academy of Rome (April, 1911) and in the Folia Urologica (October, 1911) of the operative technique followed, and drew the conclusions which could be inferred from the macroscopical examination. On my own account I made eight more experiments and examined histologically sections taken from each of the 18 cases. In experimenting I made use sometimes of pieces of vein (external jugular, femoral, and saphenous), sometimes of the carotid artery. I reached the ureter by the extra-peritoneal route and sutured the two ends of the ureter to the transplanted vessel by Carrel's method (slightly modified), having first cut away a piece of ureter somewhat shorter than the graft. In 12 cases the continuity between the two ureteral ends was re-established, but a stenosis or a complete occlusion corresponding to the vascular graft was the usual result. Briefly the conclusions that I came to are as follows: 1. There is a possibility of the vessel introduced between the two ureteral ends becoming firmly united to them. 2. The piece transplanted, a few days after the operation becomes shortened so as to draw the two ureteral ends nearer together. 3. The graft becomes thicker and hard, while the lumen is nearly obliterated. 4. The stenosis causes a stoppage in the flow of the urine with consecutive dilatation of the canal of the ureter and hydronephrosis.

The histological examination thus confirmed what could have been inferred from a macroscopical survey; but at the same time it showed a series of vital facts (proliferation of the epithelium and muscular fibres) of some importance. Without discussing these, it is certain, at any rate, that vascular grafts cannot be used to replace a segment of the ureter.

The fact that vascular grafts in vessels (arterial in veins and *vice versâ*) are generally satisfactory, while the same cannot be used to replace other hollow structures on account of their fibro-formative tendency, seemed to me in favour of the idea that a normal functional stimulus is a *conditio sine quâ non* for the life of vascular tissues. But, although the number of these experiments was not sufficient to be absolutely conclusive, the fact that every time I left a catheter in the ureter for several days I was able to observe in the graft evidences of regeneration which were lacking in most cases where no catheter was left *in situ*, counts for something. In these last cases I could only see retrogressive changes. Is it going too far to attribute them to the lack of the normal stimulus—the circulating blood, together with the presence of an abnormal stimulus—contact with the urine? The irritating action of the latter must have contributed to the destruction of the normal tissue of the vessel wall.

Given these considerations and the tendency in surgery to substitute defects of substance with similar tissues (cutaneous

grafts, bone and periosteal transplantations, grafts of whole joints, &c.), I thought of doing the same with the ureter—in other words, of performing ureteral auto-transplantations. The number of these experiments as yet made is too small to allow me to give a definite answer on the practical use of ureteral auto-transplantations, still I think I may call the results satisfactory. I hope to be able later to prove them on a larger scale and to confirm them with the bistological examination.

Rome.

A CASE OF TRICUSPID REGURGITATION.

BY R. O. MOON, M.D. OXON., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE HEART, SOHO-SQUARE, ETC.

THOUGH tricuspid regurgitation of organic origin is not particularly uncommon, yet it is so frequently accompanied by a lesion of the mitral or aortic valves or both that a case in which the endocarditis has affected the tricuspid valves only seems sufficiently rare to be worth recording.

A boy, aged 5 years, was admitted into the Hospital for Diseases of the Heart on May 22nd, 1911. There was nothing of importance in the family history. In infancy he had suffered from convulsions, but none after the first year. When 2 years old he had measles, and at 3 he suffered from diphtheria, the attack having been severe; the heart was said to be affected while in the fever hospital, and since then he had always seemed rather weak. Three months prior to admission he had seemed very tired and languid, at times being giddy, and in March he was in the Paddington Children's Hospital for "endocarditis," but remained rather a short time owing to the development of whooping-cough. On admission he seemed dull and apathetic, with a somewhat dusky appearance. The heart's apex beat was in the fifth space in the nipple line. Percussion showed distinct enlargement—dulness extending half an inch external to the nipple line and one-third of an inch to the right of the right border of the sternum; speaking generally, it was rather a flat area of dulness. A long, blowing, systolic murmur was heard all over the præcordial area and at the back, the pulmonary second sound was distinctly accentuated, and there was a cantering rhythm in the tricuspid area. I should mention that when seen in the out-patient department there was a systolic thrill internal to the apex, but this was not detected again while he was in the hospital. The liver was enlarged to within 2 inches of the umbilicus, but there was no tenderness, pain, or pulsation. The lungs presented nothing abnormal.

Soon after admission he complained a good deal of pain in the legs, and a moderate degree of œdema developed there. On June 8th there were dulness and deficient entry of air at the right base up to the angle of the scapula and in the right axilla; there was also considerable œdema in the lumbar region and most of all about the scrotum; in fact, general anasarca but no ascites. He was given diuretin gr. v., t.d.s., with very good results; the urine excreted during the few preceding days had averaged about 11 oz.; after taking diuretin a couple of days the excretion of urine increased considerably, while the œdema very largely disappeared, there being only some fluid at the bases of both lungs. On June 14th the temperature rose to 99·6° F., and on the 15th to 101·8°, returning to normal on the 20th. During this time there was an increase of the cardiac dulness upwards to the upper border of the third rib, and there was a triple sound suggestive of pericarditis in the third and fourth left spaces close to the sternum. On the 27th the œdema had again increased very much, particularly about the face, giving the patient a most typically renal aspect. However, though the urine was examined frequently, there was never more than a trace of albumin to be detected and no casts, so that it was quite clear that the case was purely cardiac. He was then given a mixture of tinct. digitalis. ♏ v.; spt. ætheris nitr., ♏ xv.; inf. scoparii ad ½ ʒ, every four hours, without producing much effect upon the œdema, which, however, was never so great as when it had first appeared. At this time a great trouble was sleeplessness and frequent shouting out at night, which disturbed the whole ward; he was never actually delirious; the shouting was loud and vigorous, but he always had something more or less intelligible to say when the nurse came to him. At first the condition was relieved by chloralamide (gr. x.) with ammonium bromide (gr. v.), but it soon ceased to be effectual, even after increasing the dose. After that occasional doses of nepenthe (♏ v.) were given at night, which calmed him to some extent, but the restlessness and shouting at night remained very marked features of the case. On July 3rd the triple sound at the base of the heart was no longer audible, but the cantering sound in the tricuspid area was still very evident. Just at this time the weather became excessively hot and the child seemed obviously worse, though there was no change in the physical signs, the cardiac action being regular and fairly forcible to within 24 hours of the end, which came on July 8th.

The necropsy, which was performed by my colleague Dr. Russell Wells, showed the following: Chest: 3 oz. of fluid in each pleural cavity. Lungs quite healthy. Heart: weight, 6¼ oz.; a few drachms of fluid in the pericardial sac; slight recent pericarditis at the base. Right auricle: hypertrophied and dilated; markedly muscular. The wall had numerous muscular bands, giving it the appearance of a normal ventricle. Left auricle: practically normal except for a fatty deposit diffused over the whole surface under the lining membrane. Aortic, pulmonary, and mitral valves competent and normal. The tricuspid valve showed recent translucent vegetations on all the flaps of the valve, having the appearance of glue tinted with saffron. Kidneys: right 2¼ oz.; left 2½ oz.; healthy; marked fœtal lobulation. Liver: weight 21½ oz.; well-marked nutmeg appearance. On the pancreas and adjacent tissues there were some little specks of about the size of a pin's head, of a dead yellowish-white appearance, probably fatty necrosis.

Finding the mitral valve normal did certainly come to me as a surprise; the fact that the systolic murmur was plainly heard at the back is generally held to be against the purely tricuspid origin of it; then, again, the accentuated pulmonary second sound seemed to point to the mitral lesion, but in children no doubt one cannot attach much importance to these signs. On the other hand, there was no cough or dyspnœa, and the comparative absence of œdema from the lungs was in striking contrast to the general anasarca. The cantering sound in the tricuspid area which usually points to an abnormal blood pressure in the right ventricle ought, perhaps, to have given the clue to a correct diagnosis.

Green-street, W.

BACTERIAL INFECTION OF THE STOMACH WALL TREATED BY VACCINE-THERAPY.

BY FRANK KENNEDY CAHILL, F.R.C.S. IREL., D.P.H.

THE following case may be of interest to some of the readers of THE LANCET.

The patient, a man, aged 48 years, who consulted me in April, 1910, had been suffering for some 12 months from "foul breath." So great was the social inconvenience that it became almost impossible for him to carry on his business, involving, as it did, intercourse daily with a somewhat fastidious *clientèle*. In his efforts to seek relief he had consulted many physicians and specialists, among the latter a very eminent throat specialist, who declared that he was quite free from nasal trouble, and a dentist who declared that his denture was flawless. I made a very careful general examination and could discover no physical disability save a cystitis of long standing (45 years). This latter the patient informed me dated back to his childhood, when he had been operated on for stone in the bladder at the age of 3 years. A stricture followed the operation, and as long as the patient could remember his urinary stream had been small. There were no symptoms of stone at the time of examination. On passing a No. 4 catheter about two ounces of "residual" urine came away; this was found to contain numerous pus cells, and on bacteriological examination yielded a growth of pure streptococcus.

The patient did not complain of "indigestion" (that much abused term). He had a hearty appetite, but eating or starving he had his "foul breath." The stomach emptied itself in normal time. Gastric chemistry was normal. Having secured specimens from his stomach, the cultivation yielded streptococcus and bacillus coli. There was a possibility that the streptococcus found in the stomach came from

the nose or was due to pyorrhœa alveolaris, but the opinions of the above-mentioned specialists would seem to negative this. So the patient would seem to be suffering from a bacterial infection of the stomach, and it is interesting to note that the streptococcus was found in the bladder also.

I had a "vaccine" prepared consisting of a streptococcus from the urine and a bacillus coli from the stomach in the following proportions representing millions:—

	No. 1.	No. 2.	No. 3.	No. 4.
Streptococcus	5	5	10	20
Bacillus coli...	5	10	15	20

I made the first injection on April 19th, and repeated the injection at intervals of one week, giving in all four doses. By the middle of May the "foul breath" had completely disappeared, and has not returned up to the present, now 17 months afterwards.

The case presents many features of extreme interest to the stomach specialist, but in the course of a short communication I shall refer to one only. Hitherto infection of the stomach walls by the bacillus coli has been noted by gastro-anterologists in obstruction of the pylorus due to malignant disease only, and I have been unable to find in the literature any record of a case in which, though the gastric motility was normal, a bacterial infection of the stomach mucosa by this organism had occurred.

The cystitis in this patient improved, but did not, of course, disappear, and the patient was quite content with the cure of his "foul breath" which, had it continued, would have necessitated his retirement from business. (He has now had the urethral stricture dilated and all pus has disappeared from his urine.)

Dublin.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SURGICAL SECTION.

Caries of Frontal Bone.

A MEETING of this section was held on Nov. 14th, with Mr. CLINTON T. DENT in the chair.

Dr. W. RINGROSE GORE read a paper entitled, "A Case of Caries of Frontal Bone and Intracranial Abscess due to Bacillus Typhosus 11 Years after Attack of Typhoid." The important point arose as to what could be done to prevent these cases of typhoid bone infection. Although not usually fatal in themselves, they might become so from their situation; for instance, an abscess might rupture through the dura mater, and a case of fatal peritonitis had been recorded following a typhoid abscess of the lower end of the sternum. It might be held that patients suffering from this condition were typhoid carriers, the habitat of the bacilli being in the walls of the gall-bladder where they could not be reached by medication or vaccines as they were shut off from the circulation, but from which situation they could occasionally infect the blood-stream. Removal of the gall-bladder had been performed, but the operation in these cases appeared to be a dangerous one. The other alternative appeared to be to try by successive courses of vaccine to create a blood immunity.

Mr. H. BETHAM ROBINSON read a paper on a case of Extra-peritoneal Rupture of the Bladder without Fracture of the Pelvis, and the meeting concluded with a paper by Mr. L. A. DUNN on a case of Retrograde Enteric Intussusception.

CLINICAL SECTION.

Exhibition of Cases.

A REPORT of Major Leonard Rogers's paper on the treatment of cholera among Europeans at Palermo, read at a meeting of this section on Nov. 10th, and the discussion thereon, were published in THE LANCET of Nov. 18th. At the same meeting many cases were exhibited, details of which are given below.

Dr. HERBERT P. HAWKINS showed a case of Enlarged Spleen with Recurring Hæmatemesis. The patient was a girl aged 9. She was said to have been pale and delicate from her birth. At the age of 4 she suddenly vomited half a pint of blood without pain and without any previous symptoms pointing to gastric disease. She was admitted into the Belgrave Hospital for Children and apparently soon recovered. At the age of 6 she had a second hæmatemesis, equally sudden, and she was said to have vomited a pint of blood. This was followed by melæna for several days. It was not certain, but it was probable, that this attack was accompanied by some pain in the epigastrium. She recovered in about six weeks. Early in 1910, at the age of 8, she began to have frequent attacks of pain "in the stomach and around the heart." Crops of small purpuric spots appeared on the chest, and the mother stated that she was easily bruised. On one occasion there was epistaxis. She was becoming pale and weak, and on admission into St. Thomas's Hospital in April of that year melæna was observed on several days in succession. The spleen projected 2½ inches below the costal margin and it was indurated. Red cells were 2,425,000, with a colour index of 0·7; leucocytes were 3700. Three normoblasts and five megaloblasts were seen. Polychromatophilia was marked. The coagulation time was 2·5 seconds. There was no other sign of disease beyond hæmic murmurs. After a month of treatment with arsenic the red cells were 3,437,000, with a colour index of 0·6. She remained fairly well, though always pale, till July 27th, 1911, when she suddenly vomited a pint of blood. For six weeks before this she had complained from time to time of abdominal pain just above the umbilicus. A few hours later there was further hæmatemesis, and melæna followed for several days. The spleen was enlarged and hard as before. Red cells were 2,200,000, colour index 0·5, leucocytes 2980, with no change in relative proportions; two normoblasts, but no megaloblasts seen. For 14 days there was pyrexia, maxima being 101° to 102° F. Under the use of arsenic the condition of the blood had slowly improved. The red cell count was now 4,328,000, colour index 0·8, leucocytes 3600. She was fairly well; she took food freely without any discomfort, but she was not gaining weight. The liver was just palpable, but it was within the limits of health. The pulse was seldom under 100, and the urine occasionally contained a trace of albumin. The spleen moved freely with respiration, and the question was whether the condition of the blood and the history of the illness justified its excision.

Dr. W. ESSEX WYNTER and Mr. JOHN MURRAY showed a case of Toxic Cirrhosis, with Spleno-portal Thrombosis and Ascites (Banti's Disease), treated by femoral drainage. The patient was a female aged 44. Eight years back, during pregnancy, while moving some furniture, she felt something give way in the left hypochondrium. Subsequent to delivery a lump was felt in this situation, and three months afterwards there was enlargement of the abdomen; three years ago, in similar circumstances, the abdomen was again distended. For three months before admission this distension had been increasing so as to cause difficulty in walking and breathing, with pain when lying on the left side, and œdema of legs. Diarrhœa had been constant. There was well-marked ascites, and the spleen descended to the level of the umbilicus. The diaphragm was pushed up, displacing the heart and causing some collapse of the bases of the lungs. The liver was small. On March 10th, 1911, 21 pints of serum were removed by paracentesis. It had a specific gravity of 1018 and contained 40 gr. per litre of coagulable protein and traces of mucin, but no reducing substance or cells. On March 24th, 28 pints were removed by paracentesis. On the 28th Mr. Murray opened the femoral ring through a semilunar incision in Scarpa's triangle. A small opening was made above Poupart's ligament to enable the peritoneum to be pushed through. This was then divided and stitched to the sides of the ring. A considerable amount of fluid escaped, but the abdomen was not completely emptied. The incisions were closely sutured, and healed in a few days. On account of the rapid formation of fluid causing tension in the femoral wound, paracentesis was twice performed in the surgical ward—May 5th, 23 pints, 16 oz.; May 23rd, 10 pints, 12 oz. She was discharged on May 26th. During September, owing to distension of the upper femoral region by gravitation of fluid, the scar again gave way, leaking slightly; owing to apprehension of possible peritoneal sepsis the patient was readmitted and fitted with an elastic support. While lying up the ascites returned and 16 pints were removed on

Sept. 29th before leaving. This was the first tapping since May 23rd (four months).

Dr. WYNTER also showed a male patient, aged 54 years, who was exhibited to the Fellows on Dec. 13th, 1907, as an example of Ascites due to Cirrhosis Hepatis, cured by permanent drainage through the femoral ring. This man, during the four years which had elapsed since the operation, had had no further ascites. There was slight yielding of the abdominal wall at the site of the scar, but this had caused no inconvenience.

Dr. WYNTER also showed a male patient, aged 50 years, who was operated upon for Ascites associated with Cirrhosis of the Liver in 1908, an additional precaution against premature closure of the femoral opening being the insertion of a decalcified bone tube. The patient had been at work for three years feeling quite well. At the present time there was some free fluid in the peritoneal cavity, and a dilated tortuous saphena vein indicated some obstruction at the site of operation.

Dr. N. S. FINZI showed a case of a large Malignant Growth of the Cheek which had disappeared under radium treatment. The patient was a female aged 48 years. She had been previously shown at the Laryngological Section in June. Since the age of 7 she had had a soft and painless swelling growing from the mucous membrane of the cheek. In May, 1910, this became painful, and a month or so afterwards enlarged, and continued to increase in size until it was removed widely in November, 1910. All seemed satisfactory until Dec. 19th, when there was a sudden rapid swelling in the cheek. This increased rapidly and was incised a few days later and a drop or two of thin pus obtained; nevertheless, the growth continued to increase rapidly. Early in the year there was an enormous swelling in the cheek of about the size of a Jaffa orange, slightly moveable, but with considerable œdema round it. At one spot it seemed on the point of bursting externally, as there was a small fluctuating area covered by extremely thin skin. No definite glands were felt, but the œdema, especially in the pre-auricular region, might have obscured these. From Jan. 3rd to 7th Dr. Finzi applied radium bromide, 105 mgr., in two tubes, one surrounded by platinum 1½ mm. thick, and the other by lead the same thickness, inside the tumour for 69 hours, and on lint outside the skin in two situations for 12 hours each. On Feb. 2nd the tumour had shrunk considerably, but there was a pre-auricular gland to be felt. This was excised and 100 mgr. of radium bromide with a filter of 2·5 mm. platinum was inserted into the wound for nine hours. On Feb. 23rd there were still a few nodules in the cheek; 205 mgr. of radium bromide were applied on lint externally for 30 hours and internally for nine hours. On May 11th prophylactic treatment was given with 205 mgr. radium bromide 34 hours in all. The patient now seemed quite well and the scar had gradually and continuously softened. Dr. Finzi said that it might be remarked that there was never any sign of sloughing of the growth after the treatment, but it simply gradually became absorbed, leaving in its place a depression and a scar. Sections were shown of the original growth and of the gland which was removed. The nature of the growth was either that of a glandular carcinoma or of an endothelioma.

Dr. REGINALD H. MILLER showed a case of Hæmochromatosis with Diabetes. The patient was a man, aged 38, who had noticed darkening of the skin for 18 years, but remained in good health until five months ago, when he began to waste and to suffer from thirst. The pigmentation began on the left shoulder, where the patient carried his bag of tools. It was now universal and was best marked on the face (which was leaden-hued), forearms, and legs. A recent scar on the skin was deeply pigmented. No part of the skin was normal in colour. In addition to the bronzing there were innumerable small darker spots resembling freckles. The scalp was pigmented, but not so deeply as the face. Axillary hair had disappeared, but pubic hair was present. The urine contained much sugar (6 to 10 per cent.) and acetone; from 100 to 150 ounces were passed daily. The glycosuria was little controlled by diet. The blood count shows—red cells, 4,700,000; white cells, 7900; hæmoglobin, 92 per cent. The mononuclear cells were proportionately increased. The liver was enlarged to the umbilical level, firm, and not tender. There were no symptoms of hepatic cirrhosis, and the patient had only suffered from very occasional attacks of mild indigestion throughout the course of the illness.

Mr. W. SAMPSON HANDLEY showed a case of Ivory Exostosis of the Frontal Sinus. The patient was a man, aged 35, who had noticed a lump growing on the inner side of his right eye for about three years. It had not given him any pain. At the operation an incision was made along the inner half of the eyebrow, inclining downwards towards the inner canthus. The exostosis was continuous with the frontal bone at the inner wall of the sinus, and here its base was divided with a chisel and removed. There was free bleeding, and air bubbled up from the bottom of the cavity, showing that it communicated with the nose. The cavity was packed and allowed to heal by granulation. The patient had suffered from bilateral nasal polypi for some years prior to the development of the osteoma. Five years ago the patient had three "black eyes" on the right side in quick succession, and thought that there had been some swelling ever since.—Mr. T. JEFFERSON FAULDER described a case and exhibited the exostosis removed.

Dr. NORMAN DALTON showed a case of Malignant Anæmia, Hæmolytic Type. The patient was a female, aged 59, who was admitted to King's College Hospital on Sept. 28th, 1907. The case seemed to be one of those rare instances of gastric cancer in which hæmolysis occurs, thus simulating the true pernicious anæmia. By Oct. 7th she seemed to be dying, was extremely prostrate and delirious, with a glazed tongue. She was now put on bismuth mixture and gradually improved. By Oct. 29th the red discs had gone up to 1,028,000, the colour index being 2. Vomiting ceased. She was able to leave the hospital on Nov. 22nd, 1907, greatly improved. A lump of doubtful nature noticed in September could not now be felt in the epigastrium. She was re-admitted on May 4th, 1908. She was extremely prostrate, vomiting, œdema of the feet, retinal hæmorrhages, &c. The epigastric lump could again be felt. She was put on liq. arsenicalis, ♏ iv., three times a day, but became worse, the vomiting being constant and delirium setting in. The red discs were 624,000, the colour index being 1·5: there was great leucopenia with relative excess of lymphocytes, megaloblasts, normoblasts. She was put on bismuth mixture instead of arsenic, and improved. On June 10th the red discs were 1,764,000, and the colour index was 1·8; there were no nucleated red discs. The spleen had never been found enlarged. She was well enough to leave the hospital on June 13th, and for two years she was able to get about at home and to do some house work. At Christmas, 1910, the asthenia and vomiting recurred, and she was readmitted to the hospital on July 17th, 1911. The red discs were 976,000, but the colour index was now just below normal. Abnormal red corpuscles were found. The abdomen was now full with a little ascites, and the liver and (?) the spleen became enlarged. She was very ill for a few days—viz., vomiting, glazed tongue, delirium, &c.—but improved under bismuth. By August 29th the red discs had gone up to 2,092,000, the colour index being 1, and no abnormal reds being found. On Sept. 21st the red discs were 3,280,000, and she is now really very well. The points about the case were that the toxins which cause the hæmolysis appeared to come from the stomach, because when she was ill the vomiting was such a prominent symptom, and bismuth brought her round, while arsenic made her worse. When, however, the gastric symptoms ceased she could take arsenic with advantage. It would seem as if the arsenic could not exert a favourable influence until the gastric irritation had been subdued. The original idea of cancer of the stomach must be abandoned after four years.

Dr. LEONARD WILLIAMS showed a case of Nocturnal Enuresis treated with Thyroid Gland. This patient's case was reported in THE LANCET of May 1st, 1909, in an article entitled "Adenoids, Nocturnal Incontinence, and the Thyroid Gland," as follows: "The patient, a girl, aged 11 years, was first seen on Feb. 2nd, 1909. She had wetted her bed every night since birth. For the last few years she had, in consequence, slept on straw. She was dull and apathetic, but not stupid. She was thirsty but her appetite was poor. The patient was not undersized and her weight was 5 st. 1 lb. The tonsils were somewhat enlarged, but there were no adenoids or nasal obstruction. The temperature was 99° F. in the mouth. One and a half grains of thyroid extract, three times a day, were ordered. Feb. 9th: The patient had missed wetting her bed for the last three nights—the first in her life. The same dose of thyroid extract was ordered. 16th: On three successive nights the bed had not been wetted. The

dose of thyroid extract was increased to 2½ grains three times a day. 23rd: No enuresis had occurred during the week. Thyroid extract was ordered as before. March 2nd: No enuresis. 9th: No enuresis. 12th: No enuresis." On March 12th, although there had been no enuresis, the patient complained of pain in the left arm, and on examination the elbow proved to be swollen and tender. She did not come to the hospital again until March 26th, and was consequently without medicine for a week. The bed had been wetted once, the night before her return. The dose of thyroid was reduced, and a mixture was ordered containing calcium iodide and arsenic. On April 2nd there had been no enuresis; the thyroid was stopped, but the mixture continued. On April 16th the bed had been wetted four times in 14 days; the thyroid was repeated. April 23rd: Enuresis had occurred once. April 30th: No enuresis. The patient remained quite free from enuresis from April 30th to August 11th. She was coming regularly to the hospital during that time, and was taking 1½ gr. of thyroid extract. The notes show that during that period there had been complaints of pains in the joints, especially the elbows and knees. From August 11th to Oct. 6th she remained away from the hospital. Having been given a supply sufficient for a month only, she had thus been without treatment for more than three weeks. On reporting herself at the end of that period she stated that she had wetted her bed three times during the previous week and once during the current week. From this date (Oct. 6th, 1909), under regular thyroid medication, there was, up to March 8th, 1910, no enuresis. She then disappeared from the out-patient room. During this time there had been several complaints of joint troubles. Early in January, 1911, I found her in the wards, under the care of Dr. W. Langdon Brown, who had been treating her for a typical attack of acute articular rheumatism, which had affected her mitral valve. There had been no urinary difficulties in the course of the attack, but the enuresis returned during convalescence. It was controlled, though tardily, by thyroid medication, continuing with considerable remissions until April 25th. On May 26th, 1911, she came to the hospital with a definite attack of left-sided hemichorea, which rapidly yielded to large doses of arsenic. In August she began menstruating; the periods have been regular and painless, but unduly profuse. Nov. 7th: involuntary movements returned last week. The mother of the patient was interesting as a case of pseudo-obesity, who was unable to tolerate the smallest dose of thyroid.

Mr. V. WARREN LOW showed a case of Lipoma of the Tongue. The patient was a man, aged 59 years, who had noticed the swelling on his tongue for eight years. It had been of gradual onset and had increased in size slowly. There was no pain, and only inconvenience owing to the size of the organ. There was a lobulated tumour on the right lateral aspect of the tongue extending for two-thirds of its length. The mucous membrane over the tumour was smooth, and through it could be distinctly seen the underlying lobules of fat. There was no infiltration of the tongue, which could be readily and easily protruded.

MEDICAL SOCIETY OF LONDON.

Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System.

MEETINGS of this society were held on Nov. 13th and 20th, Dr. J. MITCHELL BRUCE being in the chair.

Dr. F. W. MOTT opened a discussion on the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System, which was published in last week's issue of THE LANCET, p. 1392.

Sir DAVID FERRIER said that parasyphilitic affections of the nervous system—by which term he understood tabetic affections, whether spinal (locomotor ataxy), cerebral (general paralysis), or cerebro-spinal—formed a separate class, and when all or most of the cardinal symptoms were present were readily distinguishable from syphilitic affections proper. The term parasyphilis had a recognised significance, and every day strengthened the evidence that all tabetic affections were primarily of syphilitic origin, and that whatever else might be coöperative syphilis, hereditary or acquired, was a *sine quâ non* in their causation. But while parasyphilitic affections, when fully developed, were easily distinguishable from cerebro-spinal syphilis, doubts might be entertained by even the most experienced observers when the affections were in their incipient stage or when the manifestations were imperfect, irregular, or complicated by other symptoms due to syphilis or not, as the case might be. If he were to specify one symptom or sign above all others characteristic or pathognomonic of parasyphilis, he would without hesitation say the Argyll Robertson pupil, or condition termed reflex iridoplegia. That was practically always a sign of parasyphilis. Occasionally all symptoms might be so equivocal that they gladly availed themselves of the valuable aids to diagnosis which had been in recent times added to their resources in biochemical and cytological examination of the blood and cerebro-spinal fluid. Whatever might be the correct interpretation of the Wassermann reaction—and he thought the balance of evidence was against it being a specific immune reaction—there was, he thought, little doubt that, in its clinical setting, it was absolutely pathognomonic of antecedent syphilitic infection. It was, however, as Much termed it, a constitutional and not a symptomatic reaction. In cerebro-spinal syphilis it was obtained only in the serum, whereas in general paralysis it occurred with equal frequency in the cerebro-spinal fluid, and with almost equal frequency in that of spinal tabes. Those facts were of inestimable importance, and a positive Wassermann reaction of the cerebro-spinal fluid in a doubtful case would be quite sufficient to dispel all doubts as to the true nature of the case. There was one point of difference between general paralysis and cortical syphilis, which he had been in the habit of demonstrating at his hospital clinics for a great many years. It was that he had never found a general paralytic, at whatever stage of his disease, complain of or evince signs of pain on deep pressure or percussion on any part of his head; whereas in cortical syphilis, even when the patient had made no complaint of spontaneous headache, it was practically the invariable rule that pain, often obviously severe, could be elicited by deep pressure over the seat of lesion.

Dr. G. H. SAVAGE said that years ago he had been told that he was teaching wrongly when he said that general paralytics rarely complained of tenderness about the head or of headaches. He could only answer that it was very exceptional for him to meet with such a case. It was very common to meet people who were suffering from parasyphilitic trouble and other similar troubles, and who had headaches. Cases of parasyphilis and cerebral syphilis almost invariably slept badly. But the general paralytic, except in the stage of maniacal excitement, often slept very well indeed and did not complain of sleeplessness.

Dr. RISIEN RUSSELL said that he was in complete accord with Dr. Mott in regard to the failure of anti-syphilitic treatment in general paralysis, but he was fully convinced of its efficacy in tabes, and considered that no patient in the early stages of that disease should be allowed to go untreated by mercury administered by inunction or injection. Dr. Russell was glad that emphasis had been laid on the importance of differentiating neurasthenia from the affections that were under discussion. While failure of the pupil to react to light was all-important as proving the organic nature of the disease, the same could not be said of mere inequality of the pupils, for it was no uncommon thing to meet with unequal pupils in neurasthenia without its meaning that an organic basis existed to account for the neurasthenic symptoms. That the headache of brain syphilis was usually more severe than that ordinarily met with in neurasthenia there could be no doubt, but it could not be said that, although other cephalic sensations occurred in neurasthenia, those did not include headache, for the reason that true headache was a common symptom in the affection, and it might even be characterised as severe in some cases. He could most cordially endorse all that had been said in regard to the value of the Wassermann test and the examination of the cerebro-spinal fluid. Contrary to what he understood Dr. Mott to say, however, he had met with cases in which the Wassermann reaction from the cerebro-spinal fluid had been said to be positive when the blood had given a negative reaction. He had seen both ankle clonus and the extensor type of plantar reflex sufficiently often in general paralysis to rob those signs of the value with which they had been credited in the diagnosis of brain syphilis as opposed to general

paralysis. Excepting in cases of tabes-paralysis he was not in the habit of associating oculo-motor paralysis or gross paralysis of any cranial nerve with general paralysis, but had always regarded any such palsies as in favour of brain syphilis in contra-distinction to general paralysis. It was gratifying to hear such a definite pronouncement in regard to the value of the Argyll Robertson pupil in support of the parasyphilitic affections, for it accorded with his own experience.

Dr. E. FARQUHAR BUZZARD said that he believed he was correct in saying that Dr. Mott regarded parasyphilis as an abiotrophic process which, although it followed syphilis, was not in itself syphilitic, and did not depend for its progress upon the activity of the syphilitic virus. He entirely agreed with Dr. Mott that the pathological process underlying tabes was not a gross structural change comparable with that which they saw in the inflammatory lesions of syphilis, but he could not help looking upon it as one which was due to an active intoxication rather than as the expression of a primary neuronic decay. They were told—and he agreed with the statement—that the majority of tabetics gave a positive serum reaction. At the same time, Dr. Mott stated that the latter was an indication that the syphilitic virus was *still* active. If both those observations were reliable, they were certainly reconcilable with the view that tabes was the result of an active toxic process. On the whole, he found it *difficult* to regard the irritative phenomena of tabes as due to the degeneration of neurons prior to their death and loss of function. Many of them could be modified or averted by energetic antisyphilitic treatment, and in his opinion were the direct result of an active toxic agent. After all, the so-called parasyphilitic diseases were really the only syphilitic diseases of the nervous system; cerebro-spinal syphilis was not syphilis of the nervous system, but syphilis of its supporting and nutrient tissues. He agreed with all that Dr. Mott had said with regard to the value of the Wassermann reaction of the blood and of the cerebro-spinal fluid, but he had learnt to be careful not to attach too much importance to a negative result. They had heard much of the value of the Wassermann reaction in tabes. They had heard, too, of the Argyll Robertson pupil, of the absent tendon jerks, of Romberg's sign, and so on, but the ordinary physician, like himself (Dr. Buzzard), needed to give an opinion without constant resort to laboratory tests, and he could not shrink from diagnosing tabes sometimes even when Argyll Robertson pupils were absent or knee-jerks were present. Too little attention was paid habitually to the sensory phenomena of tabes, which on the whole were as reliable a guide as any other to a correct conclusion if their characteristics were appreciated. In view of the test-tube tendencies of the present time he did not think one could urge too strongly the importance of teaching medical students all there was to know about ordinary bedside methods of examination.

Mr. A. FLEMING said that the uses of the Wassermann reaction in nervous diseases were: (1) by examination of the serum to see if the patient had syphilis; (2) by examination of the spinal fluid to detect parasyphilitic affections, and especially general paralysis; and (3) to reassure the patient who had been cured, and so remove the dread of future trouble.

Major H. C. FRENCH, R.A.M.C., wrote that the number of brain and spinal syphilis cases in the army was very small in comparison with the large number of cases of syphilis. In his experience it was well under 3 per cent. as regards mixed methods, and not more than 1 or 2 per cent. in cases thoroughly treated by mercurial inunction and baths in the primary and early secondary stages. Two facts contributed to the relative infrequency in the army: first, the judicious early use of mercury; secondly, the fact that soldiers left the service, as a rule, under 40 years of age. In cases of cerebral or spinal syphilis which he had met with in the army it was the rule for them to have either been overlooked and entirely untreated in the initial stages of the disease, or they had frequently received such scanty treatment as to be scarcely worth the name. Dr. Lévy-Bing had informed him (Major French) a month ago in Paris that he had given over 500 intravenous and intramuscular injections of salvarsan. He had never succeeded in aborting syphilis even after four weekly doses in the primary stage. He found that the Wassermann reaction became negative in many cases, but it was the rule for it to become positive within two months. After six or seven months he frequently saw nervous manifestations develop, and he mentioned two recent cases of meningitis, facial paralysis, and extensive skin eruptions. The general opinion was that intravenous injections of salvarsan were therapeutically better than intramuscular, but that mercury should be administered for three years was the opinion commonly held by those who had extensively tried both drugs.

Mr. HUGH W. BAYLY said that he wished to place before them the results that he had obtained with the Wassermann reaction during the last year at the National Hospital, Queen-square. He had examined 11 cerebro-spinal fluids, and of those four were positive. He saw, however, from Dr. Candler's interesting paper in THE LANCET of Nov. 11th that he had been using too little cerebro-spinal fluid which might account for his low proportion of positives. With regard to the blood serum, of 33 cases diagnosed as tabes 13 were strongly positive, 9 positive, 1 doubtful, and 10 negative. That gave 70 per cent. of positives. Of 5 cases of doubtful diagnosis in which tabes was queried 4 were negative and only 1 positive. Of 17 cases diagnosed as general paralysis of the insane, 12 were strongly positive, 3 positive, and 2 negative = 88 per cent. positive. Of 8 cases in which general paralysis of the insane was queried, but not actually diagnosed, 3 were positive and 5 negative. Of 21 cases in which cerebral tumour was suspected only 3 (14 per cent.) were positive reactions. Of 18 cases of paraplegia examined only 4 (22 per cent.) were positive. Of 11 cases of hemiplegia only 3 (27 per cent.) were positive. Of 13 cases of pachymeningitis only 4 were positive. Of 10 cases of disseminated sclerosis 2 were positive and 8 negative. Eight cases of epilepsy and 4 cases diagnosed as cerebral thrombosis were all negative. Of 3 cases of primary optic atrophy examined, all three were positive. Purves Stewart had stated that the lymphocytosis of tabes and general paralysis of the insane was more marked than in any other form of organic nervous disease. Syphilis by itself, unless there be an active syphilitic lesion of the central nervous system, produced little or no excess of lymphocytes in the cerebro-spinal fluid. F. Plaut says that cellular increase may be found in secondary or tertiary stages (even though only latent) without any syphilitic manifestation in the central nervous system. The number of lymphocytes may reach a great height, up to 400, without producing a positive Wassermann reaction in the cerebro-spinal fluid, and *vice versâ* the intensity of the Wassermann reaction of cerebro-spinal fluid is in no relation to the cell contents, one case with a very strong Wassermann reaction showing 17 cells, and another with a very weak Wassermann showing 245 per cubic millimetre. There was also no relation between the strength of the blood Wassermann and the cellular content of the cerebro-spinal fluid. Dr. Mott had obtained a positive Wassermann reaction in every case of tabes and general paralysis of the insane in the blood, and considered that the amount of lymphocytosis in the cerebro-spinal fluid was an index of the activity of the disease. Dr. Mott found that in tabes and general paralysis of the insane antisyphilitic treatment had no effect on the lymphocytosis, so he (Mr. Bayly) imagined that it would only be in syphilitic meningitis that that effect was produced. Candler considered that an excess of lymphocytoses in the cerebro-spinal fluid indicated organic disease, but not necessarily either syphilis or parasyphilis. It was difficult to bring the observations of those four authorities into line. He (Mr. Bayly) would ask Dr. Mott whether he would consider a diminishing Wassermann in the blood or a diminishing lymphocyte content in the cerebro-spinal fluid the more valuable indication of improvement and reaction to treatment.

Dr. WILFRED HARRIS said he had hoped that Dr. Mott would have said something about a special neuro-toxin in connexion with the development of general paralysis and tabes; there were so many instances of individuals being infected from the same source and having general paralysis or tabes. There was one instance of as many as seven people being infected by one blow-pipe for blowing gas, and five developing general paralysis of the insane or tabes. The facts concerning conjugal tabes and conjugal general paralysis pointed in the same direction. With regard to injury, he had twice seen general paralysis follow so closely upon injury of the head that he was inclined to regard it as a determining factor in the disease.

Lieutenant-Colonel A. DE C. SCANLAN, R.A.M.C. (retired),

expressed his entire disagreement with the view of Sir David Ferrier that syphilis was a *sine quâ non* in tabes; he differed also from Dr. Mott that syphilis was practically the only cause of that disease. He had seen a considerable amount of syphilis in the army, but he had seen only one case of tabes in the army, though several cases had come under his notice outside the army, and in those he had found no signs of syphilis whatever. His opinion was that tabes was due to a toxæmia and that syphilis was only one of the causative factors.

Dr. H. CORNER remarked that when he was at Bethlem Hospital many years ago he took a great deal of interest in the question of general paralysis of the insane in its connexion with syphilis, and he would like to know whether Dr. Mott looked upon syphilis as the only cause of general paralysis. His opinion was that something beyond syphilis was required in order to produce general paralysis, and that syphilis was a predisposing cause producing a low form of inflammation throughout the body, and there was a tendency to proliferation of cells and a tendency to a cirrhotic condition later on. The progressive character of general paralysis and the non-progressive character of other syphilitic lesions was a fact which needed explanation.

Dr. MOTT, in reply, thanked all those who had taken part in the discussion. He said that many cases of tabes under his own care had benefited a good deal by mercurial treatment. He was doubtful whether mercury did much good for general paralysis of the insane. Many blood examinations of the cerebro-spinal fluid and of the blood had been done at Claybury, and invariably in general paralysis there was a reaction with the blood serum when there was a reaction in the cerebro-spinal fluid. But he had heard of cases in which the cerebro-spinal fluid gave the reaction and the blood did not, and therefore he would not be too dogmatic on the point. He did not consider that the Wassermann reaction should be looked upon as absolutely infallible. He did not say one could not get a positive Wassermann in cerebral syphilis, but if the cerebro-spinal fluid gave a positive reaction it was 5 to 1 that it was parasyphilitic and not syphilitic.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Some Aspects of High Blood Pressure.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 10th, Mr. H. LITTLEWOOD, the President, being in the chair.

Dr. A. MANTLE read a paper on Some Aspects of High Blood Pressure Requiring Special Consideration in Treatment. He said: It is an interesting fact that it is to two members of this society, Dr. George Oliver and Sir T. Clifford Allbutt, the profession owe so much for pressing home the importance of blood-pressure observations being made as they now are in almost all consulting rooms and medical wards. In normal man the average level of blood pressure is maintained with great constancy, and of all the parts of the vascular system the abdominal vessels innervated by the splanchnic nerves have by far the greatest effect on general blood pressure, and Janeway says that an abnormally high pressure cannot exist permanently unless there has been some damage to the regulating power of the visceral circulation. The most common source of the poison disturbing the visceral circulation is from the alimentary canal when the toxic products of decomposition, the result of over-indulgence, become absorbed. Lead and alcohol, which also bring about a disturbance of metabolism, act in the same way, and so probably does sepsis. The result of these disturbances is the absorption of pressure toxins and a rise in the blood pressure. The influence of prolonged worry through the nervous system in bringing about visceral circulatory changes, as also that of external temperature—exposure—in the hypersensitive, is great, and may lead to high blood pressure and arterio-sclerosis if the defences of the body are found weak, particularly those of the liver and kidney. High blood pressure may be *temporarily* high or *permanently* so. A temporarily high pressure may be due to a disordered metabolism, and more often it is met with in the neurotic subject, and too much attention should not be paid to such observations. It is the permanently high pressure which gives us anxiety, and the effects of such may be very far-reaching, for the increased resistance in the vessels and left ventricle which has to be overcome soon leads to a thickening of the muscular fibre and eventually to fibrotic changes. Arterio-sclerosis when developed may not affect the whole arterial tree, but may be local. In the latter cases with an unequal distribution of sclerosis there may be no appreciable rise in blood pressure, although considerable disease is very apparent in some of the superficial vessels. Hyperpiesis is a name given by Sir T. Clifford Allbutt to a class of case in which we have a high blood pressure with or without cardiac hypertrophy and symptoms (possibly covering years) referable to a functional disturbance of the liver and bowels. It occurs in the middle-aged, who show no symptoms of arterio-sclerosis and with no evidence of nephritis. Some of these cases get better if detected early. They are frequently associated with chronic constipation and are due to toxins absorbed from the bowel having pressure properties. The treatment of super-pressure has been too much confined to drugs of the vaso-dilator type and to iodides. If there is a loss of balance between the peripheral and splanchnic circulations we want to restore it and not allow too much blood in the organs of the splanchnic area with too little in the skin reservoir, for this must mean congestion of the viscera involved. This can be relieved by judicious purgation, and best probably by mercury in the form of calomel or blue pill and saline purgatives. The skin must also be kept active by attracting blood to the systemic periphery, and no doubt the *régime* and balneological treatment of a good spa are very helpful in cases of supernormal pressure. It being proved that purin bodies and alcohol keep up the pressure, a very regulated intake must be insisted upon with a diminution of red meats and salt. Supernormal pressure is not in itself a primary condition, and we must look for the causes of it. A word of warning must be given to the enthusiast who, seeing the mercury of the manometer reach the top of the tube, determines to have it down at any cost, for he forgets that owing to the gradual increase of blood pressure each individual readjusts his cardio-vascular physiology to compensate this, and the physiological limit is not now 130 to 140 mm. Hg, but may be 220 mm., and to reduce pressure below this new physiological limit is not only not indicated but bad treatment. In other cases it is noticed that with the development of symptoms from the heart the pressure falls, and then it is our duty to raise it with digitalis or strophanthus, and vaso-dilators must on no account be given. It is important to remember that high blood pressure does not mean in all cases arterio-sclerosis and nephritis, but is a condition which is not infrequently amenable to treatment.

Dr. J. H. FRYER showed a man suffering from Diffuse Scleroderma. The symptoms had started some 12 months before with arthritic manifestations, and the condition was diagnosed by several observers as a rheumatoid one. The arthritic pains were due to the thickening and contraction of the tissues round the joints. So marked was this that fissuring of the skin occurred over many of the smaller joints of the hand. There was also much pigmentation. The condition was gradually passing off, apparently having been uninfluenced by any form of treatment.

Mr. H. COLLINSON showed a girl from whom a large Retro-peritoneal Tumour had been removed. The tumour occupied the whole of the left side of the abdomen and the third part of the duodenum passed across it. In removing the tumour the duodenum was torn, and owing to difficulty in repairing the rent three inches of the duodenum were removed, the proximal end was closed completely, and the jejunum anastomosed with the stomach. The patient had recovered without any complication and was taking ordinary food without inconvenience.

Dr. T. WARDROP GRIFFITH referred to some cases that had recently been under his care which presented the physical sign known as the "third sound" of the heart. The association of this with the presence of an extra wave in the jugular pulse was discussed, and tracings were shown from the cases in which this wave was well seen. The extra wave in question was that described by Hirschfelder and by A. G. Gibson, and followed on the fall of the so-called ventricular wave of Mackenzie. The summit of this ventricular wave was usually regarded as indicating the end of ventricular systole and the consequent opening of the auriculo-ventricular valves, and the extra wave had been regarded as being due to the initial rush of blood into the

ventricles leading to a temporary closure of the auriculo-ventricular valves, a closure which it was thought was the cause of the extra sound in question. It was believed that the extra sound was due to the closure of the mitral rather than the tricuspid valve, for the blood pressure attained to a much higher level in the left auricle than in the right, being driven into the left by the contraction of the right ventricle. The extra wave in the jugular pulse was, of course, an indication of what was going on in the right side of the heart, and indicated a temporary closure of the tricuspid valve during the early part of the ventricular diastole just after the initial rush of the blood from the auricle, and it might be that this closure contributed to the sound under discussion. The importance of recognising the sound was commented on, and especially its distinction, which was sometimes difficult from the early and short diastolic bruit of mitral stenosis. The wave of Hirschfelder and Gibson was often seen in jugular tracings in patients who did not present the third sound; this was natural, the sound was a feeble one at best, and its occurrence meant a somewhat vigorous closure of the auriculo-ventricular valves.

Dr. G. W. WATSON showed a specimen of Acute Vegetative Endarteritis of the Aortic Arch from a man, aged 59, who gave a definite history of syphilis. Death occurred from malignant disease of the transverse colon. In addition there was found an active tuberculosis of the lungs.

Dr. ALEXANDER SHARP showed a case of Gumma of Highmore's Antrum, with subsequent destructive lesion in the nose, causing necrosis of the inferior turbinal, nasal antral wall, part of the hard palate, and posterior part of the septum. There had been immediate response to "606."

Mr. B. G. A. MOYNIHAN showed a specimen of Diverticulitis of the Sigmoid. The condition had given rise to acute symptoms in the left lumbar region, and an abscess had been opened with a fæcal fistula as the result, when the case came under his care. Mr. Moynihan then performed a second operation, resecting the diseased portion of the gut, with complete recovery.

Dr. J. B. HELLIER showed a case of Sarcoma Uteri, with sarcoma of ovary, right pyosalpinx and appendicitis, and abscess in omentum. The affected parts were removed and good recovery made.

Dr. C. OLDFIELD showed a case of Post-abortion Tetanus in which recovery had taken place after the use of anti tetanic serum.

The PRESIDENT showed a patient on whom he had successfully operated for Ruptured Liver. The patient, a boy aged 12 years, fell down a hole 4 feet deep, and injured his abdomen by striking it against a stone. He was operated on about six hours after the accident on July 28th last. On opening the abdomen it was found full of blood, and a rupture on the upper surface of the right lobe of the liver, about 3 inches in length, which was freely bleeding. As the rupture was far back and could not be brought to the surface, the round ligament and part of the falciform ligaments were divided; this made it possible to bring the liver easily forward into the wound. The rupture was closed by six deep No. 5 catgut sutures. The patient was very collapsed, and he was infused with three pints of saline solution. He made a good recovery.

Cases and specimens were also shown by Dr. A. G. BARRS, Mr. G. CONSTABLE HAYES, Mr. W. H. HOOTON, Dr. M. J. STEWART, and Dr. W. W. ADAMSON.

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.

Pulmonary Gangrene, with Operation and Recovery.—Mycotic Infection.

A MEETING of this society was held at the Royal Devon and Exeter Hospital on Nov. 10th, Mr. J. M. ACKLAND, the President, being in the chair.

Dr. W. GORDON reported a case of Pulmonary Gangrene, with Operation and Recovery. The patient, aged 35 years, had had an attack simulating influenza on August 25th, 1911, and was confined to bed for three days; after an interval of six days a relapse took place, with raised temperature and a complaint of great pain between the shoulders. He returned to bed with cough and expectoration, the latter becoming horribly offensive in 48 hours. On Sept. 30th Dr. Gordon first saw the patient in consultation with Dr. C. E. Stokes, when the outstanding features of the case were distressing attacks of paroxysmal cough, accompanied with the expectoration of intolerably offensive sputum of a greyish colour. Turpentine given four-hourly in 15-minim doses had exerted no apparent influence, and it was therefore decided to admit him to hospital for vaccine treatment, and if necessary operation. On admission the temperature was 100° F. and the patient was evidently losing weight. A patch of deficient resonance was found posteriorly in the right lung about its centre. There was no evidence of excavation. Dr. R. V. Solly punctured and withdrew a couple of drachms of grey fœtid fluid, and from this a Gram-negative bacillus was isolated and a vaccine prepared. Meanwhile turpentine was given by the mouth and continuous inhalations were employed. On the fourth day following admission 1,000,000 bacilli from the prepared vaccine were injected, but after an initial rise the temperature soon returned to its former level with no tendency to further reduction. At this juncture the sputum became blood-stained in addition to its extreme fœtor, and operation was decided upon. Dr. J. D. Harris, under local anæsthesia, opened a small cavity below the angle of the right scapula, and offensive material escaped showing here and there blackish pieces of lung tissue. Following upon operation the temperature fell and tended to remain lower, although irregular and intermittent. Vaccine treatment was now continued, 5,000,000 bacilli being injected on Oct. 9th. On the 11th the temperature was still 100° and both discharge and sputum were most offensive. Dr. Gordon then ordered one-drop doses of cyllin four-hourly, but although there was a fall of temperature no improvement could be detected locally. On the 15th a mixture containing iodoform gr. v., cyllin ℥ v., and olive oil ℥ ss. was injected into the lung along the drainage-tube. Beyond a sharp attack of coughing there were no disquieting symptoms following the injection, and this was repeated on the 19th. Rapid improvement followed, and on the 30th the tube was left out. Further vaccine injections of 10,000,000 and 20,000,000 bacilli were given on the 20th and 30th respectively. Beyond a small sinus discharging inoffensive pus the man was now almost well. In reviewing the case Dr. Gordon was doubtful that any curative effect could be referred to the vaccine treatment, but the beneficial influence of the cyllin and iodoform could hardly be disputed, the temperature falling to and remaining at normal shortly after the second injection. Dr. Gordon testified his gratitude both to Dr. Solly and Dr. Harris for their association in the case, and he congratulated Dr. Harris on the operative results in a type of case so often fatal under surgical interference.—Dr. HARRIS said that the accurate localisation of the house surgeon had rendered the operation speedy and effectual.—Dr. SOLLY emphasised the importance of isolating the organism by lung puncture. In this case the Gram-negative bacillus obtained appeared to be non-pathogenic. In his mind the origin of such a case would be pneumococcic, other organisms finding an entrance when hepatisation had given place to necrosis.

Dr. SOLLY read a paper on Mycotic Infection. In this he mainly followed the classification and description of the French authorities, and confined himself chiefly to the blastomycoses, or exascoses, and the sporotrichoses. As regarded the exascoses, he mentioned that De Beurmann and Gougerot used this word to include those blastomycoses which were well recognised and defined, while the word blastomycoses remained to cover the ill-defined and doubtful forms. I. The exascoses were divided into (*a*) the saccharomycoses, (*b*) the endomycoses, and (*c*) the zymonematoses. (*a*) The saccharomycoses were mostly rare conditions, but produced: (1) an infection of the mucous membrane resembling thrush; (2) a disseminated gummatoid mycosis with osteitis of tibia, and finally general septicæmia; and (3) tumour formation (due to saccharomyces tumefaciens) with in one case a lumbar abscess and meningitis. (*b*) The endomycoses. Common thrush due to endomyces albicans. This was occasionally generalised. Other endomycoses occurred due to allied endomyces. (*c*) Zymonematoses. The word had its derivation from the Greek, meaning yeast-filament. The organism occurred in the pus and tissues as a yeast cell, but filaments or mycelia also were produced in cultures. Examples of zymonematosis were: the zymonematosis of Gilchrist, or

blastomycosis (or oidiomycosis) American. This occurred mainly as a papillomatous dermatitis, but generalisation also occurred, with acneiform pustules, ecthymatous or serpiginous ulceration, subcutaneous gummatoid nodules, large or small abscesses, and invasion of bones and viscera, gastro-enteritis, nephritis, broncho-pneumonia, meningitis, with definite pyrexia, great emaciation, and marked deterioration of general health. The prognosis was very grave, but by early diagnosis and treatment by iodides, combined with surgical and electrical measures, recovery might be effected. The diagnosis was in most cases arrived at by a bacteriological examination. Bacterial infections (including tubercle) must first be excluded. Films should be treated in a wet state by 40 per cent. aqueous caustic potash, and cultures made on Sabouraud medium. A general diagnosis of exascoses might thus be made sufficient for the purpose of prognosis and treatment. II. Sporotrichosis. This disease was apparently very common in France, and would probably be found more frequently in England, when medical men were on the look out for it. A case had been recently published by Dr. Norman Walker and Dr. J. Ritchie of Edinburgh with a very complete description of its clinical and bacteriological aspect, and illustrated by beautiful plates. The prognosis certainly depended on the diagnosis. If treated by large doses of iodides, with local applications of preparations of iodine, a rapid cure ensued, but untreated or treated as a case of tuberculosis or syphilis it might last for years. The fungus in the pus and tissues occurred in a short oblong form, like a large short bacillus, but in cultures showed a felted mycelium, attached to which were numerous spores. There were various clinical forms of this disease. 1. The disseminated gummatoid form due to general dissemination of the fungus by the blood stream. This was divided into (*a*) the non-ulcerative form, where the gummata which might be disseminated all over the body, slowly softened, finally ending in a cup-shaped swelling with marked induration of edges, and containing a viscid fluid, and in which ulceration rarely resulted unless the abscess was incised; (*b*) the ulcerated form where ulceration was common and more rapid; and (*c*) the mixed form, with disseminated nodules, and also affections of mucous membranes, muscular tissue, synovial membranes, bones, eyes, testes, and various skin troubles, resembling eczema, acne, boils, pemphigus, lupus, &c. 2. The localised form with gummatous nodules starting as an initial lesion, or "chancre," and extending up the limb by means of the lymphatic vessels and so causing a succession of nodules, as in Dr. Norman Walker's case. A localised facial or cephalic form had also been described. Extra-cutaneous varieties also were found, particularly affections of the bucco-pharyngeal mucous membrane, either an acute anginous condition, possibly with false membrane, or in a papillomatous form. An acute febrile sporotrichosis also might arise, with successive exacerbations like an acute infectious disease. Each fresh attack of fever was signalised by a fresh eruption of gummata, and rigors, vomiting, epistaxis, and sleeplessness also occurred. In experimental sporotrichosis all these lesions were reproduced, and also general septicæmia, with lesions in kidneys, liver, suprarenals, and testes, and pneumonia, peritonitis, endocarditis, encephalitis, and meningitis. A hereditary sporotrichosis was also observed. Rats and mice were the best animals to experiment with. The commonest form of sporotrichosis was the sporotrichosis Beurmanni. The clinical diagnosis had to be made from syphilis, tuberculosis, leprosy, general lipomatosis, glanders, and osteomyelitis, coccic or tuberculous. One of the chief points to observe was the great number of lesions combined with the good general condition of the patient. The multiple, softening, gummatoid subcutaneous nodules were most characteristic. The bacteriological examination was simple. Direct examination of pus or other fluids was of little value. Culture at room temperature of material freely spread on Sabouraud's medium should be made, and a diagnosis might be made quickly by letting a drop of pus flow down the dry glass of the culture tube, and observing this day by day microscopically when mycelial threads might be observed, and finally the typical cultural form, with spores and felted mycelium. A more rapid diagnosis might be made by an agglutination test, using free spores obtained by filtering an emulsion of a culture in salt solution. Agglutination also occurred in cases of other mycoses, such as an endomycosis or actinomycosis, but in a lower dilution. Dr. Solly showed a culture of sporotrichosis Beurmanni and a section of an experimental lesion of the mouse, most kindly given him by Dr. Ritchie (obtained from his and Dr. Norman Walker's case). He also showed stained films and a living culture, observed microscopically growing on an agar hanging drop, of sporotrichosis from Dr. Ritchie's culture, and a microscopical Gram-stained specimen of an epithelial scale infected with mycelial threads from a case of extensive tinea circinata.

At the close of the proceedings a resolution was moved from the chair and carried unanimously congratulating Dr. C. J. Vlieland on his election as mayor of the city of Exeter for the ensuing year.

EDINBURGH OBSTETRICAL SOCIETY.

Valedictory Address.

A MEETING of this society was held on Nov. 8th, Dr. F. W. N. HAULTAIN, the President, being in the chair.

The PRESIDENT chose for his Valedictory Address the association of Sir James Young Simpson with the society, at this was the 100th anniversary of Simpson's birth. He joined the society in 1840, on the first occasion showing the external genitals of a female with central perineal tear. During his first year he made 18 communications, one of which was on the differential diagnosis of fibroid from ovarian tumours by auscultation and detection of the bruit. In 1841 he was elected president, a position he held for 16 consecutive years. During the next session he read a paper on the Diagnosis of Diseases of the Womb by the Employment of Uterine Bougies or Uterine Sounds, dilating on the use of the sound from a diagnostic and therapeutic aspect, and proposed the permanent retention of a sound in the form of an intra-uterine stem for displacements. With the inception of the sound a new era in gynæcology might be said to have arisen and pelvic diagnosis placed on a scientific basis. Though communicating many interesting papers it was not until Jan. 20th, 1847, that one of outstanding importance was given, on a case of turning under the influence of sulphurous ether. He had delivered a living fœtus from a woman whose previous labour had with difficulty been completed by craniotomy. This was the first instance in which ether inhalation had ever been used during labour, and was destined to form the commencement of a new and important epoch in obstetric practice. This was of special importance with regard to the Boston controversy as to priority. This case was the commencement of a series of valuable articles on "Turning as an Alternative to Craniotomy." This patient was an example of early rising, as with Simpson's sanction she rose, dressed, and walked into the next room on the fourth day. At a subsequent meeting he read a paper on the Inhalation of Ether in the Practice of Midwifery, but the original communication on the all-important subject of Chloroform Anæsthesia was read at the Medico-Chirurgical Society on Nov. 10th, 1847. In the same year he read a paper on the use of Guttapercha for Obstetric Instruments, showing its ready adaptability for pessaries. A series of papers on fibroid tumours contained reasons against the induction of abortion when fibroids complicated pregnancy, and suggested the use of the galvanic current to promote atrophy and calcification. The subject of albuminuria in pregnancy occupied his attention also in 1847; in the paper he showed that when convulsions supervened there was a marked diminution in the quantity of urine passed and the amount of urea it contained; and mentioned the greater frequency of this condition in primiparæ than in multiparæ and the tendency to complete cure. In 1854 he discussed the advisability of inducing labour in cases of severe albuminuria, and proposed the method of induction by passing the sound between the membrane and the uterine wall. In 1851 he published a paper on the Communicability of Puerperal Fever, and laid stress on the disease being acquired in the majority of instances, not by direct infection from one to another, but by the aid of a third party, the medical attendant or nurse. The subject of forceps occupied his attention, and he laid down the principle that it was the delayed use of the forceps, not their ready use, in which their supposed danger lay. As regards ovariotomy, he strongly urged, in 1845, the necessity of its performance, and decried the palliative procedure of tapping. Simpson made public through that society an

immense amount of valuable work, impressing them with the magnitude of his powers and the extraordinary fertility of his brain. His entire efforts seemed to have been concentrated in the attempt to diminish suffering. Wealth and fame had to him no attractions. Interest in his work absorbed him; a freak in the Cowgate would attract him from a houseful of patients redolent with the *élite* of Great Britain. His influence on the medical school was remarkable, and he was ever ready to help and stimulate younger workers and to give praise where it was due. In conclusion, Dr. Haultain advocated the commemoration of the centenary of his birth by erecting a suitable maternity hospital.

The following were the office-bearers elected for the ensuing session:—President: Dr. J. Haig Ferguson. Vice-Presidents: senior, Dr. N. T. Brewis; junior, Dr. J. W. Ballantyne. Treasurer: Dr. G. F. Barbour Simpson. Secretaries: Dr. Angus Macdonald and Dr. B. P. Watson. Librarian; Dr. J. Lamond Lackie. Editor of Transactions: Dr. H. Oliphant Nicholson. Members of Council: Dr. W. Craig, Dr. E. H. Lawrence Oliphant, Professor J. A. C. Kynoch, Dr. Kenmure D. Melville, Dr. F. W. N. Haultain, Sir J. Halliday Croom, Dr. William Fordyce, and Dr. A. M. Malcolmson.

LIVERPOOL MEDICAL INSTITUTION.

Albumin Reaction in Tuberculous Sputum.—Orthopædic Surgery.—A New Cell Proliferant.

A MEETING of this society was held on Nov. 9th, Dr. T. R BRADSHAW, the President, being in the chair.

Dr. NATHAN RAW read a note on the Albumin Reaction in Tuberculous Sputum. He said that Lesieur and Prirey had found this reaction present in 75 per cent. of cases before the appearance of physical signs. Dr. Raw gave his own experience of the value of this test, which he said was, on the whole, favourable.—Dr. W. B. WARRINGTON and others mentioned some difficulties in the way of the application of the test.

Mr. ROBERT JONES described several operations in Orthopædic Surgery—(1) an operation for extreme claw-foot; (2) an operation for ankylosed tubercular shoulder; and (3) removal of bone wedges with interval fracture.—Mr. RUSHTON PARKER thought that the methods mentioned were worthy of praise and support.—With regard to the operation on the shoulder-joint, Mr. JONES said that sinuses were rather rare. If present he would, as a rule, wait until healing had taken place.

Dr. C. J. MACALISTER communicated a paper on a New Cell Proliferant, the investigation of which had originated from the study of the Symphytum or common comfrey. In the old literature of medicine the root of this plant was invariably referred to as being a valuable vulnerary, and although long abandoned by the profession it was still much used by country people as a dressing for sores. Having been much impressed with the importance which was attached to comfrey in the past and with the recorded cases which seemed to benefit from it, he proceeded to investigate it. On being analysed by Dr. Titherley and Mr. Coppin, of the chemical department of the University, it was found to be rich in allantoin which was afterwards prepared synthetically, and on experimenting with solutions of this substance it was found to act as a potent cell proliferant. Dr. Macalister quoted the observations which he had made himself and which others had made for him with ulcers of various types dressed with allantoin solutions with a view to test its efficacy, and there was no doubt that it had accelerated epithelial growth and that it would prove useful in the future for the treatment of ulcerative conditions.—Several members gave evidence as to the value of the drug as applied by Dr. Macalister.—Mr. PARKER thought that some surgeons too seldom thoroughly acquired the principles underlying the accurate management of ulcers.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A clinical meeting of this society was held at the Royal Sussex County Hospital on Nov. 8th.—Dr. E. Hobhouse exhibited: 1. A case of Tumour of the Optic Thalamus in a male aged 19, who had double optic neuritis, with marked tremor of the intention type, and some weakness and ataxy of the right arm. There was no astereognosis or anæsthesia, or other symptoms. He was improving without any treatment. 2. A case of Anterior Poliomyelitis in a young man of the paraplegic type. At the commencement of the attack there was a good deal of pain in the legs, but now sensation was quite normal. He was making a good recovery, being able to walk, although somewhat lame.—Dr. W. Broadbent showed: 1. A woman who several years ago had a Pneumothorax on the right side, with the heart displaced to the left. The air had become absorbed but the lung remained collapsed; consequently the heart had been drawn over to the right until the apex was in the right vertical nipple line. 2. A case of Early Myxœdema in a woman which was improving under thyroid extract. There was still some solid œdema of the face, and her hair was falling out. The skin had been dry and she was very lethargic. 3. A youth aged 20 with Right Hemiplegia and Aphasia of Embolic Origin, which came on suddenly nine months ago. He had aortic regurgitation, with a loud diastolic murmur over the base of the heart; also a well-marked presystolic murmur at the apex with no evidence of mitral stenosis (Flint's murmur). 4. A man aged 65 with Stokes-Adams Disease. His heart-rate was 28, with an auricular rate of 80. He has syncopal attacks at intervals. He has been under treatment for two years and is able to work in his garden.—Dr. A. Winkelreid Williams showed two cases of Diverse Skin Diseases the nerve origin of which is undecided, but which were localised on definite zoster areas. 1. Linear Morphœa in a young woman in which there were two wide streaks, an oblique one on the left parietal region of the scalp and a vertical one on the forehead extending up into the scalp just to the left side of the middle line. Both patches were in the atrophic stage, the disease having lasted 12 years. Both showed a distinct atrophic groove in the underlying bone. The area affected is supplied by the two branches of the frontal nerve, the supra-trochlear and supra-orbital, the defect being probably in the Gasserian ganglion. 2. A Verrucose Nævus in a child aged 7. The condition was first noticed at six months of age. It mapped out exactly the area of the third cervical nerve as depicted in Head and Campbell's monograph on the pathology of herpes zoster. The patient is under treatment with solid CO_2.—Mr. A. H. Buck showed a case of Excision of a Tuberculous Knee-joint in a girl aged 19. The knee was first treated for seven months in a Mackintyre splint, which reduced the swelling and straightened the limb. It was then put into a Thomas's splint for six months, but it still remained painful when any weight was put on it owing to stretching of adhesions. The knee was therefore excised, the patella being saved by division, shaving off the posterior aspect, and uniting by wire at the end of the operation. The result after 12 months' walking was a perfect position, and as good utility as could be expected after excision.—Mr. A. G. Bate (for Mr. T. H. Ionides) exhibited: 1. A case of Paralysis of the Deltoid, Supraspinatus, and Infraspinatus, due to a lesion of the brachial plexus caused by a fall on the shoulder. 2. A patient with Symmetrical Painless Swellings of the Hands. Skiagrams showed that the process involved the bones also with the same symmetry. The terminal phalanges were rarefied, especially in the little finger; the other phalanges showed at their distal ends absorption, which gave to them the appearance of having been drilled with a gimlet. The degree of swelling seemed to correspond in each finger with the severity of the underlying bone condition. There was no history of syphilis and Wassermann's and von Pirquet's tests were negative. There was no sign of any nervous lesion, peripheral, spinal, or cerebral. The general health of the patient was excellent and the disease had developed without any demonstrable cause. It was suggested that the condition was a neuropathy, of a nature allied to that seen occasionally in syringomyelia.—Dr. H. Galt showed the following specimens: 1. Aneurysm of the Transverse and Part of the Descending Arch of the Aorta. There was much firm laminated clot. The bodies of the second, third, and fourth dorsal vertebræ were much eroded, the intervertebral discs being prominent as usual. The sac had ruptured into the œsophagus. 2. Typhoid Ulcers in the Ileum. The Peyer's patches were involved almost exclusively. 3. Two Longitudinal Sections of the Femur in Pernicious Anæmia, and one from a case of Spleno-medullary Leukæmia. 4. The Central Nervous System from a case of melanosis secondary to a diffuse hairy mole of the surface of the body, which was also pigmented. The pigment in the nervous

system was deposited in the pia mostly around the normal nerve tissue, but the temporo-sphenoidal lobe was practically converted into a melanotic mass or true melanotic sarcoma. 5. An Ovarian Cyst from a girl aged 10. 6. Pregnancy in One Division of a Double Uterus. 7. Acute Endocarditis involving the wall of the left auricle. At an earlier date the mitral valve was involved from a streptococcal infection, while the endocarditis of the auricular wall was due to a pneumococcal infection. 8. Advanced Atheroma of the Circle of Willis, one vertebral artery being completely occluded, and also some of the smaller branches. There was extensive paresis. 9. Marked Funnel-shaped Deformity of the Mitral Valve with General Thickening. 10. Patent Foramen Ovale. 11. Sarcoma of the Ovary. 12. Blood Films from a case of Spleno-medullary Leucocythæmia, showing an enormous Leucocytosis. 13. Photographs of a case of a General Yielding of the Lower Abdominal Wall. This followed a laparotomy some years ago, but as far as the skin was concerned the scar had not given.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 9th, Dr. E. Knight, the President, being in the chair.—Mr. G. E. Mould, in opening a discussion on Simple Melancholia, said that simple melancholia—i.e., melancholia without delusions—was essentially the same disease as delusional melancholia. Whether the one would pass into the other was determined by the degree of instability of the nervous system and by the strength of the deleterious influences brought to bear upon it. The division was an artificial one, yet it marked both an important stage in the disease and a starting-point for a different line of treatment, raising the question whether the patient was insane, and if insane whether he was certifiable. The simple melancholic was insane from the medical point of view. Whether he was from the legal point of view depended upon whether he was suicidal. Putting aside the question of identity of melancholia and mania, melancholia was a definite disease presenting definite physical signs and a characteristic mental state, but the physical signs might be absent in the earlier or less-developed simple form. It was indeed the most horrible and cruel affliction that could befall any conscious being. Such a condition was very different from physiological melancholia, better referred to by the English name—melancholy. The simple melancholic, with his intellect practically unimpaired, would constantly cast about for a fresh cause for his misery, attributing it to errors of conduct or of living. An unstable nervous system being the prime cause, they found, as they would expect, an ancestry showing examples of insanity, epilepsy, alcoholism, gout, asthma, and particularly phthisis. Adverse influences came into play at critical periods, puberty, adolescence, before or after childbirth, climacteric, and senility. Uncommon at puberty, when the feelings were undeveloped, it was seen most typically at adolescence and onwards to middle life when the feelings and emotions were most intense. At that period, however, there was a great recuperative power, so that the simple was less likely to pass into the delusional form than later. At the later periods there was not such an active sense of misery. They could soon see by its stationary character that a simple was not going to pass into a delusional attack, and then they knew that recovery was merely a matter of time, if they could guard against the danger of suicide. The majority of simple melancholics were not actively suicidal. They were intelligent. They remembered what they used to feel about life, and could understand when told that they would be capable of feeling the same again. They had considerable will power, enabling them to live in hope without the ordinary inducements of mankind. What they had to do was to gain time. The most important thing was to place the patient under the right man. He must be taught to see life through the eyes of another, until such time as he was capable of seeing it sanely through his own. Differential diagnosis had to be made from neurasthenia, psychasthenia, hysteria, and hypochondriasis, apart from the question whether the simple melancholia was the preliminary stage of delusional melancholia, mania, general paralysis, and dementia præcox. Fatigue was not a symptom of melancholia, as it was of neurasthenia, as evidenced by simple melancholics often undergoing severe exertions to try to rid themselves of their despairing sense of misery, and delusional cases pacing to and fro all day or standing contentedly upright. Psychasthenics were only intermittently anxious and fearful. Hysteria was very characteristic; also its manifestation took place in public. The melancholic would pull himself together in company. Hypochondriasis was more allied to chronic delusional insanity. The question might be complicated by the occurrence of several of the neuroses in the same person. An acute attack of simple melancholia might come on and pass away in a neurasthenic, or a "phobia" or obsession might come on and outlast an attack of simple melancholia.—Dr. Arthur J. Hall referred to the difficulty of diagnosis. Melancholy was a symptom, not a disease. It might be physiological and the absence of grief pathological. It was difficult to distinguish delusions from various types of "phobia," particularly when they were associated with considerations of personal health. In discussing the treatment of melancholics he laid particular stress on the importance of listening carefully and with interest to everything the patient had to say, however trivial and often repeated, and to follow that by a complete and exhaustive physical examination. This served two purposes: first, to be quite sure that there was no organic basis for the condition, and secondly, to be able to satisfy the patient's protean complaints of visceral disease. As regards treatment the main objects were fourfold: (1) to remove the cause; (2) to prevent harm; (3) to relieve symptoms; and (4) to get over time. As regards relieving symptoms, he spoke of several simple methods of dealing with insomnia, and urged their use in order to avoid, as far as possible, the use of drugs.—Dr. A. L. Husband said that it was of the greatest consequence to gain the patient's confidence, and much depended on the individuality of the medical attendant. It was important, if possible, to supply new interests in life. He was of opinion that many of the peculiar "phobias" were attributable to refractive errors.—Mr. A. C. Turner defined melancholia as a saturated solution of grief with decreased objective consciousness and increased subjective consciousness. In delusional melancholia if one delusion was wiped out another would most likely take its place. In making the physical examination they should be especially careful to look out for anything that might give rise to his delusions, such as bad teeth in cases of poisoning delusions. They should not begin by trying to prove to him that his delusions had no foundation.—Dr. Sinclair White showed: (1) A case of supposed Epithelioma of the Tongue in a woman who had long-standing leukoplakia; and (2) a woman with a Tumour of the Breast, which was probably a cystic adenoma, but had many characteristics signs of malignancy.—Dr. Percival J. Hay showed a child with the rare condition of Coloboma of both Upper and Lower Lids of the Right Eye.—Mr. W. S. Kerr showed a man with a large Choanal Polypus which filled up the naso-pharynx and appeared below the soft palate.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 15th, Dr. F. H. Jacob, the President, being in the chair.—Dr. J. Lyn Dimond read a paper on the Treatment of Bacterial Disease by Vaccines. He pointed out that the production of passive immunity by sera was disappointing. Of the two varieties of sera, (1) antitoxic or neutralising, and (2) antibacterial or curative, the antitoxin of diphtheria in (1) and the antistreptococcic serum in (2) had alone fulfilled to any extent the hopes of their investigators. Though vaccines could be administered without control in many cases, the opsonic index or other methods of investigating the immunity reaction was absolutely necessary in order to obtain the best and quickest results. It was probable that one of the quantitative modifications of the Bordet-Gengou reaction would ultimately replace the opsonic index. White's "pus-film" method was an extremely quick and reliable method of controlling inoculations in pyogenic diseases. Arneth's method of counting the number of lobules in the polymorphonuclear leucocytes gave information which helped the control of the inoculations; where there had been a succession of severe negative phases there was a definite movement to the left side of the figures representing the percentages. The subcutaneous route for the administration of vaccines was a necessity. The following examples might be given: (1) The subcutaneous injection of the diphtheria toxin brought about a much greater yield of antitoxin than intramuscular injections; (2) in antityphoid inoculations where there was a

great local reaction the protection was greater than where local reaction was slight and there were marked constitutional symptoms. There was no effect on the index after oral or rectal administration, and only slight after intravenous injections. Rest was a necessary factor in vaccine treatment in order to prevent excessive auto-inoculations. In the treatment of ulcerated malignant disease autogenous vaccines prepared by growth on media manufactured from the patient's own new-growth tissue undoubtedly produced resolution of new growth in addition to healing of ulcers, &c. Chemical sterilisation, at any rate in the case of such organisms as pneumococci, Friedländer's organism, and streptococci, was superior from a therapeutic standpoint to heat sterilisation. Koch's old tuberculin was superior to tuberculin R. and B.E in the treatment of tuberculous adenitis in children. Tuberculin B.E. was a specific for those cases of pulmonary phthisis coming under Turban's Class I. and in which the diagnosis had been verified by the injection of old tuberculin. The speaker illustrated the principles of vaccine-therapy by clinical notes of three consecutive cases of post-partum toxæmia due to streptococcus fæcalis.—Dr. C. H. Cattle, Dr. A. R. Tweedy, Dr. W. T. Rowe, Dr. J. Mackenzie, Dr. H. J. Neilson, Dr. E. H. M. Milligan, Dr. B. Freer (Grantham), and the President joined in the subsequent discussion.

THE NEW LONDON DERMATOLOGICAL SOCIETY.—A meeting of this society was held on Nov. 9th.—Dr. David Walsh read a short summary of a paper upon the Influence of Cardiac Disease upon Cutaneous Disorders.—Dr. Tom Robinson showed: 1. A man previously exhibited at the meetings with an Infiltrated Lesion upon the back of the Right Hand in which X rays had not caused much improvement. 2. A man with a lumpy Sycosis, clinically resembling Tinea Barbæ, but neither spores nor mycelium had been found on microscopic examination.—Dr. W. Knowsley Sibley showed: 1. Two boys, aged 10 and 7 respectively, who had had numerous patches of Multiple Lupus scattered over the limbs and body, following upon measles. The treatment had consisted in the application of solid carbon dioxide followed by the application of X rays. Several of the lesions had healed beautifully. 2. A young man, aged 23, with recent Lupus Erythematosus of the Face, who presented the typical "chilblain circulation."—Dr. G. Norman Meachen showed: 1. A case of Lupus Erythematosus in a girl of 7 of four months' duration. The rarity of the disease at this age was commented upon. 2. A case of Tertiary Syphilide of the Face in a woman of 36, clinically resembling a seborrhœide. The patient also gave a strong family history of tubercle. 3. A young man with Multiple Lupus following upon measles and varicella. Numerous scars, some of which were due to varicella only, were present upon the limbs and face.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—Her Royal Highness the Princess Louise, Duchess of Argyll, visited the Paddington Green Children's Hospital on Nov. 16th, in order to declare open the new out-patient department. Her Royal Highness was received by Mr. Douglas Owen, chairman of the committee; Mr. George Hanbury, treasurer; and the members of the hospital staff. Mr. Owen gave a brief history of the hospital and of the circumstances which had led up to the present important extension. Thirty years ago, he said, it was decided to replace the North-West London Free Dispensary, near Lissongrove, by a cottage hospital for children, and mainly owing to the personal efforts of Mr. Hanbury two newly erected houses on the present site were purchased for the purpose. This hospital was opened in 1883 with 23 beds. In 1892 the hospital was demolished and a new building erected. The out-patient accommodation soon became quite inadequate, and the new buildings had been provided at a cost of about £11,000. Unfortunately, there was still a debt of £2000 on the buildings. Sir Frederick Milner and Sir Henry Seton-Karr having moved and seconded a vote of thanks to the Princess for her kindness in attending, the Duke of Argyll replied and emphasised the importance of societies for the education of mothers in the healthy up-bringing of their children. A large number of purses were then presented by children to Her Royal Highness, who was afterwards conducted over the new building. The Princess then inspected the display of articles contributed by the Ladies' Work Association, and finally visited the wards.

Reviews and Notices of Books.

On Diseases of the Lungs and Pleura, including Tuberculosis and Mediastinal Growths. By Sir R. DOUGLAS POWELL, Bart., K.C.V.O., M.D. Lond., F.R.C.P. Lond., Hon. D.Sc. Oxon., M.D. Dub., F.R.C.P. Irel., LL.D. Aberd. and Birm., Physician in Ordinary to His Majesty the King; and P. HORTON-SMITH HARTLEY, M.V.O., M.A., M.D. Cantab., F.R.C.P. Lond. Fifth edition. With 29 plates (6 in colours). London: H. K. Lewis. 1911. Pp. 712. Price 21*s.* net.

THE new edition of this standard work on Diseases of the Lungs will be cordially welcomed by the medical profession, for it embraces the matured doctrines of a great authority who has not blindly accepted new views of the treatment and etiology of the affections in question, and in addition the results of the experience of a younger physician still on the acting staff of the Brompton Hospital—that storehouse of facts concerning thoracic ailments. Eighteen years have elapsed since the last edition of the work was issued. During this period the science of medicine in relation to diseases of the lungs has seen many changes. The authors have not hastily published their facts, for they tell us in the preface that well-nigh ten years have been spent in the production of the present edition. Every sentence of the former edition has been revised, many additions have been made, and much has been altered or eliminated in the light of the interval that has elapsed since the previous issue.

The account given of the essential points in the anatomy and functions of the lungs remains but little altered from the previous edition—no necessity whatever for any real modifications has arisen—but an effective X ray photograph has been inserted showing the normal distribution and general arrangement of the bronchial tree after Dr. W. Brünings. In the chapters on the Physical Examination of the Chest the excellent table setting forth the terminology and common significance of the facts elicited by palpation and auscultation is retained. It is a matter of regret that the terms there employed, which were carefully selected by Sir R. Douglas Powell and by the late Dr. Mahomed, acting as English members of a committee nominated at the International Congress held in London in 1881, have not been more generally adopted. Much confusion still exists in this respect, as various authorities employ different terms to indicate the same physical signs, and uniformity is much to be desired. We recommend for general adoption the nomenclature here chosen.

The examination of the sputum is fully dealt with; this is illustrated by two beautiful plates showing Curschmann's spirals. These plates were in the previous edition of this work. The deformities and diseases of the chest wall then claim attention. The morbid conditions of the pleura are set forth under the various sections embracing the different forms of pleurisy, the subjects of hydro- and pyo-pneumothorax, hæmothorax, hæmopneumothorax, and chylothorax. The authors point out that the majority of the primary cases of acute sero-fibrinous pleurisy arising *de novo* do not owe their existence to exposure to cold or draught, as was formerly thought, but are really tuberculous in nature. The account of the clinical symptoms is excellent, whilst the whole subject of paracentesis thoracis is treated in a masterly fashion.

In discussing the diseases of the bronchi the section is illustrated by a speaking plate showing the casts expectorated in plastic bronchitis. This plate was also in the last edition. In their remarks on the pathology of asthma the authors express the view, confirmed by the researches of C. J. B. Williams and of Brodie and Dixon,

that the theory of bronchial spasm would be adequate to explain the asthmatic attack. A full description of the various remedies found useful for correcting the spasm, and of the methods of using them, is given. A wise warning is inserted to beware of prescribing too freely the hypodermic injection of morphia. In the chapter on emphysema the authors give an interesting section on aerotherapeutics: this method of treatment is certainly of benefit in many, although not in all, cases. In discussing the causation of pneumonia it is stated that cold is by far the commonest cause of the disease. This opinion, which is certainly the one held in England, does not seem to obtain universally. Dr. Sanders, in a paper published some years ago in the *International Journal of Medical Science*, showed by statistics that "pneumonia, other things being equal, increases uniformly in frequency the nearer we approach the equator. That is to say—and the fact is a surprising one and one distinctly opposed to its presumed dependence upon cold—the disease is more frequently met with, and is more common, in warm than in cold climates, showing a gradually increasing ratio from the Pole to the Equator." This statement of Dr. Sanders would appear to be borne out by the experience of Indian physicians. An epidemic form of pneumonia is met with pretty frequently in the Punjab and on the North-West Frontier. With regard to the treatment of this disease the authors evidently do not believe in that valuable old remedy antimony.

Without attempting to indicate the alterations and additions which have been made in this edition, we naturally turn to those subjects which have been prominently before the profession in order to ascertain the conclusions arrived at by the authors in their extensive experience. The subject of pulmonary tuberculosis occupies a large portion of the volume, and in political and general circles, as also amongst the profession, the treatment of this affection is receiving an unusual amount of attention. It has been brought home to us all that in the prevention of phthisis we have a possible social reform which will bring benefits that it is quite impossible to estimate. The sanatorium treatment is described at length, and especial attention is drawn to the favourable effect of exercise and work in selected cases. This method has been elaborated at the Brompton Hospital Sanatorium at Frimley under Dr. M. S. Paterson, whose words are quoted; and the authors consider that the results of treatment already published have been gratifying. They also view with favour the contention that has been advanced that the good effects are due in great part to autoinoculation of tuberculin and subsequent immunisation. The conclusions arrived at as to the employment of tuberculin are also of particular interest. We would here draw attention to the fact that after due deliberation the authors decided to follow the more modern German system and to prescribe the remedy by measure only in cubic centimetres and fractions of the same. This method has its advantages if larger doses are employed, but with the more minute doses the number of cyphers which are required are rather bewildering; for instance, the small initial dose of "T.R." which is frequently employed is represented by 0 000,000,001 cubic centimetre. A more convenient method would seem to be to express the amount in fractions of a milligramme; we venture to question whether any benefit to dispensing counterbalances the unwieldy notification. The conclusions as to the results of treatment by tuberculin are expressed clearly and fairly. The authors maintain that the use of tuberculin in one form or another is a rational one, and leads to an increase in the body of opsonins and agglutinins, and presumably of other protective substances; in their own words, they "have no hesitation in recommending a course of tuberculin, provided that the patient possesses sufficient vitality to yield the requisite response demanded by a proper use of the remedy."

The vaccine treatment of pneumonia is discussed, and it is admitted that the results obtained by some observers are on the whole encouraging. The authors have used vaccines in some cases of acute pneumonia, but they are unable to arrive at any determined conviction in regard to their general utility in this disease.

There is an admirable summary of the various climatic resorts to which consumptives may have access, and in the concluding chapter will be found a learned account of intrathoracic tumours.

We congratulate the authors on their work. While space forbids us to comment on all the very interesting contents, we can safely say that no affection of the lungs has escaped the notice of the writers. One of the features in this new edition is the number of excellent illustrations of sections of the lungs, which are beautifully executed.

Manual of Physiology for Students and Practitioners. By H. WILLOUGHBY LYLE, M.D., B.S. Lond., F.R.C.S. Eng. With 1 plate and 135 figures in the text. London: Henry Frowde and Hodder and Stoughton. 1911. Pp. 747. Price 15*s.* net.

IN this manual histology is referred to only in those cases where it directly bears on physiology, and embryology is not included, while diagrams of instruments and details of experiments have, as far as possible, been purposely omitted. The book is none the less a large one, over 700 pages, though by the use of excellent type and well-selected paper the volume has been rendered far from bulky. The author invites friendly criticism, and perhaps this invitation can be best acceded to by taking the list of subjects seriatim—15 sections in all. They are on general and chemical physiology, diet and digestion, cardio-vascular system and allied organs, respiration and allied functions, metabolism, animal heat and the skin, excretion, nervous system, nerve and muscle, the sense organs, and reproduction.

The section on chemical physiology (pp. 13–72) is concise, and due prominence is given to the newer views of the constitution of proteins and the importance of lipoids. "Foundation stones" is hardly, however, the exact translation of the "Bau Steine" of the Germans as applied to the amino-acids. The important subject of diet is considered in 14 pages, while to digestion in the broad sense about 80 pages are given. All this is good. The work of Hertz has been largely drawn upon. We do not think the student could possibly understand Pawlow's gastric pouch from the description given on p. 100, and we are at a loss to know what is meant by "broken cardiac compensation" on p. 125. A new form of energy, the biotic energy of Moore, is invoked as being mainly the cause of absorption of the products of digestion by the villi. Surely the experiments on deglutition referred to on p. 148 were made by Kronecker and Meltzer, and not Maltzer.

About 60 pages are devoted to the cardio-vascular system. The heart is said to "consist of four chambers—two auricles placed above a fibrous plate and two ventricles below it." The author is not at his best in describing anatomical details. The right ventricle is said to have "a strand of muscle fibres stretching across its cavity from the wall to the septum, the moderator band." No free moderator band exists in man, though one occurs in the heart of the sheep. On p. 183 there is another misprint, Starling instead of Stirling, while the famous experiment on the depressor nerve is attributed to Ludwig and Lyon, instead of Cyon.

Blood is dealt with in about 40 pages, but nothing is said about its viscosity, and some of the statements require revision. In describing the functions of the colourless blood corpuscles, the author says that "they are the carriers of the blood-stream and of the lymph

stream" (p. 248), but surely there are other carriers in the blood stream. Tannic acid does not usually cause the oxyhæmoglobin in frogs' corpuscles to collect into a small globule and become attached to the nucleus; on the contrary, as described by Roberts long ago, "pullulation," or the formation of little globules, appears on the surface of the corpuscle. Blood is said to be opaque "because it contains solid elements," but the mere presence of solid elements is not the cause of the opacity of the blood. The occurrence in this section of the word "suitable" as a misprint for "stable" is a little indication that close revision has not been carried on.

The important subject of metabolism occupies about 60 pages. The author seems at his best in dealing with the chemical part of physiology, and this chapter is both instructive and concise. About 40 pages suffice for excretion, including the kidneys and the urine. To the nervous system about 120 pages are allotted, and here we find at one place "artefacts" and at another "artifacts." The discovery of the T-shaped division of the axis-cylinder of a unipolar nerve cell is attributed to Remak. Surely it was not Remak, but Ranvier, who discovered it. Twenty pages are devoted to muscle, and to the senses about 80 pages. Here some of the diagrams are rather crude, but the text gives so good a summary of the leading facts and theories that they probably serve their purpose.

There are practically no dates given to indicate what is recent and what is not. There is nothing to guide the student as to when the beginnings of real discoveries in cerebral localisation were made. Quantities are sometimes given in "grs.," "drms.," and sometimes in the metric form; measurements sometimes in inches, sometimes in centimetres. And lastly there are too many misprints and slips. We find, for example, "vitale" for "vital," "twist" for "twitch," "worked" for "washed," "heart" for "heat," and "motor cord organs" for "motor end organs," while we can assure the author that his interesting book has been read with no desire to pick small faults.

The author conveys a large amount of physiological information in this manual, which the average student of medicine will find a useful, well-proportioned, and handy compilation. Because the book is in essentials so good and thoughtful we have pointed out small blemishes which can be removed in editing the work for further issues.

Public Hygiene. By T. S. BLAIR, M.D., assisted by Numerous Contributors. Two Volumes. London: Rebman, Limited. 1911. Pp. 644 and 158 illustrations. Price 42*s.* net.

Dr. Blair, of Harrisburg, Pennsylvania, the author of several works on medical treatment, has been led to turn his attention to public hygiene from his conviction that this subject has "developed too much as a specialty and needs the tempering conclusions of the whole body of the medical profession"; and in these volumes he has aimed at informing the rank and file of the profession on the public work which is done in America in the interests of health, whether by the Legislature and officials, or by individual firms and corporations for the benefit of their employees or customers.

So that his writings should relate to "a basis of real accomplishment rather than that of a propaganda," the author has made many trips of inspection, annexed information from all sources, obtained illustrations of every kind (including photographs of medical missionaries and model ironworks), and on many of his subjects has secured contributions by experts and copious extracts from official documents. There are chapters on hotels, maternities, places of amusement and dissipation, State departments and boards of health, hygiene of camps, internal sanitary installations of houses, public works, and many other matters, on all of which Dr. Blair imparts much useful information, together with not a little gossip and occasional criticism of the shams (the "flub-dub," if we may use his word), which have come under his notice. While giving high praise to the results of local administration in the different States, he is keenly alive to the dangers of ignorant interference on the part of unqualified inspectors and officials appointed on political grounds, and is by no means carried away by the sentimentalists. Thus, on the health of foreign coal-miners, "it is very easy to criticize the brutal mine boss: very much easier than it is to boss a gang of dagoes. Also, be it remarked, the average dago has no idea the boss is being brutal. As to sanitation, the bed bugs are so thick in the shanties that the mere microbes have no chance. The foreign section in a mining town will begin to be sanitary when the law requires that it be burned down twice a year."

The book is well indexed, and deserves to be remembered as a repository of notes on many subjects on which information is not always readily obtainable. The heating of American houses and offices, rules for inspection of illuminating oils, and the sanitation of penal institutions are instances in point. The section on Public Carriage and Sanitation is particularly full, and includes regulations in force for cleansing and disinfecting railway carriages, notes on ventilation and warming of cars, and like matters. We are afraid that the "proper house drainage" illustrated on p. 390 would be rejected in any British municipality. Dr. Blair, by the way, boldly prophesies that "in England the time will soon be that the doctor will wear a State uniform and live upon a State salary."

Grundriss der Zoologie und vergleichenden Anatomie für Studierende der Medizin und Veterinärmedizin. By ALEXANDER BRANDT. Berlin: Hirschwald. 1911. Pp. 647. Figs. 685 in text. Price 14 marks.

THE output of elementary works on zoology seems to be fully as great in Germany as in England, and rather contradicts the prevailing impression that the study of this science has suffered some eclipse of late years. For a book like the present—and there are many of the same character appearing at intervals—is emphatically for the student and not for the general reader with no examination in immediate view. And the publication of such text-books implies at least the existence of a class for which they are intended.

The present volume is reminiscent of the very well-known text-book, Railliet's "Zoologie Médicale et Agricole," which has a scope very similar to that of the volume under review. The French professor, however, has catered more fully for his veterinary readers than has Dr. Brandt. The parasitic worms naturally form a distinct feature of Dr. Brandt's volume and thus mark it out from text-books which aim only at a general sketch of the animal kingdom. It is much more important for the student of medicine, whether he proposes to deal with human beings or with domestic animals, to have a full knowledge of tapeworms and nematoids than of the systematic position of balanoglossus or of the main sub-divisions of the echinodermata.

Dr. Brandt, however, gives a good account of the worms in question, though it is not very full as regards the domestic animals. Nearly all the tapeworms belonging to the division of tetracotylea (and to this division nearly all the worms infesting the higher vertebrated animals belong) are relegated to the genus tænia, which is thus used in an antiquated and now effete sense, the genera monieza and drepanidotænia being excepted. Furthermore, while the human tapeworms are treated fairly exhaustively, the section dealing with worms that occur in fowls is too short to be of any use. The author, in fact, only mentions drepanidotænia infundibuliformis (which is properly choanotænia infundibulum) and ligula as occurring in birds. Many species in

reality frequent the intestinal tract of Gallus. The necessity for compression and consequent omission has led the author into dealing in a very "stepmotherly" fashion (as his countrymen say) with other groups of the animal kingdom. But the protozoa are treated with commendable fulness—comparatively speaking. Dr. Brandt has, in fact, a good deal to say concerning trypanosomes and spirochætæ, which are of such enormous importance in medicine.

The pages in which the characters of the vertebrata are set forth are naturally many, in view of the large size of that group and the many types which must be touched upon, since they are familiar to everyone. An illustration of the posterior lymph hearts of the frog is interesting. The actual species of frog which has been selected is not identified, but each lymph heart consists, according to the illustration, of two more or less completely separated "hearts." It is usually and quite positively stated that each of these organs of propulsion of the lymphatic system in the common frog is a single organ with but one cavity; this is the view of most students' text-books. But several continental authorities, including no less a person than Professor Ranvier, have alleged the contrary, while there is absolutely no doubt about the fact that the great frog from the Solomon Islands, known as Rana guppyi, has each of its lymph hearts divided by an internal septum into two spaces. Thus Dr. Brandt has found himself plunged into an anatomical squabble, holding, however, a definite opinion on its merits.

The author, indeed, is not contentious; he deals with such controversial subjects as occur in his survey without acrimony. If views are very divergent he merely indicates that there is divergence. Especially is this the case during the pages at the commencement of the book, in which he sets forth the results of opinion as to some of the more general principles of zoology, such as the definition of species, the origin of variation, geographical distribution, and so forth. This section, which appears to us very well placed, precedes the middle part of the volume; this is by far the longer and contains an enumeration of the characters of the subdivisions of the animal world. The book concludes with a comparative anatomical section, which is mainly vertebrate in its scope. Few errors or obvious misprints have been noticed. One instance, however, must be mentioned as it might deceive. In giving the characters of the oligochætous worms Dr. Brandt writes of the large Australian earthworm originally described by the late Professor McCoy of Melbourne, and later by his successor in the chair, Professor Baldwin Spencer, as "macroscelides." He should of course have written megascolides, for macroscelides is an insectivorous mammal.

The Town Child. By R. A. BRAY. Revised edition. London: T. Fisher Unwin. 1911. Pp. 255. Price 3*s.* 6*d.*

IT is little surprising that a second edition of this book has been called for. It deals with one of the chief problems of the age, perhaps the chief—the education, physical, intellectual, and moral, of the child, the State's citizen in embryo. Few people have had better opportunities of watching the "growing child" than Mr. Bray, for he has lived for many years among school children and in schools; he is well equipped, therefore, with the necessary experience. But even more important than this experience for the making of a good book is his lucidity of style. Mr. Bray thinks clearly and writes clearly. Although there is a great deal in "The Town Child" that by no feat of legerdemain can be directed into the service of medicine, none the less there are many chapters that may be read with undoubted advantage by the school medical officer, and indeed by others of our profession who are concerned with the supervision of the health of children.

As the author fully explains, the environment of the town child is human and psychological, differing thus fundamentally from that of the country child, whose environment is that of trees and flowers and vegetables and animals. And since our health, like our diseases, must depend much on environment, it is a matter of the greatest importance for the medical man to study the true relations in the matter.

In Part I. Mr. Bray deals with the problem of the town, the environment of man, and man and the environment. In Part II. he describes the needs of education, social and religious, of the school child, but the medical reader will probably direct his chief attention to those sections which are concerned with the physical well-being of the child. There is no part of the book that is more worthy of attention than that concerned with the establishment of habits; in a physiological sense medical men realise the importance and significance of habits, but as regards their wider significance they would do well to study the canons laid down by the author for their better establishment. "First," he says, "we want habits, because habits alone render tolerable the drudgery and the routine of life and secure stability of character. Looking at the life of the town child and taking into account the influence of the environment, we need chiefly habits of regularity, habits of attention, habits of order, habits of self-control, and habits of cleanliness, using the last term in its widest significance." Mr. Bray has made an honest attempt to indicate how the attainment of these much needed elements in character can be secured through the instrumentality of our educational machinery.

"The Town Child" is altogether an inspiriting work.

Theorie und Praxis der Inneren Medizin. Ein Lehrbuch für Studierende und Aerzte. Von Dr. ERICH KINDBORG in Bonn. Erster Band. *Die Krankheiten der Zirkulations- und Respirationsorgane.* Mit 47 abbildungen. Berlin: S. Karger. 1911. Pp. 404. Price, bound, 7 marks.

Dr. Kindborg gives as his apologia for adding another to the numerous text-books of medicine the fact that he has found that the student often finds difficulty in grasping some of the problems of medicine because he has not available the necessary information afforded by the ancillary medical sciences. He has therefore given in his descriptions of the diseases of which he treats such anatomical, physiological, pharmacological, and other information as may be necessary to explain the matters he is dealing with. These are generally given at the commencement of each section, and are printed in smaller type. Without being in any sense exhaustive they are of sufficient length to be of real value.

The subjects dealt with in this, the first, volume are diseases of the circulatory and respiratory systems. The classification followed by Dr. Kindborg is on conventional lines, but the descriptions he gives of the individual morbid conditions are by no means stereotyped. He writes clearly and well, and his subject-matter is both interesting and practical. We may mention his account of pulmonary tuberculosis as one of the best in the book. After a full description of the tubercle bacillus and its properties, the pathological and clinical features of the disease as it affects the lungs are given. The question of diagnosis by means of the various modifications of the tuberculin test is then discussed and the value of each indicated. In connexion with treatment, a critical and cautious review of the use of tuberculin is given, and due care is urged in regard to dosage and frequency of administration. In general, the sections devoted to treatment are the most exhaustive. Full directions are supplied in regard to the management of the patient, prescriptions are given, and, conforming to the fundamental

principle he had in view, Dr. Kindborg in recommending any drug describes its origin, chemical constitution, and general properties. Authorities are often quoted both in the text and in footnotes.

If the other volumes come up to the standard of the present one, Dr. Kindborg will have produced a valuable and interesting addition to the text-books on medicine.

Lateral Curvature of the Spine and Flat-foot and their Treatment by Exercises. By J. S. KELLETT SMITH, F.R.C.S. Eng.; late Demonstrator of Anatomy at University College, Liverpool. Bristol: John Wright and Sons, Limited; London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1911. Pp. 137. Price 5*s.* 6*d.* net.

IN the preface the author lays down very definitely the scope of his book: "Its chief object is to indicate in a clear and concise manner the steps necessary for the treatment of those cases of spinal curvature which are most likely to occur in general practice," leaving to more elaborate works on orthopædics the description of the high grade cases of scoliosis and the method of making and fitting mechanical supports. We may say at once that he has carried out this idea admirably.

The photographic illustrations are good and demonstrate very well the different exercises that are explained in the text. Mr. Kellett Smith gives in the first chapter an interesting extract from a work by Pierre Dionis, written in 1707, and he draws attention to the fact that until recently with little alteration and few additions the text would very well have done for a description of the treatment employed for lateral curvature at the present time. The last decade has seen the growth of systems of exercises without number, but recent teaching is tending in the right direction. It now condemns the old form of physical training, in which a pupil was introduced into a gymnasium and was taught dumb-bell, club, and bar-bell exercises, and was then left to roam at will amongst a profusion of apparatus, instead of each case of scoliosis being treated on its own merits and exercises being prescribed suited to the strength of the patient and to the correction of the deformity. A useful chapter deals with the general treatment which is likely to be required by subjects of spinal curvature.

This is eminently a book suited for the general practitioner wishful to treat the slighter forms of scoliosis or pes planus.

Les Syncinésies. Leurs Rapports avec les Fonctions d'Inhibition Motrice. By Dr. G. STROEHLIN, Ancien Interne des Hôpitaux de Paris. Paris: G. Steinheil. 1911. Pp. 148.

THE tendency which is characteristic of infancy to make movements bilateral and symmetrical gradually disappears under the influence of education and of the development of the motor paths, but under certain pathological conditions—e.g., infantile hemiplegia, adult hemiplegia—this primitive motor bilaterality reappears and reveals itself by associated movements. These, as a rule, cannot be repressed or diminished by voluntary effort; they are seen only on voluntary muscular activity, and they are more pronounced on one side of the body than the other. Dr. Stroehlin supplies numerous personal observations of associated movements, and suggests an eclectic hypothesis, based on the well-known views of Hitzig and of Westphal, to account for the phenomena. The appearance of these synkineses depends on lesions of the pyramidal tract, and the author utilises a term coined by Dupré—"débilité motrice d'inhibition"—to express the symptoms by which this defect of the pyramidal system reveals itself. The syndrome consists of increase in the tendon reflexes, alteration of the plantar reflex, awkwardness of voluntary movement, paratonus, and synkinesis or associated movement. A bibliography is appended to the thesis.

LIBRARY TABLE.

On Variations in Chromosomes. By CHARLES EDWARD WALKER. A Reprint from the *Archiv für Zellforschung*, Band 6, Heft 4. Leipsic: W. Engelmann. 1911.—This paper records a series of interesting observations on the variations in shape and size of "chromosomes of an ordinary kind that are found in certain cells of the organism always, and not with a special form which is found only in the cells of particular animals and of individuals of one sex and not in those of individuals of the opposite sex." Previous observations bearing on this point have been mainly or wholly confined to cells in the last-named category. This paper must be read in close connexion with the author's book on "Hereditary Characters and their Modes of Transmission," which was noticed in THE LANCET of Dec. 3rd, 1910. In this work is suggested the theory that the chromosomes are the bearers of *individual* variations, while the cell as a whole is the bearer of *racial* traits. The author argues that if the establishment of the fact that chromosomes vary constantly in form and size be accomplished, then one step further towards the origin of variations is attained. It seems clear that more observations are wanted before this constant variation in form and size can be established. Should it be established, it would lend some additional colour to the author's hypothesis above referred to, but could not be held to prove it. His present position appears to be that he considers chromosomes *because* they vary to be the bearers of individual characters as opposed to racial; that he claims "Mendelian" characters as individual; and that he assumes that the *inheritance* of these, not the *reproduction* merely, is alternative. He therefore appears to think that there is no *patency and latency*. In the summing-up of this paper the author's belief is reiterated that racial characters, that is, characters which are found in *all* the individuals forming a race of animals or plants, cannot be borne by individual chromosomes, because the chromosomes are distributed in an alternative manner to the gametes before fertilisation. He further emphasises the view that "constant and continual variations among chromosomes would account for the constant and continual variations that appear in animals and plants, without necessary recourse to the mutation theory and the assumption that variations occur only in epidemics at intervals, species only arising during these epidemics." This author's careful work as displayed in this paper will doubtless stimulate others to make further observations on the same lines.

Aus Theorie und Praxis der Chemotherapie. Von PAUL EHRLICH. Leipzig: Dr. Werner Klinkhardt. 1911. Pp. 28. Price 1.20 marks.—This is the address given to the Society for Microbiology at Dresden in May, 1911. It deals with Ehrlich's well-known theories regarding chemo-therapeutics, which the author has done so much to elucidate. It discusses the *rationale* of treatment of such diseases as trypanosomiasis, malaria, recurrent fever, and the use by injection of salvarsan, and how the untoward accidents that sometimes accompany its use can be avoided. The author is persuaded that the "intensive" treatment of syphilis in its early stage, according to the methods recommended by himself, adds enormously to permanent recovery. The address is dedicated in a graceful peroration to Professor Waldeyer, of Berlin, who greatly encouraged Ehrlich when the latter was a student under Waldeyer in Strasburg, nearly 40 years ago. It will be interesting to clinicians as well as to biologists.

New Reduction Methods in Volumetric Analysis. By EDMUND KNECHT, Ph.D., M.Sc. Tech., F.I.C., and EVA HIBBERT. London: Longmans, Green, and Co. 1910. Pp. 108. Price 3*s.* net.—The authors deserve a word of thanks for pointing out the practical advantages of using

titanium salts as reducing agents in analysis. Their application is evidently of value, and quite a surprising number of accurate determinations can be made by employing titanous chloride. The salt can be used, for example, as a quantitative reducing agent for metals and their compounds—e.g., iron, copper, tin, chromium; for non-metallic elements and their compounds—e.g., hydrogen peroxide, chlorates, nitrates, oxygen in water; and for organic compounds—e.g., nitro compounds, azo compounds, certain reducible dye stuffs giving colourless compounds, and sugars. The details of analytical work are set forth with clearness, and it is quite obvious that titanous chloride is a valuable material in the analytical laboratory.

JOURNALS AND MAGAZINES.

The Child.—The November issue contains an abstract of the paper on the Hygiene of School Life in Ireland, read before the Royal Sanitary Congress at Belfast, by Professor J. A. Lindsay. Emilia V. Kanthack de Voss discusses in an interesting manner child welfare in Germany. She refers to the modern crowding into towns (which she attributes mainly to "the increasing desire for entertainment and social excitement"), as leaving its mark on the physique and on the spirit of the working-classes. The training of children, home and school life, and training schools are dealt with, and stress is laid on the importance of home life and mother craft in the prevention of physical deterioration. Dr. R. J. Ewart discusses the "Aristocracy of Birth." He dwells on the modern subjection of the primitive attitude of mind—the prevalence of the social "don't" over the individual "do." Even the vital statistics, he says, tell us pessimistically how many per 1000 die, instead of more optimistically informing us how many per 1000 have survived. He uses the death statistics as a figure to subtract from the number living, so as to inquire into the conditions under which the best are born. He discusses the problems of birth under the following heads: (1) age of mother, (2) sequence of birth, (3) interval of birth, (4) season of year at which birth occurs, (5) sex of birth, (6) vague conditions pertaining to general health, included under the term environment, (7) accidental conditions, such as twins or other numerical abnormality, and (8) conditions of sentiment, as judged by illegitimacy. Winifred Brooks Mylechreest writes judiciously of story-telling, the art beloved of children, so necessary to their proper bringing up, yet so neglected. Dr. W. D. Carruthers discusses the school desk, and condemns the long desk with a considerable horizontal interval between the desk and the seat. He describes a dual desk, the seat of which is moveable, and is so divided that each child can move in and out independently of the other, or one may stand while the other sits. Mr. E. D. Telford discusses residential schools for crippled children, on the basis of that instituted in 1905 by the Manchester Education Committee. It has been in existence for six years, and 115 cases have been discharged, with the following results: cured 57, improved 17, discharged unrelieved 33, discharged on time limit 8. The editor of the *Boys' Own Paper* relates its history. Miss Lillias Hamilton, warden of the Studley Agricultural and Horticultural College for Women, gives an illustrated description of that institution. Mr. H. J. Eason furnishes an account of the Manchester Children's Hospital, and Dr. F. E. Batten a summary of what is known of acute poliomyelitis. Various societies are described by their secretaries, and Cheltenham and its educational facilities by Mr. Edward F. Burrow.

The North of England Clinical Journal. The Organ of the Newcastle-upon-Tyne Clinical Society. Edited for the Editorial Committee by Mr. GEORGE FOGGIN, 24, Eldon-square, Newcastle-upon-Tyne. Vol. I., No. 2. September, 1911. Price 1*s.*—The second number of this new journal contains a paper by Dr. J. S. Risien Russell on Important Problems in the Diagnosis of Diseases of the Nervous System. It consists of a practical discourse for men in general practice on everyday problems with which all are liable to be confronted. Dr. R. E. Sedgwick contributes a paper on that bold buccaneer, Dr. Thomas Dover, which adds some features of interest that we do not recall having seen in other articles on the same subject. The late Mr. T. G. Ouston discusses the uses of radium in diseases of the nose and throat. The article is followed by an obituary notice of its author, who died on August 4th. Dr. Harold Kerr gives some public health notes, and Mr. John Clay discusses approvingly the use of indigo carmine in cystoscopy. Dr. T. M. Allison has a note on the Infectivity of Actinomycosis. Clinical reports, reviews, and notices conclude the number.

Man.—The November number of this journal contains a copiously illustrated article by Dr. C. G. Seligmann and Miss Margaret Murray on a hitherto unexplained standard pictorially represented in Upper Egypt. They argue that the object, or emblem, which surmounts the standard is an idealised figure of the placenta concerned in the antenatal life of the king before whom this particular standard was eventually carried.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

CHOLOGESTIN.

(THOMAS CHRISTY AND CO., 4, 10, & 12, OLD SWAN-LANE, UPPER THAMES-STREET, LONDON, E.C.)

CHOLOGESTIN is described as "a peculiarly eligible method of administering the natural bile acid salt and pancreatin in palatable liquid form, in conditions attended with intestinal putrefaction, auto-toxæmia, and indicanuria." We have confirmed the presence of the active constituents—viz., glycocholic acid and pancreatin. In alkaline solution the preparation showed a marked digestive action upon beef fibre, while a very definite reaction was obtained with Pettenkofer's reagent for biliary acids (glucose dissolved in strong sulphuric acid). Sodium salicylate was also easily detected. Chologestin occurs in the form of a palatable alcoholic fluid (15 per cent.), or in tablets, three of which contain the active medicinal ingredients of one tablespoonful of chologestin. The claims of chologestin merit attention.

"HEALTH AND STRENGTH" COCOA.

(SANDOW, LIMITED, 5 TO 21, NEW KENT-ROAD, ELEPHANT AND CASTLE, S.E.)

Sandow, Limited, as far as the public is concerned, means Mr. Eugen Sandow, and this gentleman has for some time past been engaged in an undertaking which has not commended itself to the medical profession for perfectly obvious reasons. We have been asked by Mr. Sandow to examine and to report upon this cocoa, and in the public interest we do not feel justified in refusing the invitation. We should certainly decline to give publicity to any undertaking in which, as it seemed to us, Mr. Sandow was posing as the possessor of medical knowledge, or in which he seemed to be making an illegitimate use of qualified medical assistance. But because Mr. Sandow's methods in connexion with the cultivation of "physical health" have been so rightly reprobated by all medical men—an attitude that has been endorsed by the General Medical Council—it would not be right to refuse to analyse a foodstuff connected with his name which has been offered to the public. If THE LANCET is to

keep consistently to its attempt to act as an interpreter of the merits and demerits of the public food-supply, we must not allow disinclination of any sort to deter us from making any analysis that the public good demands. Mr. Sandow has been making some very large claims on behalf of this particular cocoa in the public press: it will be seen from the analysis which follows how far they can be substantiated.

The cocoa on analysis gave the following results: Moisture, 5·0 per cent.; mineral matter, 8·10 per cent.; proteins, 25·84 per cent. (equal to nitrogen 4·10 per cent.); fat, 14·76 per cent.; theobromine, 1·34 per cent.; alkalinity of the ash calculated as potash (K_2O), 2 82 per cent. In THE LANCET of Jan. 7th, 1905, a contribution from our laboratory was published on cocoa, which contained the results of analysis made of the various cocoas upon the market. The following ranges in composition were shown: Moisture, 3·0 per cent. to 8·0 per cent.; nitrogenous matter (N × 6·3), 19 0 per cent. to 20·0 per cent.; fat, 26·0 per cent. to 31 0 per cent.; mineral matter, 3·90 per cent. to 8·80 per cent.; theobromine, 1·7 per cent. to 2·0 per cent. By comparing these figures with those obtained with "Health and Strength" cocoa the basis of its claims compared with other cocoas will be understood. It contains, for example, a good deal less fat and an increased proportion of proteins calculated upon the total nitrogen found. It will be also noted that the mineral matter amounts to much the same as that contained in Dutch cocoas, in which it is admitted that certain salts are used with the object of preventing sediment in the cup. The cocoa is thus more "soluble," that term really meaning that the cocoa is kept permanently suspended in the cup, as a very small proportion of the cocoa is really soluble. One important feature, however, of "Health and Strength" cocoa is that it is an extremely finely ground powder, having, in fact, the fineness of flour. This, of course, is a dietetic advantage. To sum up, "Health and Strength" cocoa differs from most other cocoas in having its nitrogenous constituents increased by the further elimination of fat, and a special method of preparation is adopted by which the cocoa is reduced to an impalpably fine powder.

ANNUAL REPORT FOR 1909 OF THE REGISTRAR-GENERAL FOR SCOTLAND.

THE fifty-fifth report of the Scottish Registrar-General, which has recently been issued by H. M. Stationery Office, contains the usual particulars concerning marriages, births, and deaths during the year 1909, but the tabular matter is prefaced by a useful introduction by Dr. J. Craufurd Dunlop, the medical superintendent of statistics, and it is to this part of the volume that we now propose to direct attention.

The circumstance that considerable delay ordinarily takes place in the issue of the Scottish reports is acknowledged and accounted for in a prefatory note, which explains that as the abstraction of the facts cannot be completed until the expiration of 12 months after the registers are closed, the detailed annual report cannot be issued sooner than 18 months after the close of the year to which it relates.

Recent enumeration of population.—In April last the twelfth Census of Scotland was taken, and since that date the preliminary Census report has been published. The use of the recent population returns in the preparation of the present report has enabled the vital statistics of the year to be presented with greatly increased confidence. A prominent feature of these statistics is the lowness of the rates of marriage, birth, and death, as well as of infant mortality. The birth-rate, the death-rate, and the infant mortality-rate were in each case the lowest on record, and with the exception of that of the years 1886 and 1887 the marriage-rate of 1909 attained its lowest point.

Declining birth-rate.—Calculated on the revised population estimate, the Scottish birth-rate averaged 27·33 per 1000 living, which is the lowest rate hitherto recorded, and is lower by 1·63 than the mean rate in the preceding decennium. The birth-rate of Scotland was above that of England by 1·7 per 1000, and above that of Ireland by 3·8 per 1000. In the principal towns the birth-rate ranged from 37·9 per 1000 in Motherwell and 36·7 in Hamilton, to 25·9 in Kilmarnock. In some of the counties the rate was very low; it did not exceed 18·4 in Selkirk, 17·3 in Bute, or 17·2 in Orkney. The illegimate birth-rate, expressed in terms of unmarried and widowed women between the ages of 15 and 45, averaged 14·1 per 1000, and varied from 29·6 in Banff, and 24·3 in Wigtown, to 8·2 in Renfrew and 7·2 in Orkney.

Reduced mortality.—The general death-rate of Scotland in 1909 was 15·85 per 1000, this being the first year on record in which the rate had been below 16 per 1000. The rate was below the average of the preceding ten years by 1·29 per 1000. In the Scottish counties the crude or uncorrected death-rate ranged from 17·5 in Lanark to 11·3 in Peebles. The death-rates of the principal towns, corrected for age and sex differences of population, ranged from 21 6 in Glasgow and 19 7 in Dundee, to 13·4 in Motherwell and 12·8 in Partick.

Infantile mortality.—The deaths of infants in their first year of age were in the proportion of 108 per 1000 births, which is the lowest rate hitherto recorded, and is below the mean decennial rate by 12·8 per 1000. In the Scottish counties infant mortality ranged from 132 in Kinross, 124 in Lanark, 122 in Forfar, and 121 in Aberdeen, to 58 in Shetland, 53 in Sutherland, 49 in Peebles, and 48 in Argyll. In the principal towns infant mortality was still very high, being equal to 152 in Aberdeen, 145 in Dundee, and 133 in Glasgow.

Causes of death.—Of the total deaths registered during the year the causes were certified either by the medical attendant or by a procurator fiscal in all but 2 1 per cent. Letters of inquiry were addressed to medical certifiers in those cases where the causes were insufficiently described for purposes of classification. As a result we learn that of the deaths originally referred by classification in the certificates either to intestinal obstruction or to tumour or other indefinite cause, not fewer than 95 were eventually assigned in the registers to malignant disease. In addition to the foregoing much valuable information has been secured by means of these inquiries, and Dr. Dunlop gratefully acknowledges the coöperation of his medical brethren in this portion of his work.

Tuberculosis.—A satisfactory feature of the vital history of the year is the continued decline in the mortality from tuberculosis of all forms, as well as from tuberculous phthisis, the rates under both these headings being the lowest hitherto recorded. The death-rate in 1909 from all forms of tuberculous disease was 198 per 100,000 living, 128 of that number being due to phthisis. Previous to 1886 the Scottish death-rate from phthisis was always above 200. In 1887, for the first time, it fell below that figure, whilst in 1909, for the first time, it fell below 130. The male death-rate from this disease was 136 and the female rate 121. Of those dying from phthisis, 85 per cent. were between the ages of 15 and 60 years, whilst only 3 per cent. were below 5 years and only 6 per cent. above 60 years of age. Disregarding sex, phthisis mortality ranged from 146 per 100,000 in the insular-rural districts to 117 in the small town districts. Among the principal towns phthisis was fatal in the proportion of 176 per 100,000 in Dundee, 152 in Glasgow, and 145 in Paisley, whilst it was fatal to 89 only in Partick, 73 in Motherwell, and 58 in Kirkcaldy.

Epidemic disease.—Comparing the death-rates from the principal epidemic diseases in the year under notice with the corresponding rates of former years, we note that the marked difference between the deaths from "fevers" in 1909 and those in the three years immediately preceding is largely due to the subsidence of the epidemic of cerebro-spinal fever which prevailed in those years. Typhus fever seems still to linger in certain parts of Scotland, as appears from the fact that 26 deaths from that disease occurred in the course of the year under notice, a number which exceeds the quinquennial average by 8. The increase of these deaths was due to an epidemic in the fever hospital at Greenock, in which town 16 of the 26 deaths took place. The mortality from enteric fever did not differ greatly from the quinquennial average and was equivalent to a rate of 6 per 100,000 living. The mortality from scarlet fever and from diphtheria was relatively high and that from measles and diarrhœa relatively low. The death-rate from malignant disease was higher than in any previous year, and for the first time exceeded 100 per 100,000 of the population. The mortality from pneumonia and from bronchitis scarcely differed from the normal.

A chapter on the influence of weather on mortality concludes this very instructive report.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 25, 1911.

The National Insurance Bill.

As we go to press a special meeting of the Representatives of the British Medical Association is being held in London to which a report of the Council of the Association upon the National Insurance Bill has been submitted. The meeting had its origin in a resolution passed at the annual meeting of Representatives at Birmingham which provided that, upon the completion of the Committee stage of the National Insurance Bill, the Council of the Association should issue to the divisions a report upon the position under the Bill as amended, and should convene as soon thereafter as practicable a special meeting of Representatives to consider the matter. Remembering the position in which the Bill now stands after the treatment which it has received since the summer meeting of the British Medical Association, we may take it for granted that the proceedings of the meeting now being held will be arduous, protracted, and important. For the Representatives are placed, in considering the particular sections of the Bill which affect most closely the medical profession, in exactly the plight of every class of the population in considering those clauses of the Bill in which they believe themselves to have important concern. They must feel in doubt of their ground. Since the Representatives last had the Bill under discussion a large number of complicated amendments have changed the face of the document in many essentials as well as in countless details, while the procedure which has been adopted in Committee of the House for dealing with these amendments has not allowed of adequate discussion. The very meaning of some of the clauses which the Representatives are considering has not been threshed out, much less has their bearing on life, when the Bill becomes law, had adequate consideration. The report which has been submitted by the Council of the Association is confidential while we write, though its bearings will probably have become public property by the end of the week. Even if we felt ourselves at liberty to comment on this report in the favourable terms which we should certainly be moved to do, it is our duty to respect the fact that the document is still confidential, while no public service would be rendered, at a time when all medical men are agreed in attempting to find a unanimous course of action, by any interjections during the meeting of the Representatives of the British Medical Association.

The essential position remains unchanged and was well shown at an enthusiastic meeting of the medical profession held in Manchester on Saturday last, Nov. 18th, when the following resolution was unanimously carried:—

That in the opinion of this meeting the National Insurance Bill as at present framed does not satisfactorily embody the demands of the medical profession, as defined in the "six cardinal points" formulated by the British Medical Association; that the scheme of the Bill in its present form is unworkable, and will create a condition of affairs not only detrimental to the medical profession, but also dangerous to the public health—therefore, this meeting of the medical profession of Lancashire and Cheshire expresses its determination, in the event of the Bill becoming law in its present form, to unite with the whole of the profession in declaring its inability to undertake the duties which the Bill proposes to assign to it.

This resolution is the deliberate opinion of a large mass of medical men who were determined, before it was too late, to register their opposition to the Bill and their dissatisfaction with the course of the negotiations that had taken place, and, in short and in their own words, who felt "that the scheme of the Bill in its present form is unworkable." The meeting, as Dr. E. S. REYNOLDS in moving the above resolution pointed out, was in no way antagonistic to the British Medical Association, but would strengthen that body in proceedings the value of which had been so fully recognised by all; and with every word of Dr. REYNOLD'S stirring but well-reasoned speech we are in complete accord. In this Bill for national insurance against sickness and invalidity provisions are introduced completely revolutionising the professional, and perhaps the scientific, position of a body of men without whose coöperation the word insurance means nothing at all. Immediately upon the text of the Bill being available the facts were made clear to the Chancellor of the Exchequer by the solid opinion of the medical profession, reinforced by the acquiescence of thinking men and women not medical practitioners and having only one thing in common—personal acquaintance with the conditions of medical practice, including those of medical and scientific education and of hospital administration. As one result of this general feeling that the Bill, however noble in intention, was bad in many of its provisions, six cardinal points upon which amendment was required were submitted to the Chancellor by the British Medical Association. No adequate reply from the Chancellor has resulted. We do not suggest that no concessions have been made in respect of certain of the six points, but the value of the concessions has been minimised by future amendments to an extent which was probably beyond the appreciation of Parliament owing to the pace at which the business in Committee has been conducted and to its complicated nature.

Dr. G. A. GIBSON points out in an eloquent address on the Medical Aspects of Some Social Questions, which we publish in another column, that criticism of the National Insurance Bill is rendered difficult by the sympathy which all medical men must have for most of its declared aims. This it was which led medical men with the rest of the country, upon the introduction of the Bill, to welcome it as an attempt to lead a large proportion of our population to make provision against the accidents of life, a provision which, as Dr. GIBSON says, has notoriously been left unmade in the past. But anyhow the time for criticism of the Bill has gone by and the hour has arrived when medical men must make up their minds whether they will or will not assist in carrying out the Chancellor's scheme. No medical man who opposes this scheme need feel that he is standing in the way of social progress for selfish reasons; he can still remain, what the medical man has always been and must always be, an ardent advocate of every movement that will lighten the

tax upon our population of sickness and invalidity, that will bring solace to the suffering, and security to the workman. Generations after generations of medical men, in a manner which has fallen to the lot of no other body of our community, have shown by actions, not by words, the self-sacrificing pleasure and unremitting zeal with which they attempt to deal with the evils that are designed to be removed by this Bill. Men of such a temper do not change. Our high ideals remain as high, and because this is the case we are bound to set our faces against a measure which, as it stands, does not give to the individual efforts of medical men a common principle by which they can abide. The Bill appears bound in its present state to lead to a deterioration of medical practice, to a falling off from our scientific standards, and to grave interference with medical charities.

Compulsory Notification of Pulmonary Tuberculosis.

IN 1908 the Local Government Board issued regulations rendering compulsory the notification of all cases of pulmonary tuberculosis occurring amongst the inmates of Poor-law institutions or amongst persons under the care of district medical officers. In March of this year further regulations were made extending the system of notification to cases occurring amongst the in-patients or out-patients at hospitals, or other similar institutions for the treatment of the sick, which are supported wholly or partially otherwise than by the contributions of the patients and otherwise than from rates and taxes. The results obtained by these regulations have evidently proved satisfactory in the opinion of those who are able to judge of the working of compulsory notification amongst the classes of patients involved, for new regulations have now been issued completing the system of notification. Hereafter it will be the duty of every medical practitioner, with certain exceptions specified in the regulations, to notify every case of pulmonary tuberculosis occurring in the course either of his public or of his private practice.

The primary object which the Local Government Board has in view in requiring compulsory notification of every case of pulmonary tuberculosis is to enable the local authority to assist in the eradication of the disease, and in a circular letter accompanying the regulations the Board offers certain observations as to the ways in which local authorities can render such assistance. Under the powers of previous Public Health Acts these authorities may either themselves provide sanatoriums or may contract for the use of such institutions. Now the Board has been advised that these powers also enable a local authority to provide or contract for the use of dispensary or out-patient hospitals. Before providing new institutions, it is to be hoped that the charitable institutions already existing in the form of tuberculosis dispensaries will be communicated with; the experience already gained by the officers of these institutions would be of the greatest value, and multiplication of centres is not to be advised. At the same time caution must be exercised not to exploit the services of the honorary staffs of the hospitals, whose duties are already sufficiently heavy. Under the regulations issued in March last some confusion existed as to the procedure to be adopted when a patient suffering from pulmonary tuberculosis passed from one hospital to another, or even from the out-patient department to the wards of the same hospital, as to whether further notification was necessary. In the new regulations this matter is very clearly defined, for the words occur: "..... a medical practitioner shall not be required under these regulations to notify any case of pulmonary tuberculosis which has already to his knowledge, under these regulations or under the Poor-law regulations or under the hospital regulations, been notified to the medical officer of health for the area within which the place of residence of the patient is situate." Useful information is given by the Board as to the limitation of the scope of the regulations. Nothing in the regulations, we learn, shall apply to, or impose any duty or obligation upon, any medical practitioner acting in his capacity as medical examiner of candidates for some office or appointment as medical examiner on behalf of an insurance company of a person proposing to insure his life at the risk of that company, or as medical examiner of the passengers and crew of an emigrant ship. These are wise and prudent exceptions, and being so clearly stated will relieve the responsibilities of practitioners acting under the conditions named. Another important article to which we would draw attention is one compelling every medical practitioner who is a school medical inspector within the period of 48 hours after he has inspected any children attending a public elementary school to complete and sign a notification of all cases of pulmonary tuberculosis of which he became aware during the course of the inspection.

We have mentioned on other occasions the apprehensions which have been expressed of certain hardships which might ensue to individuals as the result of their notification as being the sufferers of a disease so infectious as to require notification, but at the same time we remarked[1] that should the benefits derived outweigh the drawbacks, a far-reaching prophylactic measure will have been established. We have every reason to believe that the views of the Local Government Board have been faithfully carried out at the various institutions coming under the force of the regulations which commenced on May 1st of this year, and we are not aware that any of the personal inconveniences feared have been experienced. All information of this nature imparted to the medical officer of health is, of course, of a strictly confidential nature, and if detrimental knowledge has been conveyed to other quarters, such as the patient's employer, that he is the sufferer from an infectious disease, it would be from other sources than the practitioner or medical officer of health. We are glad to notice that in the circular letter accompanying the new regulations stress is laid by the Board on the fact that the ability to convey infection on the part of patients afflicted with pulmonary tuberculosis is limited and intermittent, and that infection can be prevented by the patient himself when he has learnt and is not too ill to practise elementary precautions. We endorse the statement that the patient may be trained, and may, as a result, cease to be a source of infection, in which case he need be subjected to no disability; therefore we again strongly uphold the contention which we have so often expressed that education must occupy an important place in the campaign against this disease. If

[1] THE LANCET, April 8th, 1911.

by means of compulsory notification patients can be visited by those who are experts in hygiene and sanitary matters, so that they and their surroundings can be fully and satisfactorily controlled and improved, then these regulations will be of true value in helping to stamp out a malady which has already shown such a great diminution in incidence since hygienic improvements have been enforced by law. We may add that the new regulations come into force on Jan. 1st of next year.

Annotations.

"Ne quid nimis."

GUARDIANS AND POOR-LAW REFORM.

WE have had forwarded for our inspection a copy of a memorial from 121 guardians and ex-guardians of the poor presented recently to the President of the Local Government Board. The signatories, who are of both sexes, and who have gained their practical experience in urban and rural unions in all parts of England, are persons whose position, knowledge of their subject, and proved interest in Poor-law administration would alone command respect for their observations, while the matter of their memorial is of considerable importance. It makes no absolutely new proposal, but serves rather as a reminder that the report of the Royal Commission on the Poor-laws and Relief of Distress was issued in 1909 by the majority of a Royal Commission appointed in 1905; that an alternative scheme was propounded by a minority of that Commission who were able to command no less attention for their recommendations than did their far more numerous colleagues; and that no legislative result has followed the reports of either. We are also reminded that Mr. Charles Booth, a Commissioner whose name carries the greatest weight in such matters, unable to take part in the final deliberations of the Commission, propounded yet a third scheme with regard to the question of administration and organisation, advising the grouping of existing unions upon principles which he laid down and the utilisation of existing machinery for carrying out the work of relieving destitution, without those features of the present system which both Majority and Minority agreed in condemning. The memorialists in the present case have evidently in view the scheme of Mr. Booth, and while admitting that the demand for reform is urgent, refuse to admit that a drastic change of areas or the destruction of the present authorities advocated in both Majority and Minority Reports is either necessary or desirable. Their complaint is that shortcomings have been laid at the door of the guardians, the blame for which should at least be shared by the central authority controlling them, and that no fresh principles for their guidance have even now been laid down either by that authority or by Parliament. They ask that questions of principle should take precedence of questions of machinery, and advise that the latter should be deferred until the principles upon which the work is to be done shall have been definitely ascertained. They suggest not unreasonably that any new machinery may in itself be a source of confusion and difficulty in addition to the fact that it will be expected to carry out new measures. They say in effect, "If there is anything new to be done, why do you not tell the guardians what it is and authorise them to do it? Then if you find they are not competent you can appoint an alternative authority to supplement them, but as the matter stands you have not even definitely imposed a policy of universal application with regard to out-relief; you have not done anything with regard to the general mixed workhouse (which you can do by enabling unions to combine and coöperate), and instead of codifying the law which the guardians are still administering, and which they seem likely to continue to administer, you leave for their only guidance a mass of statutes and orders, cumbrous, antiquated, and self-contradictory, which is responsible for much of the confusion of principles that lies at the root of the present difficulty." The points which we have thus summarised are well worth the consideration of those to whom they are addressed. There is an old saying as to threatened men living long. It is possible that the sentence pronounced upon the Poor-law guardians by the Royal Commission will not be carried out, for its execution has now been long postponed. If, however, we carry the analogy further, we must urge that the reprieved convict in justice should be given full opportunity for reform and for leading a better life. The guardians have a just cause of complaint as long as defects in the system which they administer are made a subject of public contempt without their being directed or even empowered to remedy them by the central authority responsible for their guidance.

LICKING STAMPS.

IN an age which has reached high sanitary standards with an obvious improvement in the public health, the licking of stamps is a retrograde proceeding, and any suggestion calculated materially to encourage or increase the habit is open to strong condemnation. The habit is opposed to a common sense of cleanliness, let alone what bacteriological requirements may teach. The speed of modern life, it is to be feared, forces upon us the breaking of many sanitary commandments, and hygienic considerations are made to retire in favour of methods of convenience and despatch. The adhesive stamp is a sanitary blunder, but it is a business convenience for which it is hard to suggest an alternative. No persons need lick a stamp if they seriously make up their minds never to do so, but unfortunately the use of stamps has created a habit which, once contracted, is difficult to avoid. The habit of licking stamps is, in fact, practically universal, and few people consider it an offence against good manners. There are several devices which are intended to obviate the licking of a stamp, but their adoption is comparatively rare. It is surprising to us that the resources of the inventor have not suggested something fulfilling the office of a stamp, but not open to hygienic objections. We are prompted to raise these considerations in view of the provision in the National Insurance Bill which requires the servant and master weekly to affix a certain number of stamps to a card which is left for the inspector to examine. It is fairly certain that the process of attachment will generally be done by licking the stamp. It is no defence to say that already, apart from this new legislative requirement forced upon the household, people are confirmed in the objectionable habit. The proposal obviously broadens the chances of disease being spread in this way, and definite cases of disease have been traced to it. It will be interesting to learn the medical officer's attitude when he finds cards of licked stamps in the houses in which there is infectious disease. No one can deny the extreme convenience and ease of collecting a tax in this way, but there are clearly grave objections to it upon the score of health preservation; and until it is shown that the habit of licking the stamp has died out the objection will always remain, whatever political party it may be which encourages it. Licking envelopes is equally objectionable, and it is time that

human ingenuity found a convenient way of sealing a paper cover or of attaching a stamp which shall not require the aid of the saliva.

THE NORMAN KERR MEMORIAL LECTURE.

UNDER the auspices of the Society for the Study of Inebriety, the fourth Norman Kerr Memorial Lecture was delivered on Nov. 14th in the lecture theatre of the pathological department, Medical Schools, Cambridge. The President of the society, Dr. T. B. Hyslop, was in the chair. The lecturer, Professor G. Sims Woodhead, took as his subject "The Influence of Alcohol on Body Temperature and on the Heart." In commencing his lecture Professor Woodhead pointed out the propriety of the arrangement that the Society for the Study of Inebriety should take charge of a memorial lecture given in honour of the late Dr. Norman Kerr. The society was founded by Dr. Kerr in 1884, and presided over by him until the day of his death. He had, by his researches and writings, taken a very prominent part in calling attention to the need for study of the physical ills resulting from the immoderate use of alcohol. Along with his friend, Sir Benjamin Ward Richardson, Dr. J. J. Ridge, and other workers, he had striven most earnestly and assiduously to place knowledge of the effects of alcohol on the human body on a more satisfactory basis than any on which it had hitherto rested. His was early pioneer work; but all of it was honest, and much of it had stood the test of time and experience. One of the great claims that could be made for him was that he endeavoured to indicate lines along which further researches might be made; and, whatever might be the ultimate finding of physiologists in regard to what may be called "physiological doses" of alcohol, there could be now little difference of opinion as to the action of excessive doses of alcohol in preparing for, initiating, and fomenting disease. The lecturer pointed out that the three former Norman Kerr Memorial lecturers had broken away from the usual method of experimentation and had tried to eliminate subjective phenomena, those phenomena dependent upon the psychical or mental condition of the patient; and he, turning his mind to some line of work in which the evidence might be simply objective, had decided to follow up, if possible, the action of alcohol upon the heart as recorded by the electrocardiographic method. After giving an account of Waller's and Einthoven's work, and pointing out some of the difficulties associated with the method of investigation, he described some experiments carried out upon himself, indicated some of the difficulties with which they were at once confronted, and then showed a series of tracings obtained after the exhibition of various drugs. The action of these drugs was tested, because they had to look upon alcohol as a drug of unknown physiological action, and before they could accept records as indicating any special kind of alteration in the heart they must have records of changes brought about by drugs that had a very definite and well-recognised physiological action. Indeed, although he and Dr. F. Shillington Scales had obtained certain features in the alcoholic record that distinguished it from the non-alcoholic, he was not at present prepared to place too much stress upon this difference or to attempt to interpret its exact significance. Still, bearing in mind the fact that those who had wide experience maintained that the cardiogram of any person was almost as characteristic as were his finger-prints, any deviation from the normal, however slight, might possibly have to be accepted as an indication of well-marked altered conditions. The lecturer then described the late Dr. Arthur Gamgee's apparatus for obtaining continuous records of the temperature of the body, both surface and internal. He pointed out what an immense amount of ingenuity had been put into this apparatus, and regretted deeply that Dr. Gamgee had not lived to finish his experiments, which promised to be of enormous value to the study of disease. He referred also to the admirable work done in this country by Professor Callender and the Cambridge Scientific Instrument Company, and by Messrs. Siemens in Germany. He then threw on to the screen a number of tracings obtained from individuals who had taken some half ounce (15 c.c.) of absolute alcohol. He showed three pairs of curves in which the surface and rectal temperatures were taken at the same time—before, during, and after this dose of alcohol had been administered. In each case there was a distinct rise of the surface temperature as taken in the axilla, and a simultaneous and distinct fall of the visceral temperature. This was interesting, because in the same series of records taken for periods of 24 hours there was, when food was taken, a fall of the surface temperature and a simultaneous rise of the visceral temperature. When hot fluids were taken there was, however, a sudden rise of the surface temperature and an equally sudden rise of the visceral temperature. This, however, in both cases was of short duration. The lecturer pointed out the difficulties that had attended his earlier experiments, and said that whilst perfectly satisfied with some of the results obtained, he should, of course, repeat the whole of the series on a much extended scale. He thought, however, that these were sufficiently interesting to place before the society in this lecture.

THE ETIOLOGY OF OCCUPATION NEUROSIS AND OCCUPATION NEURITIS.

IN the *Journal of Nervous and Mental Disease* for August Dr. W. E. Paul, of Boston, U.S.A., discusses the vexed question of the etiology of the occupation neuroses, and avows himself a staunch supporter of the peripheral theory of their causation. The generally accepted view of their dependence on central—i.e., cortical—disturbance of function is based apparently on the occurrence of cases in which the neurosis is strictly confined to the performance of a particular act. If writer's cramp be taken as an instance, it is only when the fingers pick up a pen or a pencil that the cramp appears; for all other movements or combinations of movements of the fingers, however delicate, muscular action remains unimpaired. Such cases, however, are rare compared with the number in which the defect of function has spread to the performance of more than one special act. The late Dr. Vivian Poore strongly combated the central theory, alleging that he had never seen the writer's cramp of the text-books in which failure of writing power is the sole symptom. In 60 out of 75 tabulated cases he noted loss of function other than writing. Dr. Paul has studied 200 cases of occupation neurosis from the out-patient department of the Massachusetts General Hospital with a view of learning the character of the symptoms and thereby making inferences bearing on the etiology. In no fewer than 177 cases pain is specifically referred to; it was often severe and interfered with sleep. In 72 cases the pain was referred to joints, the shoulder, elbow, and wrist joints being those mainly affected. In only four of the 200 cases did the symptoms point to involvement of any of the main nerves of the limb. It may therefore be said that the preponderance of the pain symptoms is on muscles, joints, and regions near joints, their association with definite peripheral nerves being minimal. Now, if there is an increase in subfascial pressure during muscular contraction, varying with

the duration and power of that contraction, it is quite conceivable that the mechanical effect on the included nerve structures may be, under certain conditions, injurious. Further, the pull on tendons, fasciæ, and ligaments during muscular action may again, under certain conditions, produce mechanical disturbance of nerve function. The sensations of aching, numbness, stiffness, and fatigue that accompany these neuroses, the disagreeableness of which to the patient is out of all proportion to the vagueness of his description, may very well be associated with implication of minute nerves in some of these ways. Dr. Paul does well in calling attention to cases diagnosed as occupation neurosis where the existence of actual mechanical pressure on nerves has been established by rad ography or otherwise. Poore quotes a case diagnosed as writer's cramp in which the symptoms were found to have been occasioned by the pressure on certain nerves of a small aneurysm. Dr. Paul refers to a case of pianist's cramp treated as such for some months in which the patient was subsequently found by the X rays to have a needle buried in the hand. Reference was made a short time ago in these columns to a case of cramp in a typist and shorthand writer where the symptoms were associated with stretching of brachial nerves from an abnormal first rib. It is clear that all cases of occupation neurosis demand the fullest investigation from an objective standpoint ere they can be relegated to the category of neurosis of central origin.

EPSOM COLLEGE.

AN extraordinary general meeting of the Governors of Epsom College was held at the office, 37, Soho-square, W., on Nov. 15th, when the treasurer, Sir Henry Morris, occupied the chair. The object of the meeting was, as has already been announced in these columns, to consider a proposition to delete from By-law 16, Section 1, and from By-law 24, Section 2, the last clause, beginning in each case with the word "Provided," which limited the number of vacancies for pensioners and foundation scholars, occurring within a specified time, that could be filled up from the unselected candidates having the largest number of votes at the previous election. The two sections referred to read as follows:—

By-law 16.—(1) Every vacancy among the Pensioners which shal occur, or shall for the first time come to the knowledge of the Council after any meeting which shall have determined the number of vacancies to be filled up by election at the next Annual General Meeting, and before the expiration of three months after such election, shall, subject to the provisions of this By-law, be filled up by the appointment thereto of the unsuccessful candidate who had the largest number of votes at such election, and who shall not have been previously appointed to a Pension under this section, and every candidate so appointed to any such vacancy shall be deemed to have been elected thereto at the then last preceding election, but his Pension shall not commence until the date of his appointment: Provided that the number of vacancies filled up under this section after any one election shall not exceed three.

By-law 24.—(2) Every vacancy among Foundation Scholars which shall occur, or shall for the first time come to the knowledge of the Council after any meeting which shall have determined the number of vacancies to be filled up by election at the next Annual General Meeting, and before the expiration of four months after such election, shall be filled up by the appointment thereto of the unsuccessful candidate who had the largest number of votes at such election, and who shall not have been previously appointed to a Foundation Scholarship under this section, and every candidate so appointed to any such vacancy shall be deemed to have been elected thereto at the then last preceding election: Provided that the number of vacancies filled up under this section after any one election shall not exceed three.

The chairman stated that before the alteration of the by-laws 16 years ago all vacancies for pensionerships and foundation scholarships occurring within three months after the election could be filled by the admission of those unsuccessful candidates who had received the largest number of votes. Under the present by-laws, however, not more than three vacancies in each class could be so filled, the limit of the period after the election being three months in the case of pensioners and four months in the case of foundation scholars. As the pensioners were for the most part advanced in years it was exceedingly probable that a number of vacancies might occur between the date of the April council meeting, when the voting papers had to be printed, and three months after the annual general meeting, which is held about the end of June, whilst in the case of foundation scholars it was difficult for the head-master and the bursar to estimate so early as in April the number of boys who would be leaving the college within four months after the election. Moreover, when making appeals for subscriptions and donations the council had for many years stated that 50 pensioners and 50 foundation scholars were being maintained by the foundation. Consequently, if more than three vacancies in either class occurred the council were not, strictly speaking, keeping the promise held out to persons as an inducement to them to subscribe. If the proposed amendments in the by-laws were adopted by the Governors, the council would be enabled to insure that at the beginning of every school year there were on the books of the college the full numbers of 50 pensioners and 50 foundation scholars. The requisite resolution to the effect that the last 19 words be deleted from each section was then put to the meeting and unanimously carried, as might have been expected from the unanswerable arguments for the reform advanced by Sir Henry Morris.

THE VOLUNTARY AID DETACHMENTS FOR WAR TIME.

THE necessity for the formation of voluntary aid detachments for sick and wounded in time of war has been fully recognised by those who have seen the horrors of warfare. A scheme for the organisation of voluntary aid in England and Wales has been promulgated by the medical division of the War Office on lines suggested by Sir Alfred Keogh, formerly Director-General of the Army Medical Staff. It has been arranged on lines similar to those followed by certain foreign countries, where organisations for the relief of sick and wounded have reached a high standard of efficiency. The number of voluntary aid societies and associations which already exist, having no connexion with each other, leave them liable to act independently, with the result that their respective spheres of action might not be so coördinated and kept in touch with each other as to render their services of the greatest value in time of war. A county system has accordingly been adopted, because that is the one upon which the Territorial Force is organised and which the British Red Cross Society also has adopted as the basis of its constitution. Voluntary aid detachments, as organised in each county, comprise two classes—men's detachments and women's detachments. The men's detachment consists of a commandant, preferably a retired officer of the army not liable to recall, one medical officer, one quartermaster, one pharmacist, four section leaders, and 48 men, forming four sections of 12 men each. The women's detachment comprises a commandant (man or woman, not necessarily a doctor), one quartermaster (man or woman), one qualified nurse as lady superintendent, and 20 women, of whom four should be qualified as cooks. In the training of these detachments a practical knowledge of improvised methods of aid is an essential feature. The detachments will have no depôts of stores to draw upon in the event of mobilisation; all their requirements and equipment will have to be collected and, for the most part, improvised by the detachments themselves. Up to the present there has been considerable difficulty in the way of detachments acquiring information upon this subject, as no official or other handbook has existed dealing fully and systematically with such details in the English language. There are, of course, many handbooks on first-aid treatment, but these do not cover

the subject from the point of view of the present "Voluntary Aid Detachments," as organised by the War Office. To supply this want Lieutenant-Colonel H. Mackay has compiled a well-written, accurate, and concise little book entitled "Improvised Methods of Aid in the Field,"[1] based on recently delivered lectures to the Wiltshire No. 1 Voluntary Aid Detachment. It should be most helpful to the patriotic men and women who are giving their services to the country by joining the voluntary aid detachments, as well as to members of the Territorial Medical Service. The approval of Sir Alfred Keogh, as noted in the preface, is a strong recommendation. We can heartily commend any well-advised measure likely to stimulate patriotic enthusiasm directed towards the minimising of the due effects of war—which, as history shows, not infrequently breaks out when least expected.

THE OFFICIAL OINTMENTS.

A USEFUL paper on the official ointments was read at the October evening meeting of the Pharmaceutical Society. The authors, Mr. R. G. Guyer and Mr. W. T. Ewing, in the course of their observations, remarked that up to the present time no definite information had been published concerning the power of the skin in absorbing ointment bases. Dr. F. Gardiner, however, who has been working in the Research Laboratories of the Royal College of Physicians, Edinburgh, has made a study of the preparation of ointments, and allowed Mr. Guyer and Mr. Ewing to anticipate the publication of the full details of the experiments by utilising some of the results. In determining the relative penetrative power of various ointment bases, Dr. Gardiner's procedure was to rub the base, to which a dye had been added, into a given area of a guinea-pig, for a given length of time, and to kill the animal and make microscopical sections of the part. The degree of penetration was observed by the depth of staining on the hair-root, and Dr. Gardiner's observations show that olive oil is the most absorbable of the official substances, the others coming in the following order: benzoated lard, anhydrous wool fat, hydrous wool fat, and petroleum jelly. As showing the important place which ointments take in medical treatment, it may be mentioned that a recent survey of 4000 prescriptions gave evidence that practically 10 per cent. were for ointments only. In the practice of medicine ointments have undergone considerable change during the past few years; they are now seldom used for surgical purposes, but as a result of the development of dermatological medicine their use in this connexion has increased considerably. In a criticism of the various ointment bases the authors stated that olive oil and almond oil are very useful in preparing certain creamy bases, especially those which are to form a vehicle for an oleate, and also those cases in which absorption is of paramount importance. For general purposes, however, they are not to be recommended owing to their tendency to form fatty acids. Lard, although a most useful base for strictly emollient ointments, is receiving distinctly less and less support in dermatological practice owing to its tendency to irritate the skin, the irritation being due most probably to the production of fatty acids. Spermaceti is decreasing in use and is chiefly employed to give the finished article a crystalline appearance and to raise the melting point. As to the paraffin bases, the authors said that in many respects these were ideal, and wool fat has become established as a reliable and highly important ointment base. The demand for some of the official ointments, notably capsicum, eucalyptus, lead iodide, potassium iodide, lead carbonate, sulphur iodide, stavesacre, calomel, and red iodide of mercury, is very small, and the question may rightly be raised whether the retention of these ointments in the Pharmacopœia is justified.

[1] Improvised Methods of Aid in the Field. For the Use of Voluntary Aid Detachments and Members of the Territorial Royal Army Medical Corps. By H. Mackay, M.D., T.D, Lieutenant-Colonel R.A.M.C.T., Commanding 1st S.W. Mounted Brigade Field Ambulance R.A.M.C., London: Eyre and Spottiswoode, Limited. 1911. Pp. 112 + viii. With two diagrams in colours and 45 illustrations. Price 1s. 6d. net.

THE CHEMISTRY, PHYSIOLOGY, AND ÆSTHETICS OF A CUP OF TEA.

IN our next issue we propose publishing a concluding article upon this subject. Our readers may remember that a previous article was published in THE LANCET of Jan. 7th, 1911. In that article we announced that further researches were proceeding in our laboratory, the results of which would be published as soon as they were completed. A good deal of work has since been done, and the results are of interest. They refer to caffeine tannate as the therapeutically important constituent of tea infusion; the preparation and composition of caffeine tannate; caffeine tannate physiologically considered; the effect of over-infusing tea; blends, and the behaviour of tea with different waters. The report contains a description of the methods of analysis employed, which show a departure from the methods hitherto published, and which are regarded as being instrumental in throwing fresh light upon the question.

TRIBALISM AND QUACKERY.

IT is a commonplace to maintain that quackery is on the increase, but, on examination, this appears scarcely true. Quackery dates from pre-historic times, and is, indeed, a survival of the magic of the tribal medicine-man. Anciently, as anthropologists have pointed out, the tribe was dominated by medicine-men, who were, in some sort, the fount of priesthood, kingship, and the governing classes. At an early date the human conscience began to develop and the medicine-men themselves grew first honest, then honourable, and finally scientific. But quackery, which still dominates hosts of uneducated minds in all classes, is none the less a survival from the tribal condition. It savours of the days of lacustrine man. When, as in recent years, we may behold in what might be called the most cultivated part of London, a large shop window full of "rheumatic rings"[1] at 7s. 6d. each we exclaim against the increase of superstition. There is no increase evidenced, we are only looking at a comic survival. There was a long time in human development when rings were worn as amulets. Considerably more than 1000 rings have been recovered, for example, by antiquarians from the known Bronze Age settlements, and it would be at least rash to suppose that all these were merely worn as ornaments by a necessarily rough-handed generation of archaic men. Be that as it may, it is known that rings were regarded in the Middle Ages as having magical and protective powers. Tribalism, as we may call the tribal heredity of races accounted civilised, assuredly explains many disturbing phenomena. Certain classes are tribal, static, instinctively adherent to a remote social past, and this to a degree most perplexing to those reformers and educationists who believe that every class is potentially the same as every other class. In her delightful remarks upon "the simple savage and his simple life" Miss Beatrice Grimshaw ("The New New Guinea," 1910) says of the Papuan cannibal that "His medicine is sorcery pure and simple. He shuts out every breath of air from his hut if he can manage to do so, and washes only when he is caught out in the rain." Perhaps alone among

[1] In Paris "migraine rings."

modern travellers she insists on the personal filthiness of low savages. Now, filth and airlessness are flourishing traditions among those belated barbarians, the proletarians of Europe. Phthisis, venereal disease, and, indeed, insect-borne and zymotic disease of every kind, are palpable relics of the airless and unwashing customs of savagery. Phthisis descends from the closed hut of the primitive man—it is still combated behind closed windows among primitive Celts. Venereal disease, spread, it may be, by the dissolute males of all classes, has certainly been nursed and incubated by the dissolute females of the classes that do not wash.

AN AVOIDABLE ACCIDENT DURING LUMBAR PUNCTURE.

IN the *Journal of the American Medical Association* of Oct. 14th Dr. W. F. Lorenz has reported a case of an avoidable accident during lumbar puncture—breaking of the needle by a movement of the patient. This he had long expected, but it did not happen until he had performed a large number of lumbar punctures. The patient was in the lateral position on the left side fully flexed. He was held in this position by an attendant with one arm beneath the patient's knees and the other about his neck. Ethyl chloride was used as a local anæsthetic. The puncture was made in the fourth lumbar interspace, just to the right of the median line, and close to the upper border of the fifth spinous process. The patient did not appear to heed the entrance of the needle, but when the point was in the neighbourhood of the canal he suddenly extended his back and the needle snapped, leaving four centimetres well below the cutaneous surface. He was immediately anæsthetised, and a search made for the needle without success. Three days later a skiagram was taken, and showed the needle lodged close to the upper border of the fifth lumbar spine. The patient was again anæsthetised, and the needle was easily removed. Dr. Lorenz points out that this accident can be prevented if means are taken to prevent a sudden extension on the part of the patient. For this purpose he now employs a light padded stick placed beneath the patient's knees which is attached by means of light straps to canvas bands coming over the shoulders and beneath the armpits. The bent knees can be drawn as close to the trunk as is desired, producing complete flexion of the spine. This is desirable for successful puncture. The appliance makes sudden extension on the part of the patient impossible. The difficulty in finding the fragment of needle, although its approximate position was known, is remarkable. This emphasises the help of skiagraphy, which showed the needle plainly in its relation to the spine as well as its depth below the cutaneous surface. The patient experienced no ill results from the presence of the fragment of needle; from the accident until the time of its removal he was up and about.

HUMIDITY AND HEALTH.

THOUGH many observations on the influence of humidity in disease are scattered throughout medicine and the subject has received special attention from climatologists, our knowledge of it is empirical rather than scientific. In its discussion we are confronted at the outset with the difficulty that humidity is used in two senses—absolute and relative. By absolute humidity is meant the amount of water in the air per cubic foot; by relative humidity, the percentage that this water is of the amount which the air can hold at the same temperature when saturated. The hotter the air the greater the amount of water required to saturate it. In the *Boston Medical and Surgical Journal* of Sept. 7th Dr. P. W. Goldsbury has published a suggestive paper on humidity and health. Though it is based on American conditions, climatic and domestic, which are very different from those of this country, his conclusions have a general application. He points out that air saturated with moisture at a temperature of 70° F. contains 8 grains of water to the cubic foot, while saturated air at 18° contains only 1 grain. Thus, if in winter with an atmospheric temperature of 18° saturated with moisture a flat be heated to a temperature of 70°, the air of the rooms, while having the same absolute humidity as the external air, will have a relative humidity of only one-eighth or 12½ per cent., as against 100 per cent. outside. Similarly, if the outside air contain half a grain of water to the cubic foot, and therefore has a relative humidity of 50°, the air of the rooms will have a relative humidity of 6¼ per cent. Now if it is remembered that a humidity of from 60° to 75° is none too much for the average conditions of human life, it will be realised how far different is the humidity of the air in which people are often housed in winter. Dr. Goldsbury finds that in schoolrooms, hospitals, and living rooms during winter the relative humidity is often below 40° and sometimes as low as 10°. Under such conditions indoor air is very dry and irritating. Dr. Goldsbury regards it as one of the prime causes of chapped hands and parched lips. To its injurious effect he ascribes the bad complexions of American women, while to the moister atmosphere and less indoor life he attributes the fresh complexion of English women. We may add that the still fresher complexion of Irish women who live in a still moister atmosphere bears out his contention. For the same reason the southern coast cities are famed in the United States for the complexions of their women. The problem of moistening heated indoor air so as to approximate its relative humidity to the more natural level of outdoor air has received little attention. Means to this end are growing plants, which give off a good deal of moisture from their leaves, porous vessels filled with water, and the placing of receptacles containing water over stoves or other sources of heat. It must not be forgotten that in some conditions, such as rheumatism, dryness of air, not humidity, is desirable.

THE TREATMENT OF INFANTILE PARALYSIS.

WE have received from Dr. William Mackenzie of Melbourne two pamphlets[1] dealing with the treatment of infantile paralysis in which some original and heterodox views are expressed. Dr. Mackenzie is of opinion that the muscular factor has been largely overlooked in the pathology of the disease, and he directs his treatment especially to the muscles. He appears not to be convinced that the chief lesions of the disease are in the anterior cornua of the cord, and even suggests that these may be late sequels of the muscular changes. He objects to the treatment by massage and electricity while waiting for the recovery of the anterior cornual cells. He affirms that every affected muscle will work if a commencement be made from what he defines as the "zero" position, and also that an affected limb will retain its heat and show little wasting provided that it be rested and worked within physiological limitations, even without massage and electricity. By the "zero" position is meant one in which the muscle is as nearly as possible at rest, and therefore one in which the origin and insertion of the muscle are practically on a level and in a straight line. This position is the most advantageous one for the muscle to start its movements, and one from which the weak movements of which it is capable may be increased to more effective ones. Dr. Mackenzie therefore constructs splints adapted to various forms of paralysis, with the object of keeping the muscles in the "zero" position at first. He believes that all muscles,

[1] Treatment of Infantile Paralysis. By William Mackenzie. Melbourne; and Australian Medical Journal, June 20th, 1911.

if seen early enough in the course of the disease, are capable of recovery, and that much improvement can be effected even in old-standing cases. In the latter case, however, division of the deep fascia over the muscles may be an advantage, since it may form a firm, more or less unyielding band preventing enlargement of the muscle. Dr. Mackenzie explains that his method consists in getting the affected muscle to resume work gradually, at the same time counteracting any tendency opposing this, such as the overaction of other muscles. He maintains further that work must not be done for the muscle; it must work up to its capacity at the time, and that by massaging a muscle like the paralysed deltoid with the arm hanging down we are asking damaged cells to work at the greatest disadvantage. In his splint for upper arm cases the arm is held up at right angles to the body and the deltoid is gradually made to move from this position. He gives photographs illustrating the results of his methods. While we find it difficult to accept Dr. Mackenzie's criticism of the current views on the pathology of the disease in the light of recent observations upon epidemic poliomyelitis and upon the experimental disease in monkeys, his methods of treatment certainly seem rational and worthy of trial.

THE result of the voting at the recent election of Direct Representatives for England and Wales is as follows:—

Dr. Henry William Langley Browne	7906
Mr. Thomas Jenner Verrall	7502
Dr. Henry Arthur Latimer	7173
Mr. George Brown	3424
Dr. Arthur Hawkyard	2727
Dr. Sidney Cameron Lawrence	2448
Mr. George Jackson	2182
Dr. Arthur George Haydon	909

By the report of Mr. Norman C. King, the Acting Registrar, which by direction of the English Branch Council has been entered on the Minutes of the Council, it appears that only 51 per cent. of the electorate used their suffrage.

A MEETING of the British Hospitals Association will be held at the Westminster Palace Hotel, London, S.W., on Dec. 1st, at 4.30 P.M., to discuss the National Insurance Bill as it affects hospitals and infirmaries. Hospital managers all over the country have expressed a desire that such a meeting should be held, and Members of Parliament and others interested in the question have intimated their intention of being present.

THE annual Richard Middlemore post-graduate lecture will be delivered at the Birmingham and Midland Eye Hospital by Mr. J. Jameson Evans, surgeon to the hospital, on Thursday, Dec. 7th, at 5 P.M. The subject selected is Toxic Diseases of the Eye, and all qualified members of the medical profession are cordially invited to attend. Clinical cases will be present for observation, and there will be a lantern demonstration.

THE autumn dinner of the Irish Medical Schools' and Graduates' Association will be held at the Hotel Cecil, London, on Nov. 30th, at 7.15 P.M. The President, Sir Charles Cameron, C.B., will be in the chair, and Lord Ashbourne and Mr. R. F. McCall, K.C., will be the guests of the association. Tickets may be obtained from Mr. W. J. Corbett, the honorary secretary of the dinner, at 18, Weymouth-street, Portland-place, London, W.

THE next session of the General Medical Council will begin on Tuesday, Nov. 28th, when the President, Sir Donald MacAlister, K.C.B., will take the chair at 2 o'clock P.M.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

TWO interesting reports with reference to the period 1910–1911 have recently been published by the Local Government Board. The first is the report upon Poor-law administration, the second is the report of the medical officer of the Board; Dr. Arthur Newsholme, to the President relating to the public health of England and Wales. We are at the present confining our attention to Dr. Newsholme's report, which discusses many subjects of vital importance to our profession. Having carefully perused this volume, and the introductory letter in which the medical officer summarises his experience of the progress of public health, we may say at once that it forms a worthy contribution to the series of essays on preventive medicine for which the Medical Department of the Board has achieved a well-deserved celebrity. A special feature in the present report is the frequent use of diagrams in place of, or in addition to, the tabular matter that is ordinarily relied on to enforce the teachings of vital statistics. Many readers there are to whom the scrutiny of columns of figures is tedious, if not misleading, but in whom interest is quickly awakened at the sight of aptly contrived diagrams such as those here provided in abundance. We welcome the introduction of this clear pictorial assistance to our intelligence, for however succinctly prepared and clearly written such a document as that under review may be, it must necessarily bristle with details of the sort which can be carried in the memory far easier if their lessons can be visualised.

Dr. Newsholme refrains from discussing in detail the mortality experience of the year, on the ground that this will be fully dealt with in the forthcoming report of the Registrar-General. An interesting survey is, however, given of the movement of the general death-rate in the course of the last 40 years. Comparing the mortality in the last with that in the first decennium of that period, we learn that a fall of fully 20 per cent. has taken place. Had the death-rate of 1910, in an estimated population of 36,000,000, been equal to the average rate in 1891–1900, not fewer than 171,879 deaths would have been recorded in addition to those which actually occurred. Special attention is invited to the behaviour of certain communicable diseases, both among children and adults, as having intimate relationship to immediate sanitary administration. These diseases are here considered in some detail because of their direct bearing on public health work, although the scope of preventive medicine is by no means limited to the diseases alluded to. As in past years, the subject of infant mortality is referred to, but of purpose, and in view of the circumstance that a special report on this topic is now in course of preparation the remarks thereupon in the present report are only brief. There has been in recent years a substantial fall in the infantile death-rate, and collateral evidence points to improvement at the higher ages likewise. The climatic conditions in recent years have certainly been favourable to infant life, but even allowing for this, there is no doubt that much of the life-saving already accomplished is the result of the increased concentration of public attention upon the health of mother as well as child which has been observable of late. During 1910 897,100 births and 94,828 deaths of infants in their first year were registered in England and Wales. If the experience of 1896–1900 had been repeated in 1910 there would have been 45,120 infant deaths in addition to those that actually occurred. Dr. Newsholme's remarks on the loss of life from the diseases and accidents incidental to childbirth, which deserve the attention of sanitary authorities and their officers, may be here conveniently referred to. Puerperal troubles have but a small effect on the figures of infantile mortality, but by as much as they decrease so much must we look to other causes for the annual toll of infants. That the puerperal state involves appreciable risk to mothers is shown by the fact that in one year alone more than 3300 mothers perished from disease or accident peculiar thereto. During the years 1897–1906 the death of 1 mother in every 228 births was thus caused. In 1909 the proportion was 1 maternal death to 270 births, and the ratio is still

decreasing. The rates from "total puerperal mortality" are shown in a diagram which indicates a fall of more than 30 per cent. as between 1901 and 1909. The fall is more pronounced in the case of "puerperal sepsis" than in that of "accidents of childbirth."

Another diagram shows that the highest puerperal sepsis rates are experienced in North and South Wales, and the highest rates from accidents of childbirth in Westmorland. From both groups of causes the rates are lowest in London and in the adjacent counties. "It is not unlikely," says Dr. Newsholme, "that the lower mortality of London and the Home Counties from accidents of childbirth, in comparison with Wales and the outlying parts of England, is partly due to the fact that the latter comprise districts which are sparsely populated or difficult of access, and where consequently emergency treatment is difficult to obtain, and partly to the greater facilities for obtaining institutional treatment or the assistance of consultants in London and its neighbourhood." Ophthalmia of the new-born, although relatively seldom appearing in the records of mortality, is a disease of most serious character, involving as it frequently does, in the absence of appropriate treatment, the total or partial loss of eyesight. Even when medical attendance is available, it by no means follows that the necessary prompt and active treatment will be carried out. The medical practitioner's instructions are apt to be neglected, and perilous delay in treatment is wont to occur. Hence there is need for immediate official supervision. Concerning the administrative methods adopted in those places where the disease is compulsorily notifiable, evidence is being collected and will shortly be published by one of the Board's medical inspectors. Meanwhile there are indications of gratifying success in some districts of existing measures for the prevention of blindness. It is satisfactory to learn that, judging by army and navy experience, the prevalence of gonorrhœa, which is the main cause of ophthalmia in the new-born, is decreasing, while sanitary authorities are in many instances systematically endeavouring to prevent and to cure this disease, which is responsible for so much of the blindness in this country.

The position of infantile mortality enjoys a proper pre-eminence in all comparisons of vital statistics—we are here beginning at the beginning. But, as a standard of sanitary progress, equal importance attaches to the behaviour of enteric fever and tuberculosis. In order to trace the course of mortality from these and certain other diseases average rates are given for four consecutive ten-year periods. Although these average rates conceal variations of annual prevalence, they are convenient for present purposes as indicating the general course of events. In the decennium 1871–80 England lost by enteric fever 33 in every 100,000 persons living; in the decennium ended 1910 the loss was 9 only in the same number living. By the use of a diagram it is shown that between 1901 and 1910 the mortality from this disease fell by not less than 68 per cent. Enteric fever resembles tuberculosis, and differs from scarlet fever and from diphtheria, in this respect, that it shows no marked tendency to changes either of severity or of cyclic prevalence. Since 1869, in which year it was first officially discriminated from other forms of continued fever, enteric fever has shown uninterrupted decline in mortality, and in Dr. Newsholme's judgment this decline is directly traceable to public health work. Last year enteric fever caused 1848 deaths in England and Wales. Had the death-rate been the same as in the period 1871–80 the deaths would have amounted to about 11,800. The saving of nearly 10,000 lives in a single year implies the occurrence of about 70,000 fewer cases of a disabling illness, and a correspondingly diminished loss of national efficiency. It is further calculated that the total saving in respect of enteric fever alone cannot be less than three millions sterling. Prominent among the causes of this enormous reduction of enteric fever prevalence is undoubtedly the general provision of public water-supplies. But that danger still lurks in certain drinking waters is proved by the experiences of Swanage in the autumn of last year when a sharp epidemic occurred as the result of drinking water contaminated with sewage. Next in importance to the maintenance of a safe water-supply comes the provision of a satisfactory system of main sewerage, which, when accompanied by an ample supply of water, permits of the substitution of water closets for privies and middens. The experience of Grimsby, Portsmouth, and other places on the coast illustrates a somewhat frequent mode of infection by the ingestion of polluted shell-fish. Dr. A. Mearns Fraser, medical officer of health of Portsmouth, is quoted as having reported that he possesses a history of hundreds of cases of enteric fever collected during 14 years, which are proved to have been directly caused by eating polluted shell-fish. "In the light of evidence already available," says Dr. Newsholme, "there is reason for believing that much enteric fever, the source of which is still unrecognised, ... will eventually be traced to the consumption of contaminated shell-fish." Infected ice-cream has often been suspected, but seldom proved, to be the cause of enteric fever prevalence. But in the fall of last year 142 cases of that disease occurred in quick succession at Eccles in Lancashire, the cause of which was traced to the ingestion of ice-cream containing typhoid bacilli. We agree with Dr. Newsholme that in accounting for the decline of enteric fever in this country higher importance should be attached to the considerable amount of hospital accommodation now existing for the isolation of persons suffering from that disease. In the year 1890 only 18 per cent. of the known cases in London were treated in the hospitals of the Metropolitan Asylums Board; in the year 1910 the proportion exceeded 40 per cent. A considerable number of cases of this disease are now treated in the general hospitals of the metropolis; and in the chief provincial towns large numbers are annually admitted to hospital for isolation and treatment. A sufficient and acceptable hospital provision for the treatment of enteric fever is now believed to bear an important rôle in the prevention of its recurrence in populous districts.

To pulmonary tuberculosis and other forms of tuberculous infection considerable space is very naturally devoted in this report. The general course of mortality from tuberculous phthisis during the last 40 years is set forth in a table which shows that the English death-rate therefrom in the ten-year period 1871–80 was equal to 219 per 100,000 of the population, whereas in the ten-year period last ended it did not exceed 117 in the same number living. From a diagram it appears that the decrease since 1901 has been continuous. Comparing 1901 with 1909, we find that the death-rate from pulmonary tuberculosis in England and Wales fell by 14 per cent., whilst in the metropolis in the same interval between 1901 and 1910 it fell by not less than 33 per cent. Had the death-rate from this disease been as high in 1909 as the average in 1871–80 the number of deaths in this country would have been 78,308 instead of 38,639, the number actually recorded. Of these 38,639 deaths at all ages 34,414 occurred at ages 15–65, "the working years of life." If Dr. Farr's estimate of the value of a human life (viz., £150) be adopted, the money loss to the community resulting from these preventable deaths was over 5 millions sterling. On a similar calculation a saving of nearly 6 millions sterling was effected in 1909 as a consequence of the fall in the death-rate since 1871–80. Dr. Newsholme concludes this portion of his subject with the following weighty words: "The continuing national loss of health and wealth still caused by tuberculosis is owing in large measure to the fact that local authorities and others concerned have not yet utilised all available means for its prevention," the reference no doubt being to the regulations for compulsory notification shortly to come into force (see p. 1495). In discussing the relative importance of the factors concerned in the recently diminished loss of life from tuberculosis it appears certain, *in limine*, that the latter depends largely on an improved social and sanitary condition of the people. The close relation between bad housing and excessive prevalence of tuberculosis is well known. Not only are the working classes better housed and better fed at the present time than ever before, but their occupations are pursued under far healthier conditions. Increased resistance to tuberculous infection has been secured by these influences, which have also entailed diminished facilities for infection. The more perfect separation of the sick from the healthy has been one of the prominent features of recent sanitation. At the Census of 1901 one in every thousand of the total English population was an inmate of an institution for the sick. In the year 1910 the proportion of deaths from all causes occurring in such institutions was 21 per cent., and in the metropolis it was 43 per cent. The facts

relating to tuberculosis are even more striking. In the year 1910 more than 56 per cent. of the male deaths, and more than 45 per cent. of the female deaths from phthisis occurred in public institutions; and, what is of first importance from a preventive standpoint, the average stay of each patient in these institutions covered the most dangerous period. Recent statistics prove that the death-rate from phthisis has declined in towns quite as rapidly as in the country, and that the urban and rural death-rates from that disease are approximating closely. The circumstance that the phthisis death-rate in towns has improved in spite of relatively inferior housing conditions may perhaps be accounted for by the consideration that the afflicted town dweller can more readily secure hospital isolation and treatment, and that consequently, as compared with his rural comrade, a smaller portion of his sick life is spent in the crowded tenement or cottage.

In one of the appendices the account is given by Dr. Bruce Low, of the prevalence of plague in foreign countries and of its occasional appearance on board ships in our own ports. But in the present report the medical officer draws attention to a small local outbreak of possible human plague in this country not recognisably associated with previous human cases of plague imported from abroad.[1] In October last year four cases of "pneumonic plague" were notified to the Local Government Board as occurring in a rural district of Suffolk. The bacteriological diagnosis of these cases was not confirmed by inoculation tests, but, having regard to subsequent events, it is a reasonable inference that they may have been plague; and there is the further possibility that two previous limited outbreaks of illness in the same neighbourhood may also have been due to this infection. Rat plague appears to have been present for several years in East Suffolk; nevertheless, only three very limited outbreaks of disease suggestive of human plague have hitherto been discovered. Under the conditions existing in East Suffolk human infection must be regarded as an accidental occurrence. The possibilities of spread of plague from rats to man are much smaller in this country than in India. Pneumonic plague spreads readily from person to person, and in two of the outbreaks of suspected human plague in Suffolk the attacks were chiefly of this type. A diagrammatic map is inserted in the report showing the area affected with rat plague and the position of the parishes from which rats were taken for examination. The whole subject is admirably dealt with in an appendix from the pen of that much regretted sanitarian, Dr. H. T. Bulstrode.

We shall return to a consideration of other portions of this report, which is full of information of general interest to the medical profession.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE 27th annual meeting of the Fellows and Members of the Royal College of Surgeons of England was held at the College in Lincoln's Inn Fields on Nov. 16th. Mr. RICKMAN J. GODLEE, the President, was in the chair, and he commenced the proceedings by expressing his regret that Sir Henry Butlin had been compelled through ill health to resign the presidency of the College, and he said that he felt sure that all present would join with him in regretting Sir Henry Butlin's absence.

Mr. JOSEPH SMITH moved that an expression of the sympathy of the meeting should be sent to Sir Henry Butlin.

The PRESIDENT then laid before the meeting the annual report of the Council, and he proceeded to comment on some of the matters dealt with in the report. He pointed out that the Council, in reply to a letter from the Registrar-General, had expressed the opinion that it was undesirable that an inquest should be held on every death which occurred after an operation, though they thought that it would be well to mention in the death certificate the fact that an operation had been performed shortly before death. He referred to the action which the Council had taken in reference to the Royal Commission on University Education in London, and he expressed the desire of the Council that the present disability of the London medical student in the matter of obtaining degrees should be removed. With regard to the National Insurance Bill, he mentioned the letter which the Council had sent to the Chancellor of the Exchequer, and the very unsatisfactory nature of the reply which they had received. He next referred to the establishment of a Diploma in Tropical Medicine, and stated that the only candidate had been successful. He also mentioned that though the new Examination Hall would cost £1000 more than they had received from the sale of the old hall, yet they would be relieved of the heavy ground rent of £2200, as the new hall was freehold. The great changes and improvements in the Museum were also mentioned. The President then announced that he was ready for any questions arising out of the report, and that he would answer them if possible.

Dr. S. C. LAWRENCE wished to know how many of the 3627 copies of the annual report which had been sent out had been sent to Fellows, but the President was unable to tell him. Dr. Lawrence also wished to know how many ladies had taken the diplomas of the College. He was informed that four had taken the diploma of Member, but that none had as yet become Fellows. In response to a further query as to the order in which the agenda had been put on the paper he was informed that they were placed in the order in which they were received. A few other questions having been asked and answered,

The PRESIDENT called upon Mr. H. Nelson Hardy to move the first resolution, which was as follows:—

That this meeting of Fellows and Members thanks the Council for its letter of June 1st to the Chancellor of the Exchequer, stating definitely the five points on which, in the opinion of the Council, and in that of the great majority of the Fellows and Members of this College, amendments were required in the Bill; regrets the unsatisfactory nature of the official reply, which subsequent events have shown to be entirely misleading; and trusts that until all those five points have been satisfactorily arranged no Fellow or Member of this College will take part in carrying out the scheme of National Insurance proposed in the Bill.

Mr. HARDY expressed the opinion that the five points mentioned in the letter of the Council contained the main objections of the medical profession to the Bill. These points were also put forward by two other important medical bodies in their criticisms of the Bill—namely, the General Medical Council and the British Medical Association. The reply from Mr. Lloyd George was very unsatisfactory and misleading, for Mr. Lloyd George claimed that in the most important respects his own proposals were in accord with those made in the letter of the Council. In every point this was not correct. In the letter of the Council it had been stated that the administration of the medical service must not be placed in the hands of the Friendly Societies, yet the administration had really been put into the hands of the Friendly Societies, for in the Insurance Committees they had the controlling power. Further, in their letter the Council said that persons with incomes over £100 a year should not be permitted to receive medical benefit under the scheme, yet the Bill provided that those with incomes up to £160 must, and that those with incomes over this might, insure for medical benefits. The fifth resolution asked that no attempt should be made to force upon medical men a service which was not sufficiently well paid, and yet Mr. Lloyd George had replied that this was wrangling about fees in a sick-room. These points were enough to show how unsatisfactory was the official reply. The Chancellor of the Exchequer must have thought that he was dealing with children or fools if he believed that such an answer would satisfy them. He often boasted that he was giving 9*d*. for 4*d*., but it was by requiring the medical profession to do ninepennyworth of work for 4*d*. All of them should refuse to assist in this work until the objections put forward by the Council had been removed.

Mr. A. MAUDE seconded the motion, and said that the medical profession had been thrown back into the hands of the Friendly Societies, for these societies were to have 48 per cent. of the seats on the Insurance Committees, while there were to be only two or three medical men in a committee of possibly 80 members.

Mr. F. W. COLLINGWOOD claimed that payment should be made for services rendered.

Mr. ARCHER asked the Council to use its influence to induce other bodies to take action against the Bill. Mr. Lloyd George was not to be trusted.

Mr. MILWARD pointed out that without the assistance of the medical profession the Bill could not be worked. They

[1] THE LANCET, Sept. 2nd, 1911, p. 697.

could decide whether they should perpetuate the slavery of the Friendly Societies.

Several other Members spoke and then the President put the motion to the vote; it was carried by 26 votes to 2.

Mr. H. ELLIOT-BLAKE then moved—

That this meeting of the Fellows and Members desires the Council to obtain an Act of Parliament to authorise the change of the present and obsolete graduate titles of the College to the current and usual ones of M.D. or M.B., B.S.; and of F.S. and F.M. for the respective Fellowships. And for those purposes to seek corresponding power to regulate their university courses within the schools of the University of London or elsewhere.

He believed that the University Commission would come to nothing, and that the only hope for the future was for the Council to apply for an Act of Parliament to remove the present anomaly.

Mr. COLLINGWOOD seconded, and pointed out that if London had as many universities for its population as Scotland, it would have seven or eight.

Dr. LAWRENCE claimed that in this matter at least the Council had been trying to do its best for its Members, but it had failed.

The motion when put to the meeting was lost.

The third motion was moved by Mr. JOSEPH SMITH:—

That this twenty-seventh annual meeting of Fellows and Members again affirms the desirability of admitting Members to direct representation on the Council, which, as now constituted, does not represent the whole corporation; and that it does so in order that the constitution of the Council of the Royal College of Surgeons of England shall be in keeping with modern ideas of true representation.

He claimed that this was the twenty-seventh time that a resolution to the same effect had been moved at these meetings, and that it would not be possible for the Council much longer to ignore the resolutions of the Members. The matter had been so often before them that everyone was well acquainted with it, so that there was no need for him to say much.

Mr. COLLINGWOOD seconded, and several other Members spoke, and when the motion was put to the meeting it was carried without a dissentient vote.

The last motion was proposed by Dr. Lawrence:—

That this meeting of Fellows and Members requests the Council to include in their next annual report a balance-sheet showing fully and without reserve the assets and liabilities of the College on Midsummer Day, 1912.

He said that many Members felt a very natural anxiety to know how the money of the College was spent, and he held that it was very desirable to have a balance-sheet of the year's finances. The present accounts were too indefinite and amounted only to a profit and loss account.

Mr. J. BRINDLEY JAMES seconded.

The PRESIDENT said that of course he could not commit the Council, but the matter would receive consideration.

A vote of thanks to the President closed the proceedings.

MEDICINE IN THE ENCYCLOPÆDIA BRITANNICA.

IX.[1]—VACCINATION.

THE article on vaccination is one of great importance, and, as was to be expected of its author, Dr. S. Monckton Copeman, the subject is well and concisely handled. A brief account is first given of the way in which Jenner established on a scientific basis the fact, hitherto merely a piece of agricultural folk-lore, that cow-pox in a human being actually exercises a protective influence against small-pox. The relationship of cow-pox and small-pox is next reviewed. As evidence of a definite relationship between them it is pointed out that whereas, prior to the introduction of vaccination, epidemics of these disorders frequently arose concurrently, the so-called "natural" cow-pox has now in great measure disappeared. It is further suggested that an outbreak of small-pox may be turned to account for raising, by appropriate experimental methods, a fresh stock of vaccine lymph. It can be definitely stated, the author asserts, that small-pox lymph, especially if obtained from the primary vesicle of a case of the inoculated form of the disease, can be so altered in character by passage through the system of the calf as to become deprived of its power of causing a generalised eruption, while inducing at the site of inoculation a vesicle indistinguishable from a typical vaccine vesicle; and more important still, that when transferred again to man, it has by such treatment completely lost its infectious character. The generally admitted doctrine is therefore stated, "that cow-pox, or rather that artificially inoculated form of the disease which we term *vaccinia*, is nothing more nor less than *variola* modified by transmission through the bovine animal."

A very brief review of the constitution, work, and report, including its findings, of the Royal Commission on Vaccination is next given. In this connexion, we think, a little further account of the essential facts whereby medical science has proved the efficacy of vaccination might with advantage have been included. The public think too often that they can arrive at sound conclusions by the mere method of common sense in matters of which the solution may readily turn upon data with the very existence of which they are wholly unacquainted. It is desirable, therefore, that some idea of the data should be afforded them in such an authoritative publication as the "Encyclopædia Britannica."

The various objections that have been urged against the practice of vaccination fall naturally into two groups: (1) a denial of its efficacy; and (2) an assertion of its dangers. The latter of these, indeed, is given a paragraph to itself, but a categorical summary of the main observations whereby the proof of the protective efficacy of vaccination against small-pox has been established is omitted. Such observations are: (1) Cases of direct inoculation, or the so-called "variolous" test, consisting in the inoculation of efficiently vaccinated persons with variolous matter with negative results; (2) a comparison, embracing sufficiently long periods, of the prevalence and mortality of small-pox, respectively before and after the introduction of vaccination; (3) a comparison of the liability of the general public to small-pox with that of particular groups of efficiently vaccinated persons whose duties necessarily bring them into frequent and intimate exposure to infection—e.g., medical men, nurses, and hospital attendants, more especially those connected with small-pox hospitals; (4) the experience of the modifying effect of vaccination during epidemics, in which the complete stamping out of small-pox in Porto Rico and the Philippines—where it was heretofore endemic—under the enforcement of vaccination, offers perhaps the most striking demonstration yet afforded; and (5) a comparison of the mortality from small-pox in large vaccinated and non-vaccinated communities, of which a conspicuous example is to be found in Prussia since 1874, when vaccination and revaccination became compulsory, and in Austria, which still remains without compulsory vaccination, although since 1891 the Government has done all in its power to encourage the practice. Of the points established by these five observations the first, second, and third are briefly referred to in different parts of the article, but the fourth and fifth are unnoticed.

The necessity of "efficient" vaccination is properly insisted on, and its essentials are well stated as follows: "The clinical and bacteriological purity of the lymph employed for vaccination; the skilful performance of the operation itself; the making an adequate number of insertions of lymph over a sufficient area; the observance of precautions needful for insuring strict asepsis, both at the time of vaccination and subsequently until the vaccination wounds are soundly healed." It is of special importance in the comparatively small number of cases in which small-pox has occurred in vaccinated persons to establish the degree of efficiency of the reputed vaccination in the particular case. Glycerinated lymph, as now almost universally employed in Great Britain, is recommended, but a caution is given to be on the look out for its gradual weakening, such as is likely to occur from at present imperfectly understood conditions. On this point the author says: "Possibly the condition of the calves from which the lymph is obtained, especially as regards their general health and the suppleness or the reverse of their skins, or exposure of the lymph to the action of light or to a high temperature, are of special importance."

As regards the performance of the operation, the standard laid down by the Local Government Board, the production, namely, of a total area of vaccination of not less than half a

[1] Articles I., II., III., IV., V., VI., VII., and VIII. were published in THE LANCET of Feb. 25th (p. 530), March 4th (p. 609), 11th (p. 692), and 25th (p. 828), April 1st (p. 897) and 15th (p. 1026), Oct. 7th (p. 1035), and Nov. 11th (p. 1355), 1911, respectively.

square inch, divided among four separate vesicles or groups of vesicles not less than half an inch from one another, is urged for adoption by the private practitioner. Concerning attempted revaccination, in case of apparent failure it is held to be advisable, as in the case of a primary vaccination, to make further attempts with a lymph of known potency before concluding that the individual is really insusceptible.

In the section on alleged ill-effects it is shown that the danger of transmission of syphilis, which may have occurred with careless vaccinators in the days of arm-to-arm vaccination, may in future be disregarded, for the calf, from which animal all lymph is now obtained, is not capable of contracting syphilis, and therefore cannot contaminate its lymph therewith. Leprosy, like syphilis, is not communicable to the calf. The use of glycerine destroys by long exposure to it any tubercle bacilli, supposing such by any chance to be present in the lymph when collected. Skin eruptions are common in infancy, and they must be expected in about the same proportion of cases as under other conditions; and, finally, the author holds that no causative relation has been proved ever to have existed in the few cases in which eczema and impetigo have followed on vaccination.

The article concludes with an unsigned contribution describing the status of compulsory vaccination in the various countries and the course of legislation thereon in England, special stress being laid on the home vaccination of infants as now practised. This practice was a practical impossibility in the days of arm-to-arm vaccination. The "conscience clause" is discussed, and the conclusion is arrived at that it has not justified the gloomy forebodings expressed at the time of its insertion into the Act. On the contrary, it is stated that "its operation has appeared to tend to the more harmonious working of the Act."

MEDICINE AND THE LAW.

Medical Examinations under the Workmen's Compensation Act.

As medical men are well aware, the Workmen's Compensation Act, 1906, provides that "where a workman has given notice of an accident he shall, if so required by the employer, submit himself for examination by a duly qualified medical practitioner provided and paid for by the employer, and if he refuses to submit to such examination, or in any way obstructs the same, his right to compensation and to take or prosecute any proceeding under this Act in relation to compensation shall be suspended until such examination has taken place." Under this provision for enabling employers to ascertain for themselves the condition at a given time of the workman to whom they are paying, or are likely to have to pay, compensation, disputes have frequently arisen through the contention of workmen that they are not always fairly treated by the medical men representing the employers. The necessity for the detection of malingering requires the exercise of methods on the part of the medical man which the workman whose good faith is absolute may regard with excusable, if unjustifiable, apprehension, and which the malingerer, no doubt, resents as a very undesirable check upon his deceit. The medical man insists that he must make the examination alone; the workman, or his solicitor prompting him, demands the presence of a third party. An important decision of the House of Lords now seems to settle finally the law with regard to this matter upon lines already laid down in previous cases to which reference may first be made.

In THE LANCET of Sept. 17th, 1910, p. 899, comment was made in a leading article upon a case heard in the county court in which a workman was held to have refused to submit himself to examination by Dr. R. J. Collie unless the examination took place at his solicitor's office and in the presence of a member of the firm. His honour Judge Woodfall decided that this constituted a refusal to submit to examination in accordance with the Act. In THE LANCET of March 25th, 1911, p. 830, two similar cases which reached the Court of Appeal were described, in both of which Dr. Collie's name was again mentioned. In the one the workman had been required to submit to examination either at Dr. Collie's house in Porchester-terrace, W., or at his home in Holloway, and he had refused to be examined except at his solicitor's office and in the presence of a member of the firm. His honour Judge Bray, like his colleague Judge Woodfall, decided that this constituted a refusal, and the Court of Appeal confirmed his view, holding that the Workmen's Compensation Act gave no right to impose such conditions as those mentioned. In the second case the Court of Appeal had to decide as to a slightly different condition imposed by or on behalf of a workman—namely, that he should be examined either at the solicitor's office or at the surgery of the medical man who had attended him. In this instance his honour, the late Judge Bacon, was of the opinion upon the facts that there had not been a refusal to submit to examination, and the Court of Appeal upheld his decision, putting the point to be decided thus, "Was the refusal to go to the employers' doctor's surgery so unreasonable as to amount to a refusal to submit to examination or to obstruction?" and replying to this question in the negative. It was pointed out in comment upon this in THE LANCET of March 25th that the question of reasonableness was one of fact for the county court judge, who should take into consideration the material facts of the case before him.

The judgment of the House of Lords mentioned above had reference to yet another condition, and was delivered in a Scottish case upon appeal from a decision of the Court of Session upholding that of the sheriff substitute. The condition sought to be imposed by the working man was that his own medical attendant should be present at the examination made on behalf of the employers—that is to say, the House of Lords was asked to affirm, overruling the Court of Session, that there was "an abstract unconditional right in the workman to have his medical attendant present." This their lordships declined to do. They held that there was no such absolute and unconditional right, but that the question was one of fact, as to whether the condition sought to be imposed was reasonable, the burden of proof of reasonableness lying upon the workman. At the same time, the judgments of the Lord Chancellor and of Lord Atkinson, with whom Lord Gorell concurred, indicated that in their opinion the condition, or request, that the workman's medical attendant should be present might be a reasonable one, and Lord Shaw, who dissented from their judgment, had no doubt that the condition was in all cases reasonable. In his view it was the workman's right to have his medical adviser present, and he went so far as to say, according to the report of the case in the *Times*, that "he was sure that 95 per cent. of the medical practitioners in Scotland would prefer to have the assistance of a doctor on the other side." The word "assistance" needs explanation. As we understand the proposal, it is that the second medical man should be present, but should merely observe the proceedings, taking no part in them—at any rate, not unless invited to do so. To this there might well be no objection in many instances, and so much we have said. But the suggestion has been made that if the right to demand the presence of a second medical man were to be conceded, he should be the medical referee and not the workman's medical attendant. This is not likely to be a usual procedure. However, in conceivable cases the presence of the workman's medical adviser might be extremely objectionable to the employers' medical adviser; it might tend to lessen the efficacy of his examination in ascertaining the truth, and in such circumstances the demand would be "unreasonable." The question of "reasonableness" must govern the situation, and it is now settled law that the workman has no "abstract unconditional right" to demand that his own medical man should be present.

Exhibition Noises and Neighbouring Residents.

Mr. H. O. Becker, an artist living in the immediate neighbourhood of the Exhibition at Earl's Court, claimed an injunction and damages recently against the company carrying on business as Earl's Court Exhibition, Limited, in consequence of the annoyance caused to himself and his household by the noise of certain "side-shows" conducted in the Exhibition grounds. The action was heard by Mr. Justice Eve in the Chancery Division, and a large number of witnesses were called, including the plaintiff and his wife, Mr. Alfred Drury, A.R.A., Mr. Haldane Macfall, Mr. Herman Herkomer, and other artists and friends of the plaintiff, who testified to the impossibility of work or rest in the plaintiff's house while certain amusements were in progress in the Exhibition. Those particularly complained of were a railway of the familiar type actuated

by gravity and known as the Dragon's Gorge, and another amusement, consisting of moving platforms, and apparently much enjoyed by screaming and laughing pleasure-seekers, and a merry-go-round. The plaintiff complained that he was prevented from performing his professional work, and Mrs. Becker, in addition to other evidence, stated that her little daughter was unable to obtain sleep, and, in spite of the hot weather, had to have her bedroom windows closed at night in the attempt to keep out the noise. Mr. Justice Eve held that upon the evidence there had been such a use of the defendant's property as to cause sensible and material detraction from the comfort and enjoyment of the plaintiff's residence. In granting an injunction, he expressed the hope that it would not lessen the enjoyment which every sane and sensible human being ought to be glad to see his fellow-creatures partake of. The effect of it, however, would be to qualify that enjoyment and the mechanism of its production so that they would not inflict undue pain and suffering upon those living near. As no pecuniary loss had been proved by the plaintiff his lordship thought the justice of the case would be met by £25 as damages, the defendants paying the costs. The plaintiff is to be congratulated upon a result which must not only be satisfactory to himself but of which the benefit will presumably be shared by many of his neighbours. The judgment given may also tend to protect dwellers in other parts of London from disturbance in the enjoyment of their homes in peace and health, and may serve as a warning to amusement providers who, however much pleasure they may produce for a section of the public, have as their own motive not philanthropy but the desire to make money.

CENTRAL MIDWIVES BOARD.

A SPECIAL meeting of the Central Midwives Board was held on Nov. 14th at Caxton House, Westminster, with Sir FRANCIS H. CHAMPNEYS in the chair.

The Board considered the following charges amongst others against the midwives whose names are given below, and ordered such names to be struck off the Roll. Jane Blatherwick, that at the assizes held at Liverpool on July 1st, 1911, she was convicted of performing an illegal operation with intent to procure abortion, and was thereupon sentenced to seven years' penal servitude. Priscilla Briscoe, that when attending her patients she did not wear a clean dress of washable material that could be boiled, as required by Rule E, 1; that she did not take with her to a confinement the appliances or antiseptics required by Rule E, 2; and that she did not keep her register of cases as required by Rule E, 23. Mary Ann Cornfield, that being in attendance as a midwife at a confinement she was guilty of negligence in that, the patient's perineum being seriously ruptured, she did not explain that the case was one in which the attendance of a registered medical practitioner was required; nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 20 (3). Mary Ann Jackson, that being in attendance as a midwife at a confinement, the child suffering from inflammation of the eyes from birth, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner as required by Rule E, 19 (5) of the rules then in force. Charlotte Plenty, that she was uncleanly in her person and appliances; that she did not possess the appliances and antiseptics required by Rule E, 2; and that she did not take the temperature of her patients, being unable to use a clinical thermometer. Annie Marian Sadler, alias Palmer, that at the Central Criminal Court on July 5th, 1911, she was convicted on her confession of performing an illegal operation with intent to procure abortion, and was thereupon sentenced to five years' penal servitude. Elizabeth Ellen Watkins, that having been suspended from practice by the executive officer of the local supervising authority for a week from Tuesday, July 4th, 1911, on the ground of having attended a case of puerperal fever, she nevertheless attended as a midwife at a confinement and delivered the patient of a child on Friday, July 7th, 1911, without having undergone disinfection as required by Rule E, 5. Elizabeth Webb, that, being in attendance as a midwife at a confinement, the child suffering from inflammation of the eyes on the third day, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 20 (5).

The following midwives were censured after charges against them had been considered: Sarah Coulson and Caroline Fanny Wyatt. Annie Jane Maud Webb was cautioned after charges against her had been considered.

An adjourned special meeting of the Central Midwives Board was held on Nov. 16th at Caxton House, Westminster, with Sir FRANCIS H. CHAMPNEYS in the chair.

The following midwives were struck off the Roll, after the following charges against them had been considered:—Emily Flitton, that being in attendance as a midwife at a confinement, the child suffering from inflammation of the eyes on May 13th, she did not until May 16th explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 19 (5) of the rules then in force. Emma Holmes, that being in attendance as a midwife at a confinement, the patient suffering from hæmorrhage after the delivery, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner as required by Rule E, 19 (4) of the rules then in force. Alice Matthews, that she did not take with her to a confinement the appliances and antiseptics required by Rule E, 2; that she did not employ the antiseptic precautions required by Rules E, 3 and 7; and that she did not take the temperature of her patients, being unable to use a clinical thermometer. Rebecca Robinson, that being in attendance as a midwife at a confinement, a registered medical practitioner having been sent for, on her advice, she did not notify the fact to the local supervising authority as required by Rules E, 20 and 21 of the rules then in force; she did not enter the case in her register, as required by Rule E, 22 of the rules then in force. Emily Sturt, that being in attendance as a midwife at a confinement, she did not take with her the appliances and antiseptics required by Rule E, 2; she did not take the patient's temperature at any time. Mary Taylor, that being in attendance as a midwife at a confinement she neglected to attend to the comfort of the patient at the confinement and during the lying-in; the child having died before the attendance of a registered medical practitioner she did not notify the fact to the local supervising authority as required by Rule E, 20 of the rules then in force. Sarah May Walkling, that being in attendance as a midwife at a confinement, the case being one of twins, and the first presentation being abnormal, she did not explain that the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 19 (3) of the rules then in force. Ellen Florence Ward, that she was uncleanly in her person and clothing; that her house was uncleanly and insanitary; and that when attending a confinement she did not wear a dress of washable material, as required by Rule E, 1. Emma Willingham, that she was uncleanly and did not wear a dress of washable material; that she did not possess the appliances or adopt the antiseptic precautions required by the rules, and that she did not keep her register of cases as required.

The following midwives were censured after charges against them had been considered:—Harriet Sarah Eckersall and Annie Maud Hodder.

ASYLUM REPORTS.

Mental Hospital of the City of Cardiff (Report for the Year 1910).—The average daily number resident during the year in this hospital was 682. There were admitted 208 patients, of whom 121 were males and 87 females. 197 were direct admissions. Of those admitted, 41 suffered from delusional insanity, 48 from various degrees of melancholia, 54 from dementia, 28 from various degrees of mania, 25 from paralytic dementia, 8 from idiocy and imbecility, and 1 from moral insanity, while 3 persons were not insane. In 81 cases, or 39 per cent. of the admissions, a history of heredity of some kind was elicited. It is to be noted that 67 persons were admitted in a bad state of physical health, 76 in moderate health, and 62 in good health. The recoveries numbered 92. Calculated upon the number admitted, excluding transfers, this gives a recovery-rate of 46·7 per cent. Ten patients left relieved, and these figures taken altogether give a percentage of 51·7 discharged recovered and relieved. Of those who left recovered, nearly 37 per cent. were in residence for not more than four months. The deaths numbered 61, or 11·9 and 5·8 per cent. respectively of the average number of males and females daily resident. Necropsies were held in 56 of the 61 deaths. General paralysis was the cause of death in nearly 30 per cent. Dr. E. Goodall reports that he and Dr. H. A. Schölberg had been engaged upon an investigation into the Wassermann reaction in cases of paralytic dementia and other forms of insanity. The results have since appeared in the *Journal of Mental Science* for April, 1911. Dr. Goodall points out that hitherto the field of morbid histology has been worked in, almost to the exclusion of other fields, but that as the boundaries of research have now been extended far beyond this domain it becomes necessary that specially qualified workers in pathology, chemistry, and physiology should be employed. In recognition of this a research chemist and pathologist have recently been appointed on the staff of the hospital, and it is hoped that ere long an appointment in physiology will also be made.

Asylum for the Counties of Salop and Montgomery and for the Borough of Wenlock (Report for the Year 1910).—At this asylum the average daily number on the registers was 775. The admissions numbered 203, and of these 45 were re-admissions and 25 were transfers. The discharges amounted to 99, and of these 78 were discharged recovered. The proportions per cent. of recoveries to admissions were 44 for males and 36 for females. Of those recovered, 74 per cent. had been in residence for less than 12 months. The deaths numbered 109, being a percentage on the average number resident of 14·53. Of the deaths, 18·2 per cent. were caused by tubercular disease and 4·6 per cent. by general paralysis. Dr. D. F. Rambaut reports that on March 31st of this year the partnership in the asylum between the county of Salop and borough of Wenlock on the one hand, and the county of Montgomery on the other, was dissolved. At the end of March and the beginning of April all the Montgomeryshire patients were transferred to the Cardiff, Cotford, and Powick asylums, except 14 patients whom it was dangerous to move.

Hereford County and City Lunatic Asylum at Burghill, near Hereford (Report for the Year 1910).—The daily average number resident at this asylum was 504. The admissions numbered 82, of whom 45 were males and 37 females. Of these, 21·9 per cent. were cases of mania, 12·2 per cent. cases of melancholia, 10·9 per cent. cases of delusional insanity, 12·2 per cent. cases of dementia, and 25·6 per cent. cases of mental defect (imbeciles and idiots). It is unsatisfactory to notice that the admissions represent a high percentage of dements and mental defectives, a group constituting a class in whom mental recovery is practically hopeless. Mr. C. S. Morrison, the medical superintendent, regards the percentage of mental defectives as foreshadowing in a measure the danger that underlies agricultural depression in the heart of the community. In the direct admissions insane heredity or some degree of congenital mental deficiency was ascertained to be present in 50 per cent. of the total cases. The standard of bodily health in the majority was very poor. The discharges numbered 42, of whom 13 males and 14 females had recovered, giving a percentage of recoveries calculated on the number of admissions of 34·2. The deaths numbered 33, giving a percentage calculated on the daily average number resident of 6·5, being 9·6 for males and 4·2 for females. The average age at death was 57. The number of post-mortem examinations was 23, being 69·7 per cent. of the total number of deaths.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7784 births and 4319 deaths were registered during the week ending Nov. 18th. The annual rate of mortality in these towns, which had been 13·3, 13·5, and 13·1 in the three preceding weeks, rose to 13·9 per 1000 in the week under notice. During the first seven weeks of the current quarter the mean annual rate of mortality in these towns averaged 14·0, or 0·2 per 1000 above the rate recorded in London during the same period. The death-rates in the 77 towns last week ranged from 6·4 in King's Norton, 6·6 in Wallasey, 7·6 in Burton-on-Trent, and 7·7 in Grimsby, to 19·3 in Middlesbrough, 19·6 in Stockport, 20·0 in Stockton-on-Tees, and 21·4 in Sunderland. The 4319 deaths from all causes in the 77 towns were 263 in excess of the number in the previous week, and included 267 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 279 in the 12 preceding weeks. Of these 267 deaths, 76 resulted from infantile diarrhœa, 64 from diphtheria, 51 from measles, 31 from whooping-cough, 24 from enteric fever, and 21 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 0·9 per 1000, against 1·0 and 0·9 in the two preceding weeks. The deaths of infants under two years of age attributed to diarrhœa, which had steadily decreased from 2714 to 113 in the 12 preceding weeks, further declined to 76 last week, and caused the highest death-rates of 1·1 in Oldham and 2·1 in Aston Manor. The deaths referred to diphtheria, which had been 46, 56, and 55 in the three preceding weeks, rose to 64 last week; 21 deaths occurred in London and its suburban districts, 4 in Stoke-on-Trent, and 3 each in Bolton, Bradford, Leeds, and Swansea. The fatal cases of measles, which had been 48, 36, and 37 in the three previous weeks, further rose to 51 last week, and included 13 in London and its suburban districts, 9 in Salford, 6 in Manchester, and 3 in Oldham. The deaths attributed to whooping-cough, which had been 30, 16, and 24 in the three preceding weeks, rose to 31 last week; 7 deaths were registered in London, 3 in St. Helens, and 3 in Sunderland. The deaths referred to enteric fever, which had been 28, 35, and 24 in the three preceding weeks, were again 24 last week, and included 4 in Hull, 3 in Birmingham, and 3 in Sheffield. The fatal cases of scarlet fever numbered 21, against 30 and 26 in the two previous weeks, and included 5 in London and 3 in Stoke-on-Trent. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 2203 in the 11 preceding weeks, had further advanced to 2213 on Saturday last; 291 new cases of this disease were admitted to these hospitals during the week, against 297, 269, and 292 in the three previous weeks. These hospitals also contained on Saturday last 1282 cases of diphtheria, 175 of whooping-cough, 121 of enteric fever, and 84 of measles, but not one of small-pox. The 1128 deaths from all causes in London last week were 20 in excess of the number in the previous week, and included 224 which were referred to diseases of the respiratory system, against 210, 170, and 196 in the three preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had declined from 158 to 136 in the three preceding weeks, rose to 167 last week, and 371 inquest cases were registered. The causes of 37, or 0·9 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified last week in London and its 8 suburban districts, in Sheffield, Leeds,

Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, and in 44 other smaller towns. The 37 uncertified causes of death in the week under notice included 8 in Liverpool, 4 in Gateshead, and 3 each in Birmingham, Preston, and South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 770 births and 611 deaths were registered during the week ending Nov. 18th. The annual rate of mortality in these towns, which had declined from 16·7 to 16·3 in the three preceding weeks, rose to 18·6 per 1000 in the week under notice. During the first seven weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·4 per 1000, and was 2·4 per 1000 above the mean rate during the same period in the 77 large English towns. The annual death-rates in the several Scotch towns last week ranged from 12·3 in Dundee and 12·9 in Leith to 20·8 in Greenock and 21·7 in Aberdeen. The 611 deaths from all causes were 78 in excess of the number in the previous week, and included 65 which were referred to the principal epidemic diseases, against 47 and 48 in the two preceding weeks; of these 65 deaths, 28 resulted from measles, 19 from diarrhœa, 8 from diphtheria, 4 from scarlet fever, 4 from whooping-cough, and 2 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 2·0 per 1000, and was 1·1 per 1000 above the mean rate from the same diseases in the 77 large English towns. The deaths referred to measles, which had been 12, 15, and 13 in the preceding weeks, rose last week to 28, of which 16 were recorded in Aberdeen and 9 in Glasgow. The deaths attributed to diarrhœal diseases, which had declined from 41 to 9 in the five preceding weeks, rose last week to 19, all of which related to children under two years of age; 11 deaths were registered in Glasgow, 4 in Edinburgh, and 3 in Dundee. The fatal cases of diphtheria, which had increased from 5 to 14 in the four preceding weeks, declined to 8 last week, and included 4 in Glasgow and 2 in Aberdeen. The deaths referred to scarlet fever, which had declined from 8 to 2 in the six preceding weeks, rose to 4 last week, and included 2 in Aberdeen. Of the 4 deaths attributed to whooping-cough, which were slightly above the average in recent weeks, 2 were recorded in Glasgow and 2 in Aberdeen. The 2 fatal cases of enteric fever were registered in Glasgow. The deaths referred to diseases of the respiratory system, which had been 111, 116, and 108 in the three preceding weeks, rose to 144 in the week under notice, and were 23 above the number in the corresponding week of last year. Of the 611 deaths from all causes in the Scotch towns last week, 162, or 27 per cent., were recorded in public institutions, and 44 were attributed to different forms of violence. The causes of 23, or 3·8 per cent., of the deaths in the eight towns last week were not certified or not specified; in the 77 large English towns the proportion of uncertified causes did not exceed 1·0 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 529 births and 419 deaths were registered during the week ending Nov. 18th. The annual rate of mortality in these towns, which had increased from 17·1 to 17·6 in the three preceding weeks, further rose to 19·0 per 1000 in the week under notice. During the first seven weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·3 per 1000; in the 77 large English towns the mean annual death-rate during the same period did not exceed 14·0 per 1000, while in the eight Scotch towns it was equal to 16·4. The annual death-rate last week was equal to 22·1 in Dublin (against 13·0 in London), 17·7 in Belfast, 25·9 in Cork, 16·6 in Londonderry, 9·5 in Limerick, and 13·3 in Waterford; while in the 16 smallest of these Irish towns the annual death-rate did not exceed 15·4 per 1000. The 419 deaths from all causes were 31 in excess of the number in the previous week, and included 47 which were referred to the principal epidemic diseases, against numbers decreasing from 134 to 33 in the nine preceding weeks; of these 47 deaths, 19 resulted from diarrhœal diseases, 12 from diphtheria, 8 from measles, 5 from whooping-cough, and 3 from scarlet fever, but not one from enteric fever or from small-pox. These 47 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·2 per 1000; in the 77 English towns the mean death-rate from these diseases last week did not exceed 0·9 per 1000, while in the eight Scotch towns it was equal to 2·0. The deaths attributed to diarrhœal diseases, which had steadily declined from 121 to 10 in the nine previous weeks, rose to 19 last week, and included 17 of infants under two years of age; 6 deaths were recorded in Belfast, 5 in Dublin, and 3 in Cork. The deaths referred to measles, which had increased from 1 to 9 in the five preceding weeks, numbered 8 last week, of which 5 occurred in Dublin and 2 in Cork. Of the 5 fatal cases of whooping-cough, which were slightly in excess of the average in recent weeks, 4 occurred in Dublin and 1 in Belfast. The 3 deaths assigned to scarlet fever were equal to the average number in the five preceding weeks, and comprised 2 in Dublin and 1 in Belfast. The deaths referred to diseases of the respiratory system, which had been 77 and 75 in the two preceding weeks, further fell to 73 last week. Of the 419 deaths from all causes in the Irish towns during the week under notice, 153, or 37 per cent., were recorded in public institutions, and 9 were attributed to different forms of violence. The causes of 13, or 3·1 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes last week did not exceed 0·9 per cent. in the 77 large English towns, but was equal to 3·8 per cent. in the eight Scotch towns.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1911.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 8·5 per 1000 of the population, estimated at 4,522,628 persons in the middle of the year. In the three preceding months the rates were 5·1, 4·4, and 6·9 per 1000 respectively. The lowest rates last month were recorded in Chelsea, the City of Westminster, Hampstead, Holborn, and the City of London; and the highest rates in St. Marylebone, Hackney, Shoreditch, Deptford, Greenwich, and Woolwich. Scarlet fever showed a greatly increased prevalence compared with that recorded in any other recent month; among the several metropolitan boroughs this disease was proportionally most prevalent in St. Marylebone, Hackney, Shoreditch, Lambeth, Deptford, Greenwich, and Woolwich. The Metropolitan Asylums Hospitals contained 2152 scarlet fever patients at the end of last month, against 1400, 1324, and 1656 at the end of the three preceding months; the weekly admissions averaged 317, against 200, 159, and 261 in the three preceding months. Diphtheria also was considerably more prevalent than it had been in several preceding months; the greatest proportional prevalence of this disease was recorded last month in St. Pancras, Stoke Newington, Finsbury, Wandsworth, and Greenwich. There were 1143 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 839, 720, and 892 at the end of the three preceding months; the weekly admissions averaged 168 last month, against 120, 85, and 138 in the three preceding months. The cases of enteric fever notified during October showed a marked decrease from the abnormally high number in the previous month; among the several metropolitan boroughs this disease was proportionally most prevalent in Fulham, Hackney, Shoreditch, Stepney, Poplar, and Southwark. The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 47, 56, and 155 at the end of the three preceding months, was 160 at the end of last month; the weekly admissions averaged 23, against 9, 10, and 39 in the three preceding months. The greatest proportional prevalence of erysipelas was recorded in Hackney, Finsbury, Shoreditch, Bethnal Green, Stepney, Bermondsey, Deptford and Greenwich. The 23 cases of puerperal fever notified during the month included 4 in Islington, 4 in Lambeth, 3 in

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING OCTOBER, 1911.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1911.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.‡									Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.		
LONDON	4,522,628	—	1400	486	—	150	3	23	594	5	2961	8·5	—	38	13	51	20	25	370	517	1·5	5004	15·1
West Districts.																							
Paddington	142,541	—	27	17	—	3	—	1	10	—	58	5·3	—	—	—	1	1	1	16	19	1·7	139	13·6
Kensington	172,296	—	28	31	—	3	—	—	7	—	69	5·2	—	1	—	1	—	3	12	17	1·3	148	12·1
Hammersmith	121,837	—	24	14	—	4	—	—	8	1	51	5·5	—	—	—	2	—	—	9	11	1·2	128	14·3
Fulham	153,726	—	57	24	—	7	1	1	5	—	95	8·1	—	1	—	1	1	—	14	17	1·4	182	16·1
Chelsea	66,218	—	12	4	—	—	—	2	5	—	23	4·5	—	—	—	—	1	—	3	4	0·8	76	15·5
City of Westminster	159,709	—	23	17	—	3	—	2	13	1	59	4·8	—	—	—	1	—	—	6	7	0·6	147	13·5
North Districts.																							
St. Marylebone	117,844	—	72	10	—	4	—	—	14	—	100	11·1	—	—	1	—	1	—	5	7	0·8	126	14·8
Hampstead	85,599	—	10	10	—	3	—	—	7	—	30	4·6	—	—	—	—	—	1	—	1	0·2	70	12·1
St. Pancras	218,031	—	54	48	—	7	—	—	27	—	136	8·1	—	1	4	2	2	1	10	20	1·2	250	15·6
Islington	327,234	—	105	71	—	11	—	4	39	1	231	9·2	—	2	2	7	—	3	24	38	1·5	372	15·4
Stoke Newington	50,669	—	14	14	—	—	—	—	4	—	32	8·2	—	—	1	1	—	—	2	4	1·0	52	14·0
Hackney	222,674	—	97	47	—	12	—	1	43	—	200	11·7	—	—	1	2	2	3	15	23	1·3	232	14·2
Central Districts.																							
Holborn	49,084	—	7	6	—	1	—	—	4	—	18	4·8	—	—	—	—	—	—	—	—	—	45	12·8
Finsbury	87,639	—	16	20	—	3	—	—	30	—	69	10·3	—	—	—	—	2	2	5	9	1·3	134	20·6
City of London	19,475	—	1	1	—	1	—	—	2	—	5	3·3	—	—	—	—	1	—	—	1	0·7	18	13·2
East Districts.																							
Shoreditch	111,284	—	52	18	—	7	—	—	27	—	104	12·2	—	—	—	4	1	—	20	25	2·9	189	23·2
Bethnal Green	128,247	—	39	15	—	4	1	3	33	—	95	9·7	—	—	1	2	—	—	11	14	1·4	162	16·7
Stepney	279,560	—	62	33	—	22	—	—	55	—	172	8·0	—	—	—	4	—	—	30	34	1·6	322	15·7
Poplar	162,290	—	37	27	—	13	—	1	23	1	102	8·2	—	—	1	4	3	4	17	29	2·3	208	17·2
South Districts.																							
Southwark	191,595	—	44	25	—	12	—	—	37	1	119	8·1	—	7	—	1	1	1	17	27	1·8	271	19·2
Bermondsey	125,840	—	28	27	—	3	—	—	30	—	88	9·1	—	3	—	—	1	1	21	26	2·7	183	19·5
Lambeth	298,032	—	144	46	—	5	—	4	31	—	230	10·1	—	2	1	4	3	1	23	34	1·5	343	15·5
Battersea	167,765	—	34	19	—	4	—	—	18	—	75	5·8	—	—	—	—	—	2	16	18	1·4	177	14·8
Wandsworth	313,389	—	102	71	—	4	—	1	20	—	198	8·2	—	—	—	—	—	—	24	24	1·0	260	11·0
Camberwell	261,407	—	83	35	—	4	1	—	35	—	158	7·9	—	9	—	2	—	—	19	30	1·5	285	14·7
Deptford	109,475	—	65	12	—	1	—	—	20	—	98	11·7	—	12	1	2	—	—	16	31	3·7	131	16·4
Greenwich	95,982	—	43	64	—	—	—	—	19	—	126	17·1	—	—	—	2	—	—	20	22	3·0	103	14·3
Lewisham	161,677	—	52	35	—	6	—	3	13	—	109	8·8	—	—	—	4	—	2	7	13	1·0	136	11·5
Woolwich	121,509	—	68	25	—	2	—	—	15	—	110	11·8	—	—	—	4	—	—	8	12	1·3	125	14·3
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard. ‡ Deaths from "typhus fever" and "other continued fevers" are not now distinguished in the Registrar-General's weekly returns; these two columns are therefore omitted from the Table.

Bethnal Green, 3 in Lewisham, 2 in Chelsea, and 2 in the City of Westminster. The 5 cases of cerebro-spinal meningitis belonged respectively to Hammersmith, the City of Westminster, Islington, Poplar, and Southwark.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided; the death-rates from all causes are further corrected for variations in the sex- and age-constitution of the population of the several boroughs. During the four weeks ending Oct. 28th the deaths of 5004 London residents were registered, equal to an annual rate of 15·1 per 1000, against 12·4, 18·9, and 16·8 per 1000 in the three preceding months. The death-rates last month ranged from 11·0 in Wandsworth, 11·5 in Lewisham, 12·1 in Kensington and in Hampstead, and 12·8 in Holborn, to 17·2 in Poplar, 19·2 in Southwark, 19·5 in Bermondsey, 20·6 in Finsbury, and 23·2 in Shoreditch. The 5004 deaths from all causes included 38 from measles, 13 from scarlet fever, 51 from diphtheria, 20 from whooping-cough, 25 from enteric fever, and 370 among children under two years of age from diarrhœa and enteritis. No death from any of these diseases was recorded last month in Holborn; among the other boroughs they caused the lowest death-rates in Chelsea, the City of Westminster, St. Marylebone, Hampstead, and the City of London, and the highest rates in Shoreditch, Poplar, Southwark, Bermondsey, Deptford, and Greenwich. The 38 deaths from measles were 13 fewer than the corrected average number in the corresponding period of the five preceding years; of these 38 deaths, 12 belonged to Deptford, 9 to Camberwell, 7 to Southwark, 3 to Bermondsey, and 2 each to Lambeth and Islington. The 13 fatal cases of scarlet fever were 31 below the corrected average number, and included 4 in St. Pancras and 2 in Islington. The 51 deaths from diphtheria were 6 in excess of the corrected average number; of these 51 deaths, 7 belonged to Islington and 4 each to Shoreditch, Stepney, Poplar, Lambeth, Lewisham, and Woolwich. The 20 fatal cases of whooping-cough were less than one-half the corrected average number in the corresponding period of the five preceding years; 3 of these deaths belonged to Poplar, 3 to Lambeth, 2 to St. Pancras, 2 to Hackney, and 2 to Finsbury. The 25 deaths referred to enteric fever were 6 below the corrected average, and included 4 in Poplar, 3 in Kensington, 3 in Islington, 3 in Hackney, 2 in Finsbury, 2 in Battersea, and 2 in Lewisham. The 370 deaths from diarrhœa and enteritis among children under two years of age showed a decline of 999 from the number recorded in the previous four weeks; the greatest proportional mortality from this cause last month occurred in Paddington, Shoreditch, Bermondsey, Deptford, and Greenwich. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases (excluding diarrhœa) was 69 per cent. below the average.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned Staff-Surgeons have been promoted to the rank of Fleet-Surgeon in His Majesty's Fleet: Charles Henry James Robinson, Harold Huskinson, Ernest Sydney Tuck, Murray Parry Jones, Arthur William Bligh Livesay, Herbert Hope Gill, William Reynolds Trythall, John Charles Rowan, Richard Adolphus Ross, and Michael Joseph Smith (dated Nov. 12th, 1911).

The following appointments have been notified:—Fleet-Surgeons: R. A. Fitch to the *Neptune*, for service on staff of Commander-in-Chief, Home Fleet; E. Hodnet de Courtmacsherry to the *Hercules*, for service on staff of Vice-Admiral Commanding 2nd Division, Home Fleet; J. H. Stenhouse to the *King Edward VII.*, for service on staff of Vice-Admiral Commanding 3rd and 4th Divisions, Home Fleet; J. Andrews to the *Exmouth*, for service on staff of Commander-in-Chief, Mediterranean; P. B. Handyside to the *Minotaur*, for service on staff of Commander-in-Chief, China; V. G. Thorpe to the *Powerful*, for service on staff of Commander-in-Chief, Australia; G. A. Dreaper to the *Hermes*, for service on staff of Commander-in-Chief, Cape; E. Sutton to the *Highflyer*, for service on staff of Commander-in-Chief, East Indies; E. B. Pickthorn to the *Prince of Wales*, for service on staff of Vice-Admiral Commanding Atlantic Fleet; C. S. Woodwright to the *Leviathan*, for service on staff of Rear-Admiral Commanding Fourth Cruiser Squadron; R. Hill, M.V.O., to the *Medina*, for service on staff of Rear-Admiral Commanding Detached Squadron; W. R. Trythall to the *Roxburgh;* P. W. Bassett-Smith, C.B., to the *President*, additional, for duty as Professor of Clinical Pathology in the Naval Medical School, Greenwich; A. Gaskell to the *President*, additional, for three months' course of special study in metropolitan hospitals and for duty as Professor of Hygiene and in charge of studies at Naval Medical School, Greenwich; F. H. A. Clayton to the *President*, additional, for three months' course of special study in metropolitan hospitals, to the *Victory*, additional, for Haslar Hospital, and to Haslar Hospital as Instructor of Acting Surgeons and in charge of Junior Medical Section. Staff-Surgeons: W. L. Martin to the Medical Department and R. W. Stanistreet to the *Empress of India*. Surgeon: A. Fairley to the *Roxburgh*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel John C. Haslett, Half-pay List, is placed on retired pay (dated Nov. 16th, 1911).

The undermentioned Majors to be Lieutenant-Colonels (dated Nov. 2nd, 1911):—John W. Bullen, vice C. A. Young, supernumerary; and Benjamin J. Inniss, vice J. Will, supernumerary.

Major Gerald B. Carter retires receiving a gratuity (dated Nov. 8th, 1911).

The undermentioned Captains to be Majors (dated Nov. 17th, 1911):—Edward W. Siberry and Basil F. Wingate.

Colonel Sir David Bruce, F.R.S., expert on tropical diseases to the Army Medical Advisory Board, has left the London District for duty in Nyassaland under the Colonial Office. Colonel L. E. Anderson has taken up duty as Principal Medical Officer of the Bareilly, Garhwal, and Dehra Dun Brigades with headquarters at Bareilly. Lieutenant-Colonel W. H. Starr, on transfer from India, has been posted to the Eastern Command. Lieutenant-Colonel W. C. Beevor, C.M.G., lately commanding the station hospital at Bangalore, has on arrival home been ordered to join the Irish Command for appointment to medical charge of the Military Hospital at Fermoy, vice Major C. J. Healy. Lieutenant-Colonel J. M. F. Shine, from Fyzabad, has been placed in medical charge of the troopship *Plassy*, which left Bombay for Southampton on Nov. 9th. Lieutenant-Colonel H. W. Austin has been placed in medical charge at Fort Stamford. Lieutenant-Colonel W. W. Pike, D.S.O., has arrived home on leave of absence from Egypt. Lieutenant-Colonel W. Turner, in charge of the Military Hospital at York and commanding No. 8 Company, R.A.M.C., has been transferred to Aldershot, to take charge of the Connaught Hospital. Lieutenant-Colonel J. Fallon, lately in medical charge at Preston, has embarked for a tour of foreign service with the Northern Army in India. Lieutenant-Colonel N. C. Ferguson, C.M.G., has been transferred from Queen Alexandra's Military Hospital, Grosvenor-road, to the Northern Command to take over charge of the Military Hospital at York. Major B. J. Inniss, in charge of the Military Hospital at Gravesend, has, on promotion, been transferred to Ireland to take charge of the Military Hospital at Belfast. Major L. P. More has taken up duty at Portsmouth in charge of the reception hospital. Major T. H. J. C. Goodwin, D.S.O., from Aden, has been transferred to the home establishment. Major F. J. C. Heffernan has embarked for India for a tour of foreign service. Major J. P. Silver, company officer at Edinburgh, has been granted leave of absence to Dec. 16th. Major W. Hallaran has been appointed to command at the station hospital at Chakrata, in succession to Lieutenant-Colonel S. Westcott, C.M.G., tour-expired. Major G. M. Goldsmith has been transferred from Maymyo to the Eighth (Lucknow) Division. Major W. T. Mould, company officer at Dover, has been detailed by the War Office for a tour of service in India, embarking at an early date. Major A. M. MacLaughlin, specialist sanitary officer in the Scottish Command, has been granted leave of absence until Dec. 4th. Major L. Wood, adjutant of the Royal Army Medical Corps School of Instruction at Manchester, has been detailed for transfer to Burma. Major C. E. P. Fowler, specialist sanitary officer at Gibraltar, has arrived home on leave of absence. Major S. H. Withers, commanding the station

hospital at Gharial, has been selected for appointment to command the Station Hospital at Dagshai for a period of two years with effect from March next. Major D. Harvey has left the London District for duty in Nyassaland under the Colonial Office. Captain P. J. Hanafin has taken up duty as Specialist in Ophthalmology in the Dublin District. Captain C. W. Holden has been transferred from Tientsin to Shan-Hai-Kuan. Captain A. C H. Gray has taken up duty as Clinical Pathologist at the Royal Infirmary, Dublin. Captain H W. Farebrother has received one month's extension of his leave of absence on the recommendation of a medical board. Captain A. Dawson has been transferred from the Ninth (Secunderabad) Division to the Aden Brigade and placed in charge of the Brigade Bacteriological Laboratory in succession to Captain E. W. Powell, returning home tour-expired. Captain J. S. Bostock has embarked for a tour of service in India for duty with the Northern Army. Captain P. G. Patch has taken up duty in the northern command as Specialist in Otology, Rhinology, and Laryngology. Captain A. McMunn, from Portobello Military Hospital, Dublin, has joined at Hong-Kong for a tour of service. Captain G. E Ferguson, on return home from Cyprus, has been appointed to the Southern Command. Captain A. R. C. Parsons, specialist in advanced operative surgery at Edinburgh, has been granted leave of absence from Dec. 18th to Jan. 17th. Captain C. A. Morris, C.V.O., attached to the 16th Battalion London Regiment (Queen's Westminster Rifles), has been selected for a course of instruction at the Queen Alexandra Military Hospital, Millbank, from the 6th inst. Captain H. H. A. Emerson has taken up duty at Clonmel. Captain W. MacD. MacDowall has been transferred from Aldershot to Ewshott. Lieutenant F. W. M. Cunningham, on the closing of Donard Camp, has been appointed for duty to the Curragh. Lieutenant R. M. Davies, from Landguard Fort, has taken up duty at Chatham. Lieutenant C. Robb, from the Curragh, has been selected for employment with the Public Health Department of the Government of Egypt. Lieutenant E. C. Stoney has been placed in charge of staff and families at Colchester, in succession to Lieutenant R. C. Priest.

INDIAN MEDICAL SERVICE.

Surgeon-General A. M. Crofts, C.I.E., has taken up duty as Principal Medical Officer of the Second (Rawalpindi) Division of the Northern Army. Lieutenant-Colonel W. R. Edwards, C.M.G., administrative medical officer of the North-West Frontier Province, has been granted one year's leave of absence home from India Lieutenant-Colonel M. A. Ker has been appointed to the Medical Charge of the 2nd Battalion 5th Gurkha Rifles, in succession to Lieutenant-Colonel C. E. L. Gilbert, transferred to the Medical Charge of the 26th Punjabis at Samana. Lieutenant-Colonel W. B. Lane, Inspector-General of Prisons in the Central Provinces, has been granted 18 months' leave of absence home from India. Lieutenant-Colonel L. F. Childe has been appointed Senior Medical Officer at the Parsi Hospital, Bombay, and will act as Principal of the Grant Medical College during the absence of Lieutenant-Colonel C. H. L. Meyer. Lieutenant-Colonel L. G. Fischer has been selected for appointment as a Civil Surgeon of the First Class in succession to Lieutenant-Colonel L. J. Pisani, retired. Major S. P. James, statistical officer with the Government of India, has been selected to proceed to the Panama Canal to report on investigations in connexion with yellow fever being carried out in that locality. Major E. C. Peck has relinquished charge of the duties of Superintendent of the Jullundur Jail. Major W. H. Kenrick, on special duty in the office of the Sanitary Commissioner of the Central Provinces, has been appointed to officiate as Sanitary Commissioner of the Central Provinces during the absence home on leave of Major T. G. M. Stokes, the permanent incumbent. On return from leave Major T. Stoddart has taken up duty as Civil Surgeon of the Ruby Mines District, relieving Captain H. S. Matson. Captain E. H. B. Stanley has been granted one year's leave of absence home from India Captain N. S. Wells, Civil Surgeon in the United Provinces, has been granted one month's leave on Medical Certificate. Captain W. S. McGillivray has been selected for appointment to the Substantive Medical Charge of the 41st Dogras.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Lieutenant Hubert Cox is confirmed in his rank.

TERRITORIAL FORCE.

Royal Army Medical Corps.

Captain John Marcus Hobson Conway, R.A.M.C., to be Adjutant of a School of Instruction (dated Nov. 1st, 1911).

1st Highland Field Ambulance, Royal Army Medical Corps: Lieutenant James Robertson to be Captain (dated Oct. 14th, 1911).

2nd Highland Field Ambulance, Royal Army Medical Corps: Lieutenant James F. Mackintosh to be Captain (dated Oct. 14th, 1911).

3rd Highland Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains (dated Oct. 1st, 1911): Lieutenant James M. Smith and Lieutenant John H. Hunter.

3rd Home Counties Field Ambulance, Royal Army Medical Corps: Lieutenant Thomas Francis Roche, from the List of Officers of the Royal Army Medical Corps attached to Units other than Medical Units, to be Lieutenant (dated Nov. 15th, 1911). Lieutenant Edwin Augustus Houchin, from the 2nd Home Counties Field Ambulance, Royal Army Medical Corps, to be Lieutenant (dated Nov. 15th, 1911).

2nd London (City of London) Field Ambulance, Royal Army Medical Corps: Lieutenant Francis R. Humphreys to be Captain (dated Oct. 1st, 1911).

2nd North Midland Field Ambulance, Royal Army Medical Corps: Lieutenant James R. Plant resigns his commission (dated Nov. 15th, 1911).

3rd North Midland Field Ambulance, Royal Army Medical Corps: Lieutenant Andrew E. Hodder to be Captain (dated March 24th, 1911).

1st West Riding Field Ambulance, Royal Army Medical Corps: Lieutenant James Ewing to be Captain (dated Oct. 1st, 1911).

1st Welsh Field Ambulance, Royal Army Medical Corps: Lieutenant John Buckner to be Captain (dated Oct. 1st, 1911).

1st Scottish General Hospital, Royal Army Medical Corps: Lieutenant-Colonel James M. Booth resigns his commission and is granted permission to retain his rank and to wear the prescribed uniform (dated Nov. 15th, 1911).

Attached to Units other than Medical Units.—Captain David J. Penney to be Major (dated Sept. 20th, 1911). Lieutenant Winstan St. A. St. John to be Captain (dated Oct. 1st, 1911). Captain John B. Stevens to be Major (dated Oct. 4th, 1911). Lieutenant-Colonel William R. Sewell resigns his commission and is granted permission to retain his rank and to wear the prescribed uniform (dated Nov. 15th, 1911). Captain John S. Mackay resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated Nov. 15th, 1911).

For Attachment to Units other than Medical Units.—James Hogg Martin to be Lieutenant (dated Oct. 17th, 1911).

HEALTH OF THE ARMY IN 1910.

The Director-General's Annual Report on the Health of the Army for the Year 1910 (Vol. LII.) has just been published by His Majesty's Stationery Office, and is now on sale at the price of 1*s.* 9*d.* each copy. In his introductory letter to the Secretary of the War Office, Sir William Gubbins draws attention to the steady improvement in the health of the troops which has been in progress for the past 12 years or so, and which was well maintained during 1910. The ratios per 1000 of strength, for troops at home and abroad, of admissions, of deaths, of invalids sent home, and of soldiers constantly sick were in 1910 the lowest on record and showed a considerable decrease on the previous year. The ratio of invalids finally discharged was a trifle higher than in 1909, but was lower than any other previous ratio, while the average sick time (9·15 days) per man was 1·24 days less than in 1909. These figures are most satisfactory, and are naturally attributed by the Director-General to the increased attention which of late years has been paid to personal hygiene and general sanitation among our troops by those responsible for their health.

THE CORONATION DURBAR AT DELHI.

Colonel S. J. Rennie, commanding the Northern Regiment, United Provinces Horse, has been selected to command the Volunteer Cavalry at the Coronation Durbar to be held at Delhi. Colonel Rennie retired from the Royal Army Medical Corps and settled in practice at Mussooree some few years ago. He was shortly afterwards appointed to command the Dehra Dun Volunteer Cavalry.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—I am one of those who believe that in principle contract payment is the best. All members of the profession engage in contract practice, more or less. The general practitioner engages to attend a confinement at a fixed sum to include after visits; the operating surgeon does the same for his work. All paid appointments are on the same basis. "Payment for work done," as the phrase goes, would not be secured by a fixed sum per visit (also a contract by the way). There is considerable difference in value between a first visit, when 30 or 40 minutes may be spent in examination, &c., and subsequent ones, when five minutes are often sufficient, and also between night and day, special and routine visits. If all these and other conditions are to be separately rated, half one's time will be spent in working out what is due. Adequate payment for a variety of services can only be arrived at by lumping them all together.

Sir Alfred Pearce Gould says: "The doctors would have to accept small cash fees, and to *insist on their payment at the time*." This to my mind is a fatal objection to the scheme. Consultants, perhaps, are not practically familiar with general practice amongst the poor. Imagine a man in a crowded cottage just having ordered certain things which the mother of the sick child says she cannot possibly afford; the doctor is to reply, "I am sorry for that; my fee, please," and take it, in sixpenny bits and coppers, with one eye on the child for whom some necessary cannot be bought. The fee would not always be paid, consequently bad debts and cash-books would continue as now.

Many writers offer as a test of contract practice its application to all classes, and mention as against it that the system was founded on charity. Surely the fact that any scheme is originally founded on one idea is not to bar its application for ever to any other if otherwise suitable? The only charitable element in club practice is the *amount* of the capital fee, and as to the universal application I personally think that it would be quite suitable for general practice. Again, the close association of work and payment is mentioned as sweetening both; on the contrary, I think the one objection to the practice of medicine is the daily valuation of one's services. It would be an ideal life with an assured sufficient income—no accounts to keep, no bills to send out, no bad debts, and no hints and suspicions of unnecessary zeal. The one valid objection is "unreasonable demands on the doctor and malingering." The suggested remedy for this is that the poor man shall pay for each visit, receiving an extra grant for the purpose; either this extra grant would exactly equal the doctor's bill or it would not; in the former case there is no stimulus; in the latter, if it is more, the patient retains money that ought to go to the profession, and if it is less the doctor won't get paid!

No scheme which provides that the patient pays the doctor's bill will meet the primary object of the Bill, which is to make certain provision for medical attendance on the poor at all times, for the simple reason that any doctor, and therefore all doctors, could refuse to attend any given individual who had a bad reputation with regard to paying. Some months ago, in a letter to the *Times*, I suggested that unreasonable demands could easily be got over by debiting the patient with a small charge for each visit. The doctor would merely have to initial a card at each visit and the necessary total would be deducted from the payments made to the patient. This would check unnecessary calls and secure that the patient pays somewhat according to the attention he requires.

It is said that if the sum paid to the profession under the scheme of "contract" is "adequate," it must equal the total sum that should be paid by the sick members of the insured community under the ordinary method of payment for work done. Quite so. Let that sum be properly ascertained, as it can be actuarially. Insurance companies do not fix their premium rates at the dictation of a Chancellor, neither should we. Mr. Lloyd George has consulted professional men to work out other money items, and he should be asked to utilise their services to work out this question also. The sum of money, therefore, required to remunerate the profession would be the same in either case, with *this* difference: "For work done" the practitioner would have to collect it himself, and would then probably always receive something less than 100 per cent. *Per capita* he would get 100 per cent. paid quarterly, and no unpleasantness about it.

A simple and satisfactory scheme would be: 1. A sum of 10*s.* (or other amount properly ascertained) for every individual who did not pay income tax. 2. A fine of 1*d.* per £1 of weekly income for each visit. 3. Free choice of doctor, half-yearly. 4. Consultations, midwifery, surgery, anæsthetics to be paid either extra or dealt with at an institution.

The income-tax limit is far simpler than one based on fluctuating earnings and, the *pay being adequate*, the exact line of admission is immaterial. Such a system would practically wipe out all bad debts and gratuitous work, and the profession would be able to accept everybody within the income limit, without further haggling over this and that, merely arranging amongst themselves for a fair distribution of "chronics" and other undesirables whom nobody wants but somebody must attend. I cannot understand how anyone can think it more dignified and honourable to accept small cash fees from labourers and domestics than to receive quarterly a cheque from the State. There is nothing undignified in receiving a cheque of 100 guineas from the donor's hand, but when it comes to accepting a silver coin from a domestic, who later in the day may receive it back again for helping on one's coat after dining out, the word dignity is out of place. I hope the profession will not be led away by such phrases as "the thraldom of contract practice" to reject a certain and easy method of payment for a vexatious and uncertain one, under a system which is every bit as much a contract as the other. The only thraldom I know of is to be overworked and underpaid.

The whole thing for us turns on one point only—£ *s. d.* The one and immediate thing the profession has to do is to insist that the *per capita* sum shall be ascertained by professional experts and not guessed at or based on charitable schemes of the past, and have the sum fixed for the whole country and named in the Bill. The constitution of the Health Committees will then be of no moment, and there will be no local disputes between those committees and the profession—a great danger as matters stand at present.

I am, Sir, yours faithfully,

PENROSE WILLIAMS, F.R.C.S. Edin.

Bridgwater, Nov. 19th, 1911.

To the Editor of THE LANCET.

SIR,—I hope you will find me space to reply to Dr. B. Hall's letter, which appeared in your last issue. Allow me to say, at the outset, that I am not endeavouring to prove that contract practice is necessarily more immoral and dishonest than private practice, but I do undertake to demonstrate the greater disadvantages of contract practice, both to patients and physicians, when compared with private practice. Further, I undertake to show the disadvantages of contract practice, not only where the premium is adequate, but where it is much more than the most miserly member of the profession could desire. This point is of extreme importance, for I am sorry to say I meet not a few medical men who hurl all kinds of epithets at the Chancellor of the Exchequer because he threatens to introduce the contract system, who, when one asks them if a 12*s.* or 15*s.* capitation fee would make the scheme reasonable, immediately reply, "Yes, yes." These people seem willing to sell themselves.

Dr. Hall maintains that contract practice is more lucrative than private practice. I am doubtful about this, but I will say here that I feel inclined to agree with him. I most decidedly disagree with him, however, when he suggests that contract practice is as satisfactory to patient and physician as private practice. I take up his points in detail. Dr. Hall says, "Those who contend for payment for work done under the Act intend, I presume, that there should be paid us a fixed fee for every visit." As far as I am concerned, Dr. Hall is wrong in his presumption. The fee does not require to be fixed, but will depend on the time and place of the visit, the quantity and the quality of the work done, the ability or inability of the patient to pay, just as it depends on such circumstances in any private practice to-day. Dr Hall is not to understand, however, that medical men

would necessarily subscribe to the scheme even when the fees are placed on this footing. The system of payment is not the worst feature of the scheme. A worse, perhaps the worst, feature is this, that a patient as soon as he has chosen his medical adviser, and a doctor as soon as he has chosen his patient, are to be bound to one another for *a definite* period of time, no matter what discord may arise between the two parties. No doubt an aggrieved person will have the right of appeal to the Local Insurance Committee, but very awkward situations may arise while an appeal is in progress; whereas in private practice a patient is free to throw up his physician at any time, and a like liberty belongs to the physician.

Let me quote fully the next important point in his letter. Speaking of payment for work done, he considers the payment as so much per visit, always so much, never more and never less. He says: "Thus the value of the service rendered has no limit in its variation to the fixed fee. In the same way one can see that though the fee is in some occult way supposed to bear relation to the income, or rather rent of the patient, the relation is anything but regular—so irregular, in fact, that it is foolish to call it 'relation' at all." If these words were applied by anyone to that clause of the national insurance scheme which deals (or will deal) with medical fees, they could hardly be more apt.

Dr. Hall next states that "under the *per capita* system the relation—of visit to fee—is absolutely scientific." Surely if work can be scamped in private practice it may also be scamped in contract practice. Nay, it will be scamped more easily, for the physician's fee is secure, at least for a time. I am sure physicians who have had experience of contract practice will agree with me when I say that the temptation to cut work is stronger in a contract than in a private practice.

Dr. Hall then proceeds to show that in the contract system one may foretell more accurately the number of births, deaths, or visits to be made than in the private system. I have found it as difficult to prophesy in the one case as in the other. The economical aspect of the contract system I purposely pass over, for I hold most strongly that it is not the economical but the ethical aspect of the insurance scheme which should now occupy our attention. I have not much doubt but that Mr. Lloyd George is prepared to yield on the six cardinal points of the British Medical Association, but he is keeping the concession up his sleeve till the right time comes, when they will act as a sop to the profession. Suppose he does yield, will the laugh be on our side? Not at all; the Chancellor will have wedded the medical profession to contract practice.

In the last paragraph of his letter Dr. Hall states that he prefers contract to private work. Be it so. I would like, however, to point out to Dr. Hall two very important reasons for the abolition of contract practice. Firstly, the very fact that in the private system there is no legal contract between a patient and a physician makes the bond between these two parties all the more beneficial and desirable to both. Secondly, the mental influence which a physician exercises over his patient—a very important part of treatment—is apt to become a vanishing quantity whenever the parties are bound together by rules and regulations.

I am, Sir, yours faithfully,

Harringay, N., Nov. 20th, 1911. R. S. MILLER, M.B., Ch.B.

To the Editor of THE LANCET.

SIR,—I have followed with interest the letters and articles which have appeared in the medical journals on the Insurance Bill. As an insurance medical man in the City, having no active interests in general practice, "contract" or otherwise, I can only hope if the Bill passes that the best interests of the profession will have been safeguarded by those in authority. The ordinary insurance man is credited usually as being a very keen individual, he sees business in everything. As soon as the Bill passes the country will be probably flooded with schemes and proposals of all kinds, especially from companies doing an industrial class of work. New small companies will spring up. Clubs and societies, solvent and otherwise, will be bought up or amalgamated for the formation of an approved society in connexion with the scheme of national health insurance contained in the National Insurance Bill now before Parliament. I am afraid that the profession will suffer as under the Workmen's Compensation Act.

Under the Workmen's Compensation Act the injured man had free choice of doctor, and now as a great concession under the Insurance Bill the members are to have also free choice of doctor. Can anyone who pretends to know anything about the Workmen's Compensation Act be ignorant of the fact that a vast number of claimants come under the observation of a "select" few of the profession? Medical men are, of course, entitled to their opinions, and some hold stronger views than others on the question of placing men on the funds of a society or club on account of illness, but who, with any experience of contract practice, is ignorant of what takes place when men are members of several clubs at the same time when each club has a different doctor? What will happen when they have the choice of a dozen or more doctors I would not like to hazard. There is a certain amount of *esprit de corps* amongst the members of most clubs; this for one thing will vanish under the new system, but an increase of malingering, one of the inherent evils of "contract" practice, must be expected from the Insurance Bill, no matter how amended or administered.

The Bill will do good by relieving the overcrowded outpatient departments of our large hospitals, tending to diminish abuse and incidentally help to get men back to work quicker. I examined a man twice within the past few months for one of the companies. He had a wound of the hand which had become chronic. He was under treatment at one of the London hospitals, where he attended once a week, getting a bottle of lotion with which he was instructed to bathe the hand daily at home. I asked him why he did not attend a private doctor, and he said he could not afford to do so, which I fully believed. On making out my report to the company I mentioned that in such a case under the new Bill the man would have been able to command the services of a private doctor, who would have probably seen the man every day or every other day, dressed the wound, and that in all probability he would have recovered in a few weeks instead of a few months.

If Mr. Lloyd George can only help us to get rid of the "Prescribing Chemist" and the "Dispensing Doctor" by the aid of his Bill he will have earned the everlasting gratitude of all who have the best interests of the profession at heart.

I am, Sir, yours faithfully,

London, E.C., Nov. 20th, 1911. J. J. SCANLAN.

*** Dr. Scanlan makes shrewd points in his letter, but his closing sentence confirms his statement that his personal interests lie outside general practice. Many practitioners do not desire to relinquish dispensing, and strong arguments have been supplied to show that what appears to be a progressive move may act badly for the public as well as for many practitioners.—ED. L.

To the Editor of THE LANCET.

SIR,—As a practitioner in Lancashire I was present at the meeting of protest against the National Insurance Bill held at the Midland Hotel, Manchester, last Saturday, Nov. 18th. I was very pleased to see on the platform so many of the leaders of the profession in the Manchester district, and I listened to their inspiring "die-hard" advice tendered to us general practitioners. We were told that no man who wishes to retain the respect and esteem of his professional colleagues must serve on the proposed panels or assist in any form to carry out the provisions of the National Insurance Bill, unless the six cardinal points demanded by the British Medical Association be conceded. When we hear such advice given to general practitioners by our leaders, the consultant physicians and surgeons, we feel that we have a clear lead given to us.

May we then assume that these leaders of the profession are prepared to stand with us and to refuse to consult with, or operate for, any man who takes office or works under the provisions of the Bill? Also, will they give their guarantee that they themselves will accept no post whatever under the Bill? If we could have such an assurance we should march forward with solid front in opposition to the Bill.

I am, Sir, yours faithfully,

Cadishead, Nov. 20th, 1911. E. O. JAGO.

To the Editor of THE LANCET.

SIR,—If this Bill passes without severe amending it will be a grave danger to the public health, and will perpetuate the worst evils of cheap hospital treatment, cheap dispensaries, cheap surgeries, and club practice. There are a few points I wish to call the grave and serious minds of doctors and others to.

1. Will this Bill permit the doctors and assistants working under it to come under the Workmen's Compensation Act? That Act applies to incomes under £250, and I am certain that the gross income of 65 per cent. of doctors does not now exceed £200. It will be less under the Bill, more especially if dispensing is taken from them—an item sometimes equal to more than half their income. Let a clause be introduced to provide for this.

2. Does the Bill guarantee to the doctor life tenure of office? It does not. We know the trouble that asylum, public health, and Poor-law doctors have over this. Tenure is here doubly important seeing the Bill now hands the doctors absolutely over to the Friendly Society and other club members on the Local Insurance Committee.

3. Does the Bill guarantee superannuation to doctors? It does not. The working classes have been given State superannuation of 5*s.* weekly. Almost all companies grant it. Why attack the doctors?

4. Does the Bill provide for payment of locum tenens when doctor is sick or on holiday? It does not. Here again the working classes are even now provided for, and will be more so if this Bill passes.

5. Does the Bill permit doctors, their wives, and families to insure against the benefits? This is doubtful, and should be cleared up.

6. How are we to find out the actual gross income of insured? About 885,397 persons, exclusive of firms and companies, pay under the income tax. How are we to decide regarding the 25,000,000 persons who will insure? Will the Income-tax Commissioners help?

7. How are we to find the gross income of "voluntary" persons under this Bill? Mr. Lloyd George in his book, "The People's Insurance," price 1*s.*, on p. 132, says: "The Governor of the Bank can join" as a voluntary member, and that he means Mrs. George and her children to join.

8. What should the payment to the doctor be per member? Recollect that we shall be called upon to treat rich and poor, young and old, strong and weak, cripple and sound, and those so ill that they *must* be Post Office members, those over 60 years. Also, that as the Bill refuses medical or sick benefits until four weeks after a confinement we shall have a large amount of waiting sickness thrown upon us. It means that the work of doctors will be trebled under the Bill and their pay lessened by half. I think we should accept a *minimum* of 10*s.* per member per annum of those who are "compulsorily" insured, and for "voluntarily" insured of £160 income. This sum for each man, woman, child, and maid would work out at about (four children per family) 70*s.* per family per annum; not a large sum for good, efficient treatment.

9. Should doctors, on the other hand, be paid per visit? A few may recollect that in the *British Medical Journal* of June 22nd, 1889, I proposed the formation of a public Medical Service of England, while in the *Foresters' Miscellany* for August, 1886, I gave a very full account of the German insurance against sickness, accident, infirmity, and old age. I am more than sorry that the doctors in the British Medical Association did not adopt my proposal, as it would automatically have swept away club practice and would now have avoided all the present trouble, as we would be in a strong position to offer our services at a fixed price and so really be business men and not mendicants.

10. The confinement fee should be 42*s.* for the first and a definite fixed fee for instrumental and manual labours. At present the idea of the Bill is to be one of State subsidy to midwives. It is said that last year midwives conducted half the total confinements, this meaning a lessened income on the year of about £440,000 of doctors.

11. Will the doctors acting at voluntary hospitals be granted an income for treating sick assured members? Each should be paid a *minimum* of £500 yearly. After very arduous work I have collected statistics showing that not less than 4,136,263 persons in the United Kingdom during 1901 obtained medical, surgical, and midwifery relief, or 1 in 11 of the entire population, at the voluntary hospitals alone; that is exclusive of clubs, asylum, fever, Poor-law, and other hospitals. As showing the money value of this treatment, if we estimate it at 10*s.* per person, including all operations, here is a money loss to doctors of not less than £2,068,131. Of course, the loss is ten times this, owing to our checking sickness, deaths, and chronic invalidity. Under this Bill the hospital patients will be doubled, just as they have been greatly increased by cheap club practice. Why therefore, cannot the State pay doctors, as it will pay well the other officials under this Bill.

12. The Bill does not provide a scale of fees for surgical operations. Why not? Under the Poor-law regulations there is a scale of fees for operations, confinements, and vaccination.

13. The Bill does not provide for dental treatment. This is perhaps one of the grosser defects of the Bill. I have estimated that £4,500,000 would duly provide for this most important feature of sickness and malnutrition.

14. Should doctors surrender dispensing to assured members. At present 60 per cent. of the income of many doctors is derived from dispensing. In their present chronic condition of genteel poverty, can they afford to make the chemists a present of it, and if not, will the chemists purchase the goodwill, and so recompense the doctors? I have proposed that the chemists form a sinking fund, taking it off the sick members of, say, 1*d.* per prescription, so as to purchase out the rights of doctors.

15. How many members to each doctor? This is the basis of the Bill to us, for if we are not very particular political trickery will come in, and so those doctors on the "wrong side" will not be "fed" by the local secretaries. A limit would also lessen bribery of many kinds. If each doctor could secure 1000 members at 10*s.* each, this would give £500 to each. But this high average cannot be obtained, as the army, navy, police, and all the civil service, as post office, telegraph, telephone, customs, inland revenue, will remain as they are. In 1901 there were 22,695 doctors *practising* in England and Wales, or on a gross average of 1 practitioner to 1433 persons (see also report of the General Medical Council of 1886 upon these averages). Suppose half the population become members, this gives 16,263,921 members, and at 10*s.* per head a gross sum of about £350 per doctor per annum. Now when we deduct income and other taxes, conveyances, servants, part rent, and other items, it is impossible to see how doctors can for this pittance supply efficient medical treatment. The midwifery fees, with a steadily falling birth-rate—a rate which will soon fall to 12 per 1000—and with midwives employed, must not be counted upon.

16. Unemployment benefit to pregnant women. Our employing pregnant women in factories and mills has become a public laughing stock, an object of scoff and satire. Similarly with their re-employment four weeks after confinement. Thus the horrible and devastating maternal sick- and death-rates, and the juggernaut of infant murders—given out to be "nursed" on tea; and their deaths, encouraged by insurance. The want of such provision in this Bill—one whose promoters have the bluffing effrontery to officially describe in its preamble as one "for the prevention and cure of sickness"—is enough to hiss it out of existence in its present form, and to fit it for comic opera, were there not so terrible a tragedy in it.

This Bill cannot be administered honestly and with due consideration for the health of mothers and infants—the basis and backbone of national health—without the active approving help of doctors. It is for this reason I advise them seriously to have nothing to do with it, and to give their reasons to the sick and future sick public. A well medically administered Act would pull down the death-rate by 5 per 1000, the sick-rate by 50 per cent., and lessen the expenses of administering the Act by at least £5,000,000 annually.

I am, Sir, yours faithfully,

Liverpool, Nov. 14th, 1911. ROBERT R. RENTOUL.

To the Editor of THE LANCET.

SIR,—The previous letter and the one which appears in to-day's issue of THE LANCET on the above subject from the pen of Sir A. Pearce Gould appear to me to be so much to the point and so unanswerable that I am puzzled that the profession as a whole do not, before it is too late, abandon what, in my opinion, is a very untenable position and adopt the simple, and I think sound, principle of "payment for work done." I confess I find it difficult to understand the

mental attitude of those who can find anything to say in favour of the "contract system." My experience of such practice is comparatively limited, but I think I have seen quite enough of it to satisfy myself, at least, that it can never be satisfactory to either of the parties concerned. A couple of days after the introduction of the Bill, when I saw that the Chancellor of the Exchequer was proposing to perpetuate and to give State sanction to a system which was almost universally condemned, I, as one of his constituents and supporters, took the liberty of writing to him, regretting the proposal he had made, and saying I thought I could suggest a much more satisfactory plan of remunerating medical men. By the time I received his reply the profession had made what I cannot help considering a very regrettable *faux pas*. I venture to say that the plan advocated by Sir A. Pearce Gould and others will be found in practice to be simplicity itself. It differs in no essential particular from private practice, except that payment will be much more certain.

At first sight, however, there are two dangers: first, that some doctors may be disposed to run up a bill unnecessarily; and, second, that some patients may be too often on the sick list. These two really resolve themselves into one, and can be easily guarded against at one and the same time by docking the weekly payment of the patient after the attendances have exceeded a certain number. In this way both doctor and patient are checked at the same time.

I am, Sir, yours faithfully,

Bangor, Nov. 18th, 1911. RICHD. WILLIAMS.

To the Editor of THE LANCET.

SIR,—Cannot a modification of the capitation system be devised that would make it acceptable to the medical profession?

Firstly, a minimum sum per head must be fixed upon and put in the Bill. As this minimum means in all cases a maximum, it must be sufficient to avoid disputes between the profession, when split up into small bodies, and the Local Health Committees.

Secondly, the Chancellor in his opening speech laid great stress on the fact that when funds accumulated, as they would do, additional benefits would be extended to the insured in the way of increased sick pay, &c. No word, mark you, of increasing the pay of the medical men, through whose exertions the funds accumulated. Now, why not give medical men a direct interest in the measure by increasing their pay in an equal ratio? Sick pay goes up to 12*s.*, then an extra shilling per head to each doctor, and so on. In such a way we would have an incentive to give our best service and look keenly after any malingering. As long as human nature is as it is some such tangible inducement is probably necessary.

I am, Sir, yours faithfully,

Nov. 20th, 1911. W. ROBERTSON.

To the Editor of THE LANCET.

SIR,—I shall be grateful if you will permit me to direct the attention of medical men to the fact that a list is being compiled of medical men who are in favour of having medical benefits included in the Irish Insurance Bill. I therefore request that all medical men desirous of having medical benefits applied to Ireland will without delay send me their cards or postcards, bearing on them their signatures and the words "For Medical Benefits." When the list is complete it will be forwarded to the Chancellor of the Exchequer as evidence that Irish practitioners approve of the application of medical benefits to this country.

I am, Sir, yours faithfully,

SEYMOUR STRITCH.

13, North Frederick-street, Dublin, Nov. 19th, 1911.

To the Editor of THE LANCET.

SIR,—I think those who desire payment by a capitation fee are sufficiently answered by Mr. Lloyd George's statement in Parliament on Nov. 14th, when he said the demand of the Irish Medical Association for a capitation fee of 8*s.* 6*d.* was "financially impossible," and that 6*s.* might be taken as the "financial basis" of the Bill—that is, 4*s.* 6*d.* for the doctor and 1*s.* 6*d.* for medicines, &c. Truly a princely sum!

Surely the demand of 8*s.* 6*d.*, exclusive of medicines, &c, is little enough, even to those who wish for this method of perpetuating the hated club system. I might add that the financing of the scheme is no business of ours. The Bill is forced on us and we demand, not petition for, what we consider is our due, and unless we obtain it we absolutely refuse to work under the Bill.

I am, Sir, yours faithfully,

Heaton Park, Manchester, Nov. 20th, 1911. E. T. LARKAM.

To the Editor of THE LANCET.

SIR,—It may seem absurd to remind your readers that a part is not equal to the whole. That it is not superfluous, however, to do so is clearly indicated by the confusion that has arisen over what constitutes "contract" practice, especially in relation to the Insurance Bill. This confusion, due to transference in thought to the whole of qualities that belong necessarily only to a part, is plainly instanced in the letter of Dr. B. Hall published in THE LANCET of Nov. 18th. Dr. Hall there says: "In my letter of Nov. 4th I referred to the fact that a considerable percentage of medical men is now, and has been for generations, working on the contract system in which payment is by salary. Surely everything that can be said against the *per capita* system applies to this system of payment by salary." That is exactly what it does not do, and it is the inability to see why it does not, that is creating much confusion and waste of argument, and causing many outside of the medical profession to wonder at its determined opposition to what would appear at first blush to be a reasonable and, provided the *per capita* payment is "adequate," a profitable plan.

It is a fact that the *per capita* system of payment, so far as medical service is concerned, is radically and essentially bad, and that quite independently of the amount of any probable *per capita* payment. "Why," it may be asked, "is a plan which works well with other occupations necessarily bad in the practice of medicine?" The answer is simple. Because the services demanded of the medical practitioner are entirely different in kind and in character of obligation from those of any other occupation or profession. They are imperative on the score of humanity, and there can be, in consequence, no arbitrarily fixed limitation set to the amount of service that may be demanded at a given time of each individual practitioner, or to the time at which or the hours during which he shall be required to labour.

This fact may be best brought out by a consideration of what actually happens in the course of (1) private practice; (2) so-called "club practice"—i.e., contract practice based on a *per capita* payment system; and (3) salaried contract practice, of which the naval and military medical services may be taken as the best known and highest types.

Private practice has this in common with "club practice," that the medical attendant is the employee of each of his individual patients. The *primâ facie* claim of all patients on the doctor's services is equal. Priority of service can be demanded only on the score of priority of summons or of obvious urgency. If two or more patients happen urgently to need the medical man's services at the same time, he attends to the first-comer first, and later, to all subsequent comers in turn—there are no closing hours for the doctor—provided they have not already betaken themselves elsewhere for assistance, which in private practice is not unlikely to happen. In the latter event these patients do not have to pay the medical man for what they have not had. The fee that would have been his, had he attended them, goes to the doctor who actually did attend. Moreover, having a fee to pay for each separate act of service rendered, the patient is not so apt to summon his medical attendant unnecessarily, and even if he did, it would be doctor's right, when already overtaxed, to forego his fee and refer the patient to some other medical man.

In club practice, on the other hand, each patient has already paid the appointed club doctor—or the one he may choose from an authorised panel, if any—for every service that can be demanded from him during the currency of his subscription. If a number need him simultaneously or in rapid succession, each has theoretically an equal right to his instant service, for all alike have paid him

equally. Supposing that in the presence of some case of serious emergency the better-disposed patients are content to yield place until he has done with the urgent case, they merely postpone their own call on his services, and expect him, and rightly so, at once to direct his attention to them. Thus a string of claims upon his time and strength may, and often does, accumulate in such a way that for long periods together the doctor is deprived of proper time for repose, for meals, or for leisure for recreation or study, the first of which is essential for the continued performance of good work, and the second necessary in the public interest. The medical man in private practice can, if he chooses, and he often does, decline to take more obligations than he can adequately fulfil without undue strain on his health and reasonable comfort. Those that he cannot attend when need arises are free, without being mulcted twice for the same service, to seek aid elsewhere. But in club practice it is not so. Having taken a number of *per capita* payments by contract he is bound to fulfil his obligations with equal loyalty to everyone, regardless of the cost to his own health and well-being and of the results to his own family life. And although the club or Government authority is not his real paymaster it will insist on his performing to the full the duty he has undertaken. When one or the other—the doctor or the patient—must suffer, its sympathy is practically always on the side of its own *protégé*, of whose interests it is the custodian.

Now let us look at the difference between *per capita* club practice and salaried practice, let us say, in the army. Both, it is true, are "contract" practice. But the army doctor enters the service as the employee, not of each individual patient, but of the Government which pays him. He arranges terms and conditions of service—or rather accepts those which the profession has secured for him—not with 1000 masters having different, often conflicting, interests, but with one master. He is responsible, not to his patient, but to his employer, the Government. His employer, advised and represented by his superior officers in the service, knows what is humanly possible in the way of labour and what is not. It realises—sometimes, it is true, not until it has had a rude lesson—that to get the right kind of men, competent and willing to do the work, it must make the terms of its service attractive. It arranges for him his hours off duty, during which under ordinary conditions no work can be demanded of him, thus securing to him time for repose, leisure, and relaxation. He is assured of social position and of a certain amount of social life. Provision is made for increase of pay and rank with years of service, and his future is provided for by either a pension or a retiring allowance at his choice. Opportunity is periodically afforded him by leave on full pay for both recuperation and professional study. His work is thus collected into one consistent whole under one master, to whom alone he is responsible. How different is the case of club practice! Here the practitioner's obligations are distributed among many distinct individuals with necessarily conflicting interests, to each of which he is personally responsible as to a different master. To this fact are traceable all the intolerable results of the club system—the inconsiderate demands, the frivolous complaints, the exactions, the incessant grind, resulting in an overworked and often underfed, or at least improperly fed, doctor, who cannot himself carry out the very precepts it is his duty to instil insistently into others. What wonder that his *clientèle* in its turn should suffer from scamped work, inadequate care and attention, waning skill through lack of opportunity for study, and the absence of that magnetic sympathy between doctor and patient which is half the battle in the struggle with disease.

The question of a salaried medical service under the Bill need not be discussed, for there are other and more practicable plans, as, for instance, that suggested by Sir Alfred Pearce Gould in THE LANCET of Nov. 18th. The point is, that whatever other methods of payment may be found suitable, a *per capita* payment, which renders the medical man a slave to the caprices of a number of distinct and independent masters, is radically bad, as has hitherto been consistently held by the profession at large. Certainly a method that is radically bad for the medical profession—and through them for the individual patient and the public at large—ought not to be made compulsory.

I am, Sir, yours faithfully,

Nov. 20th, 1911. EXPERTO CREDE.

"SPONGE EDUCTION."

To the Editor of THE LANCET.

SIR,—I have read with great interest the annotation on "Sponge Eduction" in your issue of Nov. 11th, p. 1348, and note the remark that the method seems to have originated in America.

The late D. J. Hamilton, professor of pathology in Aberdeen University, was one of the earliest workers on the subject of "Organisation of Porous Dead Materials," and advocated the use of sponge in accelerating the healing of indolent ulcers. His method was somewhat different from that described by Dr. E. Ward, inasmuch that thinner layers of sponge were used, and that instead of pulling on the sponge when filled with organising vascular tissue, a second layer was applied. It may be of interest to quote his plan as described in his "Text-book of Pathology," published in 1889:—

> The wound should first of all be rendered aseptic, and any sloughy shreds should be got rid of. A close-meshed Turkey sponge is the best for the purpose. It should be cut into thin sections in the freezing microtome, and the larger they are the better. The sponge should be wrung out of freezing fluid "A," and be stuck on the freezer with mucilage. The sections should not be more than from 1/16th-1/32nd of an inch in thickness and may be applied in one large continuous piece or in several small ones. Great care should be taken that the sponge does not come nearer than 1/8th to 1/4th of an inch from the epithelial edge or the latter will be sure to undermine it and prevent its adhering. In a few days it will be found to be filled with organising vascular tissue. A second layer considerably smaller than the first should now be placed on the surface, followed by a third, and so on, until the wound is healed. Indolent ulcers take on a remarkably healing and healthy look within a very short time of its application. The sponge before being cut must be soaked in a dilute solution of caustic potash for several hours, and subsequently in a dilute solution of nitric acid for a night. It should be thoroughly washed in water after this and the sections may be kept in watery solution of carbolic acid (1 to 40) until required. The dressing should be strictly antiseptic, the ordinary dextrine silk forming an excellent protective covering. Freezing fluid "A" is composed of 4 parts of a syrup, containing 28·5 grm. of pure sugar to 30 c.c., 5 parts of a mucilage of gum acacia of the strength of 45·6 grm. of gum to 2400 c.c. of water and 9 parts water. The whole boiled and saturated while hot with boracic acid and filtered when cold through muslin.

Hamilton's experiments were published in the *Edinburgh Medical Journal* in 1881 and were confirmed by Marchand later. As regards the fate of the sponge in the tissues, Hamilton, on examination of parts in which a piece of sponge had become ingrafted, could find no trace of it, and concluded that the keratode of which it is composed is absorbed after fulfilling its mission as a framework for the tissues to grow in.

It seems to me that Hamilton's method is to be preferred to the more recently described one, because one would be more likely to get a firmer pad when the framework for the granulations to grow in is left until absorbed instead of being pulled away.

Of course, one would not reduce the size of each layer of sponge, as recommended by Hamilton, if it were desired to build up a wound as in the case of a lacerated finger.

I am, Sir, yours faithfully,

Banff, Nov. 13th, 1911. WM. MANSON FERGUSSON.

RECENT DEVELOPMENTS IN THE RECOGNITION, TREATMENT, AND PROPHYLAXIS OF SYPHILIS.

To the Editor of THE LANCET.

SIR,—In reading over the report of his first Hunterian lecture I notice that Major H. C. French quoted me as having stated that I "only succeeded in demonstrating the spirochæta pallida in 152 out of 202 cases of syphilitic sores" and as having suggested "that in the remaining 25 per cent. of cases local antiseptics or other causes may have prevented the demonstration." This does not convey the impression I intended, as is shown by reference to the original paper,[1] in which I stated: "I may mention that out of 202 syphilitic sores which I have examined I have established the diagnosis by means of the dark-ground apparatus in a few minutes in 152. I think this number would be much larger if in 40 out of the remaining 50 cases an antiseptic had not been previously applied to the sore. In a number of the 152 cases in which the diagnosis was made so rapidly

[1] Brit. Med. Jour., Sept. 23rd, 1911, p. 686.

I have had the opportunity of submitting the sore to examination by expert clinicians, who confessed that on clinical grounds they would not have taken the responsibility of diagnosing them as syphilitic."

I am, Sir, yours faithfully,

L. W. HARRISON,
Major R.A.M.C.

Rochester-row, S.W., Nov. 15th, 1911.

FEES TO SHIP SURGEONS.

To the Editor of THE LANCET.

SIR,—Referring to the letter on the above subject from Dr. R. R. Rentoul, the writer must not be too "glad" at escaping the thanks of ship surgeons, as his escape is possibly due to their ignorance of his endeavours on their behalf. Some 16 years ago Dr. Dutton brought the subject of charging passengers the usual fees for medical attendance to the notice of shipping companies; eleven years ago I approached the P. and O. Company on the same matter, and a little later Dr. Elder worked on similar lines. It is therefore not altogether surprising that some of us were ignorant that it was to Dr. Rentoul and his efforts five years ago that all our thanks were due.

Dr. Rentoul warns us that a few surgeons are helping to ruin his proposal—he does not say what that proposal exactly is—by objecting to submit their bills to the captain. I have met a great many ship surgeons; to their credit all of them do object to this practice, most of them feeling that the relations between patient and surgeon are confidential and concern no one else. We should all be glad to know with what object such a rule was made. Is it that the accounts may be revised and criticised by the commander? Or is it to check abuse? If for the former purpose, it seems an unwarrantable interference; if for the latter, it is not quite complimentary to the surgeon. Perhaps Dr. Rentoul may be able to enlighten us on the real object.

I am, Sir, yours faithfully,

T. W. ATKINS.

Nov. 22nd, 1911.

ELECTION OF DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—We wish to take the earliest opportunity of thanking most sincerely every one who has supported us at the recent election, in which we have been returned by so handsome a majority; and we feel particularly grateful to those busy workers who, having little leisure, yet have found time to attend committees and meetings, and to do all in their power to further our candidature.

We are, Sir, yours faithfully,

HENRY W. LANGLEY BROWNE.
H. A. LATIMER.
T. JENNER VERRALL.

Nov. 20th, 1911.

UNIVERSITY COLLEGE HOSPITAL: A LECTURESHIP FOR MEDICAL RESEARCH.—This hospital has received from Mrs. C. Kayler a sum of £1000 to found and endow a lectureship in memory of her father, the late Dr. Sydney Ringer, formerly consulting physician. The lecturer will be selected every two years, and will take as the basis of his lecture original research carried out by him in the physiological or pharmacological laboratories of University College or in University College Hospital Medical School.

A BALL will be held in the New Banqueting Hall, Savoy Hotel, London, on Wednesday, Nov. 29th, in aid of the funds of the Army and Navy Male Nurses' Coöperation. The object of this coöperation is to afford to the public thoroughly well-trained male nurses and sick attendants of good character, and to provide employment for retired non-commissioned officers and men of the Nursing Section of the Royal Army Medical Corps and members of the Sick Berth Staff of the Royal Navy. Tickets—price, 1 guinea each; for parties of four or more, 15*s.* each—may be obtained from Mrs. Frank Juler, 24, Cavendish-square, London, W.; or Miss Ethel McCaul, honorary secretary, 11A, Welbeck-street, Cavendish-square, London, W.

THE DEMAND FOR PUBLIC ABATTOIRS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

(Concluded from p. 1435.)

FAILURE OF ABATTOIR REFORM AT LIVERPOOL.

Defects of the Birkenhead Foreign Cattle Lairage.

LIVERPOOL has not been particularly successful in solving the slaughter-house problem. First and foremost, it has allowed a gigantic business in the slaughtering of foreign cattle to go to the other side of the Mersey, though there were no proper slaughter-houses at Birkenhead. Even to-day it cannot be said that the lairage and the abattoir provided for the foreign cattle at Birkenhead fulfil modern requirements. Without entering into details, the fact that old factories or mills have been converted into slaughter-houses is a sufficient condemnation. A slaughter-house must be specially designed and constructed; existing buildings cannot be adapted for that purpose. If when the foreign cattle trade gave promise of expansion the corporation of Liverpool had built a large model abattoir the meat industry might not have passed over to Birkenhead. To the nation at large, of course, it does not matter on which side of the Mersey the foreign cattle are landed and killed. But the public is interested in seeing that this is done in abattoirs where every facility exists for the inspection of the meat and its cleanly handling. At Birkenhead there is an insufficient staff of inspectors. The principal inspector admitted to me that he did not see all the animals at the moment of killing, but urged that if he found a diseased viscus he would know to what lot of cattle it belonged and would hunt out the carcass. In so important a place as the Birkenhead foreign cattle lairage and slaughter-house there should be several veterinary surgeons on the spot, and no viscus should be separated or removed from the animal till it is inspected.

Mills Converted into Abattoirs.

Considering that a large trade in the importation of American cattle has grown up at Birkenhead on premises absolutely unsuitable for the purpose, and where the control is of the crudest, it is surprising that the city of Liverpool should not have attempted something better. The rival city of Manchester, in any case, did not lose the opportunity. As soon as the Ship Canal was built, enabling ocean steamers to reach Manchester, the Foreign Animal Wharf at Old Trafford was constructed. Though this establishment is not perfect in all respects, as I explained in my last article, still it is a real lairage and abattoir. Everything was planned for this express purpose, while at Birkenhead there are no such buildings. In this latter place cattle are driven to the upper floors of the old warehouses or mills. Instead of a lairage the cattle are lodged upstairs, and the dirt they make is drained out through a window into a big pipe suspended in mid-air. On the ground floor the cattle are slaughtered. Instead of air and light coming from the roof of the killing floors, there is no light, no air from the roof, because there is no roof; it is a ceiling and not a roof, and it is a watertight ceiling, because there are cattle on the floor above. That does not help to ventilate or to illuminate the place. It is astonishing that a proper wharf, lairage, and abattoir have not been built in some other part of Birkenhead. Liverpool, however, makes no attempt to draw the trade to its side of the Mersey.

Abattoir Nuisance in the Heart of Liverpool.

The strange thing is that the need of a proper abattoir at Liverpool has been acknowledged for many years. The butchers themselves at the beginning of the nineteenth century already realised that it was better to work together than separately. As previously related in these columns, they grouped together several businesses and established in the centre of the town a joint abattoir.[1] In those days there was no knowledge of the dangers that accompany the butcher's trade, but of recent years the corporation was obliged to buy out all the private butchers and convert their joint slaughter-house into a municipal abattoir. The premises, however, are so unsuitable for the purpose that killing was discouraged, and now a part of the slaughter-houses has been converted into a meat market. Still there

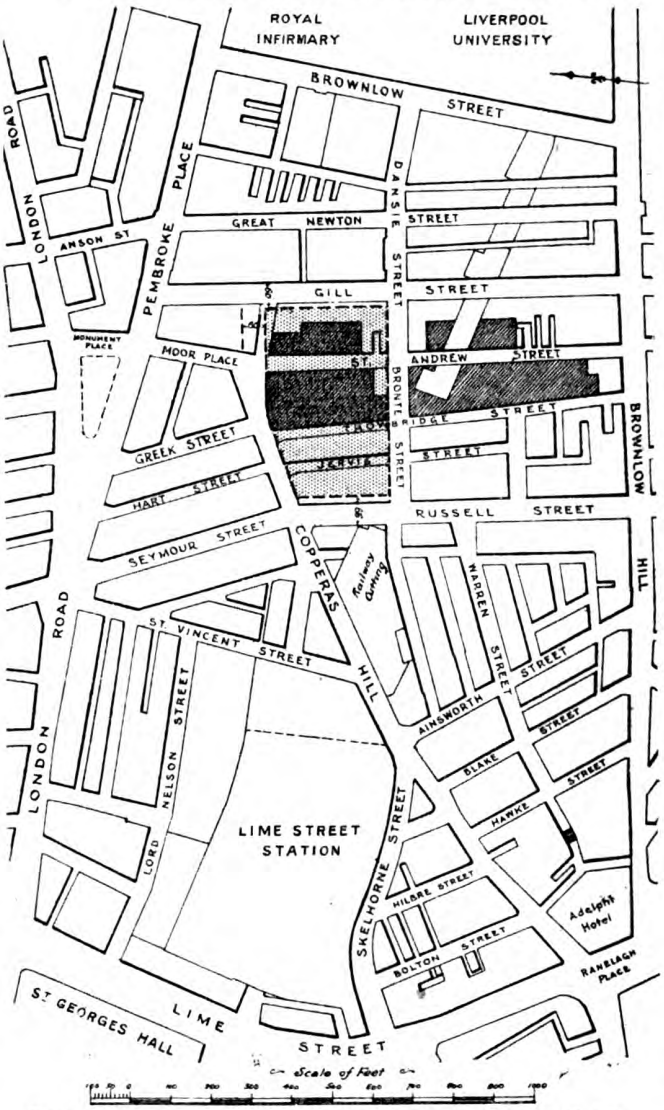
[1] THE LANCET, August 22nd, 1908, p. 586.

is some killing done here, especially of sheep. Then there is a horrible place it was my misfortune to visit where putrefied or condemned meat and carcasses are kept till such time as they can be removed to the destructor. The stench is sometimes appalling, and this abomination is barely 110 yards from the Liverpool University and the Royal Infirmary. Both these buildings also are on a higher level. It is incredible that such an industry should be allowed close to and between the hospital, the University, and the principal railway station and hotels of the town. The sanitary authorities of Liverpool have insisted over and over again that an abattoir, especially such an antiquated and insanitary abattoir, should not be allowed to stand with the University and hospital so close on one side, and on the other side St. George's Hall, Lime-street station, the theatres, hotels, museums—in a word, the magnificent centre of which Liverpool is justly proud. Dirty work is done at the abattoir. Apart from the killing, hide sorting and salting do not make up an ideal occupation. The offal, the intestines, the manure, the diseased carcasses, and the putrid meat have to be handled and carted from the abattoir through the streets, and the animals destined for slaughter are driven along the same streets to the abattoir. All such traffic should not take place in the very heart of the city. The whole business should be removed to an open, airy suburb where there are few or no inhabitants.

The Private Slaughter-houses of Liverpool.

The construction of a proper abattoir on a suitable site would be the more easy, as there is no reason to fear competition from the butchers. There used to be 25 private slaughter-houses at Liverpool, and these are now reduced to 17. The corporation has very wisely refused to grant any more licences. Some of the private slaughter-houses have only annual licences, and these could easily be stopped. Even if legal sanction for the compulsory closure of the remainder, which are worked on life licences, could not be obtained, they do so little work that their competition would not interfere with the prosperity of a model municipal abattoir. In visiting some of the private slaughter-houses I came across the butcher who supplies the highest classes in Liverpool with the best meat. For slaughter-house he utilised a small barn. The floor, however, was of flagstones draining to a gully. Formerly there was a big cesspool in the middle of the barn. Now this has been filled up and concreted and the place drains into the sewer. But when first built the barn was in the suburbs and probably there was no sewer. To-day it is considered to be in a central district. Nevertheless the slaughtering work continues, though there is only inadequate equipment. The best use is being made of the buildings that is possible in the circumstances, but they are unsuited for the work. For absolute lack of everything that is needed it would be difficult to surpass the wooden shanty belonging to the breeder of celebrated pedigree pigs. So wonderfully and fearfully made is this structure that I implored Dr. Hope to take a photograph so that future generations might know what was still tolerated at the beginning of the twentieth century. Dr. Hope's annual reports on the health of the City of Liverpool are rendered more interesting and instructive by numerous photographs. These supply precious testimony as to the insalubrious condition of much property that has now been reformed out of existence. But the private slaughter-house in question still exists, and to my great joy I found that a photogravure of it had appeared in the medical officer's report for 1909.

SITE OF PROPOSED PUBLIC ABATTOIR FOR LIVERPOOL.



Dotted area indicates proposed site under a scheme which should not find favour; it is too central; black area shows present abattoir buildings. Note the nearness of the infirmary and the University at the top of the map, and of St. George's Hall and the fine centre of the city at the bottom. (Reproduced from the corporation surveyor's scheme.)

Slaughtering in a Shanty.

In many respects, except in regard to the slaughter-house, or shanty as it should be called, its owner has manifested a keen appreciation of the beneficent effects of good sanitation. The housing of the pedigree pigs is perfectly ideal. First of all every pig is carefully and frequently bathed, then he is allured into a luxurious stall which he enjoys all to himself, though it is as big as a horse stall. The floors are of concrete, the walls are well lime-washed, and there are eight louvred windows at the back of six stalls. Opposite, the upper parts of the doors open like windows to admit fresh air from a large field. So much light, ventilation space, and continual cleaning is rarely provided for human beings; but then these pedigree pigs can readily be sold for £30 each. All this lavish expenditure and supreme carefulness over living pigs made the contrast with the slaughter shanty the more marked. Instead of solid walls with louvred windows there were a few planks nailed together, and some tar to save them from rotting too quickly. The roof is so low that the lowest portion is only 4 ft. 6 in. from the ground. Not one but all the walls are of wood, whitewashed inside and tarred outside. To call this a slaughter-house is quite

preposterous. It is such a ramshackle structure that it seems incapable of bearing the weight of a good heavy bullock if strung up to one of the dust- and dirt-laden rafters within. But bullocks are killed here and they do not drag the building down with them. Nevertheless, this should not be allowed, particularly as the shanty abuts on a high road and there are dwelling-houses close at hand. The pavement outside the shanty is most irregular. Old bits of broken asphalte have been thrown over one part and have formed themselves into strange-shaped lumps. In another direction there are nubbly stones, but in all directions the water mixed with blood and manure from the slaughtering of animals filters down easily into the subsoil to create a permanent condition of impurity. The intestines and useless offal are removed at night to the farms, but tubs get impregnated, and porous wood is not the right material to hold such organic matter. There is no thought given as to modern processes and the scientific apparatus now used for speedy and cleanly work.

Liverpool Corporation Studies Continental Abattoirs.

The existing evils, fortunately, are fully admitted. Nobody attempts to apologise or to find extenuating circumstances so as to justify their continued existence. On the contrary, the corporation has appointed a special sub-committee, consisting of Sir Charles Petrie, several aldermen and councillors, the town clerk, the corporation surveyor, the city engineer, the superintendent of markets, and the medical officer of health. These gentlemen have proceeded to the continent so as to study and report upon the importance of centralising the live cattle markets, abattoirs, dead meat markets, and the allied trades on one site. Of course, there were also many technical matters for them to investigate. The committee started on their journey in the spring of 1909, and they visited the abattoirs and cattle markets of Brussels, Cologne, Frankfort, Munich, Vienna, Dresden, Berlin, Budapest, and a few English abattoirs. On their return they issued a report with many illustrations. This report shows that they were greatly impressed by the large amount of land devoted to the abattoirs and cattle markets of continental towns—32 acres at Brussels and 93 acres at Berlin. Then they note that the abattoirs were outside the towns and had such railway accommodation as rendered it unnecessary to drive cattle through the streets. Of course, the immense superiority in structure, in methods of inspection and handling meat, did not fail to impress the Commission. Then came the great practical fact that though the cost varied from £400,000 at Cologne to £800,000 at Dresden, these abattoirs are self-supporting. After such an object lesson, all the Commission could say was to urge their fellow citizens of Liverpool to go and do likewise. For a moment it was thought that this excellent if obvious advice would be followed. Liverpool would then have, close to the river as part of the port and in touch with the railway and canal system, a central cattle market adjoining a modern model abattoir, with annexes for the treatment of all the by-products. All this would be so modern, so scientifically contrived and controlled, that it would provide the ships in the harbour and the population in the town with a safe, reliable meat-supply, while realising such profits as to give relief to the overburdened ratepayer. But it was not to be. Prejudices, apathy, the timorous feeling that perhaps somebody might lose something, stood in the way, and the proposals made were rejected. Much to the detriment of the interests of the city, the whole affair is once again in the melting pot. Several members of the Special Commission who went abroad and thoroughly studied the question have resigned out of disappointment. That is why to-day Liverpool, like Newcastle, joins in the demand now spreading from town to town for public abattoirs—not a mere tinkering with the question, but complete abattoirs with cattle markets adjoining, such as in Germany have proved of great benefit to the health of the people and the finances of the municipalities.

ROYAL METEOROLOGICAL SOCIETY.—The council of this society has awarded the Symons gold medal to Professor Cleveland Abbe, of the United States Weather Bureau, in recognition of the valuable work which he has done in connexion with meteorological science. The medal will be presented at the annual meeting of the society on Jan. 17th, 1912.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Medical Inspection of School Children.

THE recent report of Sir George Newman, medical officer to the Board of Education, on the great good which has resulted from the systematic medical inspection of children attending public elementary schools has prompted the inquiry as to what is being done and has been done in Manchester in this direction. An immense amount of good work is being done by the schools medical officer and his assistants. The statutory obligation has been carried out with great thoroughness, and must be productive of immense and lasting benefits to the children of the poor. The cost of elementary education to the ratepayers has been increased by about £14,000 by the extra duties imposed by Parliament, the duties including the care of the feeble-minded and other weakly children and the feeding of necessitous scholars. There are nearly 200 schools in the city, attended by about 120,000 children. The all too common defects of sight and hearing, the state of the teeth, uncleanliness, and diseases of the skin have to be constantly attended to. In special cases—last year over 4000—examinations were made by the school medical authorities at their offices, and the condition fully investigated. These cases had previously been seen by the medical officers at the schools. These special cases are of very great importance, and their investigation and treatment necessarily occupy a large amount of time as compared with what are called routine cases.

Purchase by South Manchester Guardians of Mansion and Estate for a Convalescent Home.

A notable advancement in Poor-law administration in Manchester has been achieved in the partial solution of two grave problems which face guardians here as elsewhere. How can the white plague, which largely helps to fill and overcrowd our workhouses, be arrested; and how can recovery of the sick poor be furthered so that they may be able to return again fit for work? The Local Government Board has approved of a scheme proposed by the South Manchester guardians for acquiring a mansion and an estate in the neighbourhood of Abergele, in North Wales, for the treatment of convalescents and of sufferers in the first stage of consumption. Naturally there was considerable opposition offered by the local governing bodies of Abergele, but this has been overruled. At the present time the South Manchester board of guardians has to find accommodation for its convalescents in institutions in all parts of the kingdom at a cost varying from 2 to 3 guineas a week, the average number of cases running to about 50. Consumptive patients who have reached the stage when the disease is contagious will not be sent to Abergele, and the institution there will not be an infectious diseases hospital in any sense of the word.

Smoke Abatement Exhibition.

This exhibition, promoted by the corporations of Manchester and Salford, was officially opened on Nov. 10th with a view to enable the public to inform itself of the means whereby the emission of smoke from chimneys can be reduced, if not actually abolished, so as to obtain a purer and more wholesome atmosphere in which to live and breathe. Apart from the bad effects of smoke and other products of industrial manufactures and house chimneys, the pecuniary loss is very great. It is calculated that smoke costs Greater Manchester £1,000,000 a year. To householders also a special appeal for the diminution of "home-made smoke" is made by the exhibition of apparatus for the more extended use of gas, electricity, and smokeless solid fuels in the domestic kitchen. Open kitchener grates at present in use are said to be responsible for nearly 60 per cent. of the total smoke poured out over the city. If this be so the sooner the citizens themselves take up the reform the better. There is a "gas home" and an "electric home" showing how these two agents can be successfully, effectively, and economically employed for domestic purposes.

Appointments of Women by Boards of Guardians.

At a meeting of the South Manchester board of guardians held on Nov. 10th it was proposed "That it be a rule in future that one of the three resident medical officers shall be a woman." The motion was not carried. It was not felt

desirable to tie the hands of the board as to its policy, while one woman representative favoured the making of appointments solely according to the qualifications of candidtions and regardless of sex.

National Insurance Bill.

A meeting of medical men of Lancashire and Cheshire was held on Saturday, Nov. 18th, in Manchester. The meeting had been called—

in view of the facts that the Government has entirely failed to satisfy the medical profession in the scheme of medical benefits proposed in the National Insurance Bill; that it has not met the requirements of the British Medical Association; and, further, that Members of Parliament and the public are in ignorance of the universal dissatisfaction existing in the profession, and its inability to work under the Bill as at present drafted.

The demands on which the meeting insisted were the six cardinal points which have already been formulated by the British Medical Association. The meeting was attended by more than a thousand members and was presided over by Mr. G. A. Wright, of Manchester. Dr. E S. Reynolds, of Manchester, proposed the following resolution, which was passed:—

That in the opinion of this meeting the National Insurance Bill as at present framed does not satisfactorily embody the demands of the medical profession, as defined in the "six cardinal points" formulated by the British Medical Association; that the scheme of the Bill in its present form is unworkable and will create a condition of affairs not only detrimental to the medical profession, but also dangerous to the public health—therefore this meeting of the medical profession of Lancashire and Cheshire expresses its determination, in the event of the Bill becoming law in its present form, to unite with the whole of the profession in declaring its inability to undertake the duties which the Bill proposes to assign to it.

Nov. 21st.

WALES.

(FROM OUR OWN CORRESPONDENT.)

Brecknockshire School Medical Inspection.

THE population of the county of Brecknock is approaching 60,000, so that it is not surprising to find the school medical officer, Mr. J. C. Bridge, who is also county medical officer of health, reporting to the local education authority that he finds it impossible single-handed to follow up satisfactorily those children whom he finds on inspection to be defective. Of the children already examined by him, and whose parents have been advised to seek for them medical treatment, only 23 per cent. followed this advice. He has suggested to the authority that the homes of the children in question should be visited by a nurse, who might persuade the parents to have their children medically attended to. He has endeavoured to obtain for this purpose the services of the district nurses, and although in a few instances the district nursing committees have agreed to this course his proposals have not met with much encouragement.

Honorary Degrees—University of Wales.

At the graduation ceremony of the University of Wales, held at Bangor, the honorary degree of LL.D was conferred upon Sir Isambard Owen, Vice-Chancellor of the University of Bristol, who was one of the founders of and for several years senior deputy chancellor of the University of Wales. The honorary degree of D.Sc. was conferred on Dr. W. T. Edwards, the senior medical practitioner in Cardiff, who was largely instrumental in establishing the medical school at Cardiff.

A Milk Depôt for Cardiff.

About four years ago the medical officer of health of Cardiff, Dr. E. Walford, reported to the Cardiff corporation upon the desirability of establishing an infants' milk depôt in the town. He then pointed out that to sell pasteurised or "humanised" milk in a municipal milk depôt without any medical control, as was being done in some English towns, seemed to be a waste of money, for there appeared to be no means of knowing whether the results were good or bad He urged, however, that in the first instance there should be established an infant consultation, following the example of similar institutions in France. This suggestion was adopted by the corporation, and an infant consultation was started which has since been doing excellent work under the supervision of Dr. Elizabeth Elder, who has been assisted by a staff of lady health visitors. Within the past few months the question of providing a municipal milk-supply for all persons, and not only for infants, has been under the consideration of the health committee of the corporation, and Dr. E. Walford was instructed to report as to the practicability of such a scheme. His report has recently been issued, and in it, after describing the Rochester (New York) municipal milk-supply and the Danish method of coöperation among dairy-farmers, he pointed out that although the supply of milk on a large scale to all classes of the community under conditions similar to those in force in Denmark was a most desirable end to attain, it was a scheme which properly belonged to private enterprise, and at present, at any rate, seemed to be beyond the legitimate scope of municipal sanitary administration. He asserted, moreover, that no legal powers existed authorising municipalities to carry on the business of milk purveyors to the inhabitants of the district under their control. He strongly urged, however, that a milk depôt should be started in connexion with the infant consultation, so that there might be complete supervision of every detail in the supply of milk from the time it left the cow until it reached the consumer.

Nov. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University Court.

THE Edinburgh University Court met on Nov. 13th. After the adoption of a commemorative minute with reference to the late Dr. Joseph Bell, and recording its appreciation of the services rendered by him to the University, the Court again considered the question of inclusive fees but no decision has been made public. Various applications for recognition as lecturers were granted, including those of Dr. W. Ford Robertson, Edinburgh, as a lecturer on the Pathology of the Brain and Nervous System and Bacteriology in its Relation to Mental Diseases; and of Miss Winifred Muirhead, L.R.C.P. & S. Edin., on Bacteriology in its Relation to Mental Diseases. Both these courses are to qualify for the recently established Diploma in Psychiatry.

Royal Victoria Hospital for Consumption, Edinburgh.

The annual report of the Royal Victoria Hospital for Consumption contains an interesting account of the progress of the Edinburgh anti-tuberculosis scheme. With the original Victoria Dispensary as a centre, the committee of management has a network of agencies which appear likely rapidly to acquire a complete supervision of the tuberculosis existing in the city. At the dispensary are seen such patients as are suitable cases for treatment at home. There also is carried out the "march past" of members of households in which cases of tuberculosis have occurred, and by this means early cases are at once detected. From the dispensary notification of fresh cases is made to the public health authorities of the city. A close coöperation is now maintained between the dispensary and the public health department, the records of the dispensary being at the service of the medical officer of health of the city, while in return the municipality has granted towards the working expenses of the dispensary an annual sum of £450 From the dispensary cases suitable for sanatorium treatment are drafted to the Royal Victoria Hospital, and advanced cases are sent to the Hospital for Advanced Cases, which is supported by the municipality. A farm colony is maintained for the further treatment of sanatorium patients, and this agency during its first year has fully proved its value. A dental department has now been opened at the Royal Victoria Hospital, at which the teeth of every patient are carefully inspected and treated. The school for tuberculous children within the grounds of the hospital has continued to prove a great success, and without exception every child has done well. A staff of physicians and nurses attached to the dispensary undertakes visiting of the homes of the patients. During the past year 2242 visits were paid by the medical officers, and 5273 by the nurses. With regard to the expenses of the hospital and dipensary, the committee reports a reduction in the cost per patient of £3 5*s.* 7*d.* during the year; but notwithstanding this, the ordinary expenditure exceeded the ordinary income by the sum of £2090. The farm colony, for the maintenance of which a separate fund was instituted, will, it is hoped, soon pay its own expenses.

The Sir John Struthers Lectureship.

The first of the lectures under the Sir John Struthers lectureship was delivered before the Royal College of Surgeons of Edinburgh on Nov. 17th by Professor Arthur Keith, conservator of the Museum of the Royal College of Surgeons of England. Professor Keith took as his subject "Anatomy in Scotland during the Life and Times of Sir John Struthers." The chair was taken by Mr. George A. Berry, the President, and among those present were Principal Sir William Turner; Sir James Russell, Edinburgh; Professor A. Robinson, Edinburgh; Professor Johnson Symington, Belfast; Professor J. Musgrove, St. Andrews; and Professor R. W. Reid, Aberdeen. The lecturer showed that at the time when John Struthers, in 1841, commenced the study of medicine the study of anatomy was still in its infancy. The development of the human embryo was almost unknown, the body was supposed to consist of "textures" and humours, and fossil remains of man were unknown. In the succeeding years the anatomists one by one became followers of Darwin, and gradually there took place a revolution in the world of anatomy—a revolution in which Scotland played her part and in which there had been no more courageous rebel than Sir John Struthers, the founder of that lecture. Until the day of his death in 1899 Sir John Struthers fought continuously for freedom to teach and to carry on research. The problems of anatomy were yielding most rapidly to those who used the experimental method, and the modern anatomist had to study the living as well as the dead body. At the close of the lecture Sir William Turner expressed the thanks of the meeting to Professor Keith.

Scarlet Fever in Aberdeen.

For some time scarlet fever and measles have been epidemic in Aberdeen to an unusual extent. For the last four weeks there have been 257 cases of scarlet fever notified.

Representative to the General Medical Council.

The Aberdeen University Court has appointed Professor J. T. Cash, dean of the medical faculty, to be a representative of the university on the General Medical Council in place of Professor D. W. Finlay.

The Inclusive Fee: Effect in Aberdeen.

The Scottish Universities have agreed to institute the inclusive fee in Arts and Science, but in view of the great difficulties in fixing an inclusive fee for medicine the Universities Courts, at their conference in July, resolved on deferring the establishment of an inclusive fee in Medicine, or Arts and Medicine, or Science and Medicine. The Treasury has refused to permit this, and Aberdeen, in common with the other Universities, has received a letter expressing satisfaction with the progress made in adjusting matters so far as the present year is concerned; but as regards the additional grant to be provided for the University in the forthcoming financial year and later, it trusts that the system which has been accepted with regard to the faculties of Science and Arts will be extended and brought into operation simultaneously with the other—namely, from the beginning of the academic year 1912–13. The Treasury is therefore making next year's grant conditional on the inclusive fee being adopted for all the faculties. In Aberdeen the introduction of the inclusive fee of 30 guineas in Arts and 40 guineas with honours will entail a heavy loss in fees, as students have been accustomed to take a larger number of classes than the bare minimum for the degree, and have paid, or been paid for by the Carnegie trustees, separately for each class. It is estimated that the loss in Aberdeen will be not less than £1000 a year. In St. Andrews and Glasgow the sum of 30 guineas is about the average of the fees usually paid, and these Universities will not suffer as Aberdeen will. On this point being shown to the Treasury, the reply was that the loss could be made good out of the new grant; but the Universities contend that this grant was needed for quite different purposes, and that it is unfair of the Treasury to give a new grant, and then attach conditions which detract from its value.

Aberdeen Medical Men and Contract Medical Practice.

A circular in the following terms has been sent to all members of the Aberdeen branch of the British Medical Association: "At a meeting of the Aberdeen division, held in the Medico-Chirurgical Society's Hall, 29, King-street, on Tuesday, 14th inst, the question of the family medical fund in connexion with Friendly Society lodges was under consideration. The meeting unanimously resolved that the time was ripe to terminate this form of contract medical practice. The following motion was also carried unanimously: 'That the secretary circularise all practitioners within three miles of the city boundary to give their adherence to the following: First, to decline to act as medical officer to a Family Medical Fund in connexion with a Friendly Society. Second, to give a pledge not to compete for a Friendly Society Lodge against a colleague holding the appointment at present.' It may be stated that, so far as can be ascertained, all the medical men holding Friendly Society appointments within the city were present save five. You are requested to return the fly-leaf, signed." The pledges contained in the fly-leaf are as follows: "1. I hereby pledge myself not to act as medical officer to a Family Medical Fund in connexion with a Friendly Society. 2. I hereby pledge myself not to compete for a Friendly Society Lodge against a colleague at present holding the appointment."

Baldovan Institution, Dundee.

Dr. John Macpherson, His Majesty's Commissioner in Lunacy, recently visited Baldovan Institution for the Treatment, Education, and Training of Imbecile Children. He reports that his visit produced a favourable impression, not only of the management, which is thorough and devoted, but of the growing importance and progress of the institution. There were many evidences that the institution was becoming every year better equipped for the important social work for which it was founded. The children were well dressed and nourished, the sick carefully tended, and the instruction and training of those who could benefit by them were assiduous and regular. He said that the enterprise of the directors, the good medical care of the inmates, and the single-hearted devotion of the staff deserved more substantial support and recognition from Dundee than they at present received.

Consumption and Local Authorities.

At a meeting of the Dundee public health committee, held on Nov. 14th, the question of the extension of King's Cross Hospital was under discussion. It was shown that the proposed extension—namely, the erection of a pavilion for advanced cases of phthisis and a pavilion for measles, each containing 40 beds, the erection of a new home for nurses of 40 bedrooms, and the provision of additional servants' accommodation—would cost about £16,000, with a first cost of furnishing of £1600, and a cost of maintenance and staffing of £3043. Dr. C. Templeman, the medical officer of health, advised the postponing of the whole question of providing for phthisis meantime. He said that he was of opinion that in a very short time the Local Government Board would throw the responsibility of dealing with phthisis entirely upon local authorities, which he thought might mean a more serious burden upon local authorities than any of them imagined. In the course of further discussion it was stated that by leaving out the phthisis pavilion the primary cost would be reduced by £6000 and the cost of maintenance by £1500. This it was agreed to do. The Order for England issued by the Local Government Board on Nov. 16th making notification of pulmonary tuberculosis compulsory and giving certain powers, such as to supply medical assistance, facilities, and such articles as may be necessary, with a view to preventing infection or removing predisposing conditions, and of appointing additional officers, fulfils Dr. Templeman's prediction. A like Order for Scotland may follow at any time.

Nov. 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Profession and the Insurance Bill for Ireland.[1]

THE extraordinarily uncertain and topsy-turvy condition of the National Insurance Bill is well illustrated in the wonderful changes that have taken place in the method of its application to Ireland. At first, when the Bill was introduced, medical benefits applied to that country; then the

[1] On Nov. 22nd we received the following telegram from our local correspondent: "On Nov. 21st the Conjoint Committee of the British Medical Association and the Irish Medical Association passed a resolution in Dublin approving the restoration of medical benefits for Ireland, and on behalf of the profession in Ireland accepting the measure under the same conditions as shall be acceptable in Great Britain."

Chancellor, on Nov. 14th, withdrew them; later, when Mr. Lloyd George and the Irish Members had been made acquainted with the views of the industrial classes who had sent over a deputation to London, the Chancellor said: "If there was a feeling that medical benefit for Ireland should be incorporated the Government would not resist. The question was what bargain could be made with the doctors. It was a question of bargain with the doctors." So far as Ireland is concerned, the following alterations have been made in the Bill:—

1. Separate commissioners with a distinct Irish fund and administration for Ireland.

2. The joint contribution of employer and worker in Ireland will be 5½*d.* instead of 7*d.* in England.

3. The State contribution in Ireland will be 2*d.*, as in England, thus giving in Ireland a larger proportion according to payments. The saving of 1½*d.* is divided as equitably as possible between the employer and the worker.

4. A reduction of 2*d.* per week can be obtained by those who agree to maintain during six weeks' illness their indoor servants and agricultural labourers.

5. Where the wages are under 9*s.* per week there will be no contribution from the worker, who under the Bill as originally introduced would have had to pay 1*d.* a week. This penny is to be paid by the State as an additional contribution.

6. For women the charge will be 1*d.* per week less than for men, in all cases, and there will be the same State contribution.

7. Medical benefits are excluded.

8. The provision that parents must insure their children who are working for them and are not in receipt of wages has been abolished both for town and country.

9. Provision is made for the exemption of home workers when the work is done at the leisure time of the workers and is not their main means of support.

10. Farmers who emigrate to Great Britain as labourers are excluded.

11. The limitation, as originally drafted in the Bill, giving the minimum membership for a society to qualify as an "approved society," has been eliminated.

12. The constitution of Health Committees has been popularised and adapted to Irish conditions.

13. Maternity benefit has been increased, so that sickness benefit may be paid in addition to the 30*s.* mentioned in the original Bill.

The Nationalist Members base their main objection to medical benefit on the feeling that exists in Ireland whilst the present dispensary service exists, although Mr. Birrell said he was sorry medical benefit had been excluded in favour of the retention of the dispensary system. It is right to recollect that in Ireland out of 2724 medical men there are only 810 dispensary officers. The Nationalist Members say the creation of a second service to administer medical benefit would stand in the way of Poor-law reform, while most people feel that the administration of the Insurance Bill by the dispensary system will only intensify the Poor-law methods. Further, in their printed statement the Nationalist Members say the medical benefit, as it exists in England, is only for the insured persons, which would leave in Ireland the wives and children still dependent on the dispensary service, and they add: "Should the fund permit it, medical benefit for the insured and their families can be made an additional benefit," which is entirely contrary to the usual inducement to the medical profession: "True! Your pay for attending the insured man may not be much, but think what you will make by looking after his wife and family."

On Nov. 16th, at a very largely attended meeting of the Ulster Branch of the British Medical Association, held in the Medical Institute, Belfast, Mr. J. G. Cooke, surgeon to the Londonderry Infirmary, being in the chair, a long and interesting discussion took place on the Insurance Bill. Mr. R. J. Johnstone, Dr. J. S. Darling, and Mr. William Burns, who had been members of a deputation that had interviewed the Chancellor of the Exchequer and the Irish Members of Parliament in London, gave an account of what had occurred. It being known that negotiations had been again reopened in reference to the inclusion of medical benefits in Ireland, it was moved by Dr. Darling (Lurgan), and seconded by Dr. E. C. Thompson (surgeon to the Omagh County Infirmary), that the members were willing to act on the same lines in Ireland as their medical brethren in England, a resolution to which effect was passed unanimously.

The urgent recommendation of the Conjoint Committee of the Irish Medical Association and the British Medical Association for the inclusion of medical benefits was considered by the Dublin Division of the British Medical Association at a meeting on Nov. 20th. There was a hot debate on the subject, but ultimately a resolution was carried approving of the inclusion of medical benefits. The voting on the question seemed to show that the dispensary medical officers wish for medical benefits, while other general practitioners are opposed to them. The dispensary officers looked to the medical benefits of the Bill to relieve them of much of their Poor-law work, while if the Bill becomes law without medical benefits being included they fear that a large number of insured persons will seek Poor-law relief, not so much for purposes of treatment as to obtain the necessary certificates of sickness. On the other hand, some general practitioners fear that they are likely to be deprived of much of their private practice and to get very little in return.

At a meeting of the Belfast Division of the British Medical Association, held on Nov. 20th in the Medical Institute, Belfast, the various recommendations of the Council of the British Medical Association were passed with a few modifications, and their delegate, Dr. H. Hanna, was instructed to support them at the London meeting on Nov. 23rd. Among the recommendations were those affirming the necessity of the six well-known points put forward by the medical profession, and another asking that medical benefits should be re-inserted in the Irish part of the Bill.

Dental Hospital of Ireland.

At the annual meeting of the Dental Hospital, held last week, it was stated that the operations during the year numbered 48,370, and that much of the work had been done free. There was still an outstanding debt of £1041 4*s.* 8*d.*, although the income for the year had exceeded the expenditure by £90. There had been 48 students on the roll, of whom 11 had secured diplomas.

Eugenics in Belfast.

At the opening meeting of the Belfast Natural History and Philosophical Society, Major Leonard Darwin gave an address on "The New Science: Eugenics or Race Hygiene." Professor J. A. Lindsay presided, and at the conclusion of the lecture a vote of thanks, proposed by Mr. J. R. Fisher (editor of the *Northern Whig*) and seconded by Professor Greig-Wilson, was accorded to Major Darwin. At a meeting on Nov. 15th it was decided to form in Belfast a branch of the Eugenics Education Society.

The Ulster Medical Society.

The annual dinner of the Ulster Medical Society was held in the Medical Institute, Belfast, on Thursday, Nov. 16th, the President, Dr. H. L. McKisack, occupying the chair. There was a very large attendance. The usual loyal toasts were warmly received. Professor W. St. C. Symmers then proposed the health of the guests, to which the new Recorder, his honour Judge J. W. Craig, K.C., and Mr. G. Clark, D.L., replied. The health of the President, proposed by Dr. W. L. Storey, was cordially received, and Dr. McKisack responded. The reunion was a very successful one.

Belfast Guardians and Consumption.

At a meeting of a special committee appointed by the Belfast board of guardians, held recently, to consider the question of sanatorium treatment, after a long discussion it was agreed to recommend—(1) That for the purpose of preserving thorough classification in the Abbey Sanatorium, which it is admitted cannot be completely carried out with the existing buildings, a hospital or pavilion to accommodate from 65 to 70 patients be erected on the lower side of the Administrative House, adjacent to the pavilions for female patients, and that a suitable fence be also erected; (2) that steps be taken immediately for the appointment of an additional visiting medical officer and an additional resident medical officer, Dr. Robert Hall to remain as senior medical officer, to take charge of the administration and to allocate the work of the medical staff.

Typhoid Fever in Omagh Asylum.

At present there are about 66 typhoid fever patients under treatment in the hospitals connected with the Tyrone and Fermanagh Asylum at Omagh, which, with the three patients being nursed in the hospital and the number who have died, make about 80 cases since the commencement of the outbreak. No new cases have arisen within the past few days, and it is likely that the most critical part of the epidemic is over.

Nov. 21st.

THE German Colonial Ministry is sending Dr. O. Glantz, assistant in the Berlin University Ophthalmic Clinic, to Samoa, to study and report upon the infectious eye disease which is prevalent there.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Danger of Drop Bottles.

M. Pron has pointed out to the Therapeutical Society a serious defect, which does not receive sufficient consideration, in the use of drop-bottles, a defect which might have serious consequences. When the bottles are used for watery or alcoholic liquids they give drops much too large, with the result that, for instance, a patient ordered to take 0·70 gramme of an alcoholic tincture actually absorbs, when dropped from a bottle, an entire gramme.

Contagious Diseases.

The French and German Governments have arranged for an immediate exchange of notification between the proper authorities of the frontier jurisdictions of the two countries in the event of the outbreak of contagious diseases affecting either man or beast. The arrangement will come into force on Dec. 11th.

The Right to Publish Reports of Medical Proceedings.

This question of law has been raised at the general assembly of the Association of French Medical Journalists. The association's legal adviser has stated that a journal has no right to publish a clinical lecture, which is presumably his property, without the authority of the lecturer.

A Medical Sculptor.

Dr. Paul Richter, in addition to his acknowledged medical status, is an engraver of marked talent and a sculptor of repute. In this capacity he has added to his title as a member of the Academy of Medicine that of member of the Academy of Fine Arts. He has just completed two medallions designed to commemorate two scientific personages. The first was brought about as the result of an international subscription, and shows on the obverse a bust of Sir Patrick Manson, having on the reverse an allegorical design portraying the labours of the illustrious scientist in tropical diseases. The second, which was engraved for the occasion of the bi-centenary of the Veterinary School of Lyons, commemorates the life-work and discoveries of Professor Arloing, of Lyons. It bears on the obverse the profile of the scientist and on the reverse a tableau of bovine antituberculosis vaccination.

The Evolution of Tuberculosis during Pregnancy.

At a meeting of the Obstetrical Society of France this important question has been taken up and studied afresh. For many years it has rightly occupied the attention of the medical world. It had already been considered at the congress at Rome in 1902, and since then medical men of all countries have been engaged upon it. The occasion for the interruption of pregnancy has especially been worked at up to now; abroad opinion was clearly in favour of intervention, while in France a more conservative view has prevailed. The recent researches of Schmorl on placental tuberculosis have aroused fresh interest in the question. It has been demonstrated that pregnancy may light up a latent tuberculosis and that this aggravation may become manifest only after delivery. It is due to the lessened resistance, by the absence or diminution of the antibodies in the pregnant woman and after confinement. Although placental tuberculosis is hardly admitted as a fact in France, M. Bar and his pupils in their researches have demonstrated the presence of placental tuberculosis on four occasions. In regard to treatment, also, accoucheurs are divided into abstentionists and interventionists. But there is no certain means of distinguishing cases in which medical treatment alone gives satisfactory results and those in which early intervention is necessary; the tuberculin test is interesting, for it seems to be the case that in every woman at the beginning of pregnancy a violent reaction to tuberculin, even if the pulmonary lesions appear to be extending, indicates a relatively good prognosis, while the negative phase, coinciding with even slight lesions, indicates a very serious prognosis. It is difficult to know whether it is better to induce abortion or to resort to surgical operation. If the placental tuberculosis is very marked hysterectomy seems indicated. If the aggravation is due to inhibition of the antibodies abortion appears sufficient.

Disturbances at the Faculty of Medicine.

The reopening of the course of M. Nicolas, professor of anatomy for first and second year students, has been the signal for disorder. It was impossible for M. Nicolas to make himself heard. Appeals written on the blackboard for silence were in vain. About 500 students were gathered in the amphitheatre. After disorderly behaviour for three-quarters of an hour, they began to throw coppers and paper pellets into the well. At 5 o'clock M. Nicolas was compelled to retire. This is the third year in which these disturbances have occurred. It is probable that they will result in the suppression of the course for the entire year.

The Maison du Médecine.

I chronicled at the time of its foundation, two years ago, the happy inspiration that had brought medical men together for the charitable purpose of founding a house of retreat in which, for the smallest possible sum, unfortunate *confrères* could live in honourable comfort. The president of this society, Dr. Courtault, having died a tragic death during a voyage, the council of administration of the House of Rest has elected in his place M. Paul Reyniez, a surgeon to the hospitals, professor *agrégé*, and member of the Academy of Medicine.

Death of Dr. Albert Louis.

Another victim to professional duty, Dr. Albert Louis, surgeon-major to the expeditionary corps in Morocco, succumbed on Oct. 8th in the field hospital at Casablanca from typhoid fever contracted at the bedside of the numerous typhoid patients whom he devotedly tended at the field hospital at Meknes.

Nov. 21st.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Opening of the New Clinics.

ON Nov. 4th the three new clinics were formally opened by representatives of the Government, the University, and the municipality in the presence of a great number of invited guests and other persons interested in the ceremony. On the conclusion of this part of the proceedings the visitors had an opportunity of examining the various details of the new buildings, in the course of which inspection many interesting particulars were brought to their notice.

For instance, in Professor von Noorden's clinic, which has 100 beds, special attention will be paid to the study of disorders of metabolism, and for this purpose a separate kitchen has been provided, in which the kind of food and the proper quantity of it necessary for the individual treatment of such patients will be prepared. This kitchen is at present the only one of its kind in a continental general hospital. Not only students, but also practitioners and nurses, will thereby be enabled to make themselves acquainted with the important dietetic management of patients suffering from diabetes, gout, obesity, and other abnormalities of nutrition, as well as with the scientific principles on which the treatment is founded. Another remarkable innovation in the clinic is the department for physical therapeutics, containing appliances for gymnastics, medico-mechanical exercises, electro-therapeutics, hydro-therapeutics, electrical baths, and various other baths in which sand, mud, and brine are made use of. Chemistry naturally plays an important part in this clinic, and a splendidly equipped large laboratory is provided, as well as a fine library, the nucleus of which consists of the library of the celebrated Professor Nothnagel, who bequeathed it to his clinic. The latest improvements have been introduced in the building of the institute. The lecture room has excellent acoustic properties, ample means of exit for the students, and convenient arrangements both for darkening the hall and for demonstrations with optical apparatus; on the roof there is a garden, part of which is occupied by hutches for the animals used in the experimental laboratories, one such laboratory being allotted to each of the new clinics. The staff of the clinic, to which a large out-patient department for nervous diseases is attached, consists of 2 professors (Professor von Noorden and Professor von Frankl-Hochwart), 8 assistants, 12 house physicians, and 37 nurses.

A noteworthy improvement has been introduced in the Clinic for Children, at the head of which is Professor

von Pirquet. The idea has been to prevent as far as possible a transmission of infectious diseases in the out-patient department, and for this purpose the following system has been adopted. At the entrance of the clinic an experienced matron sees the child, and if there are manifestations of infectious disease the patient is sent at once, by a special exit, to the examining medical officer, while if there is any suspicion of such disease the patient is sent to the "observation station." This consists of an examination hall, divided up into (1) several small compartments, each of which is disinfected after each patient, and (2) the observation cells. When the child has been seen by a medical man in the examination compartment, if the case be infectious the child is sent through a special exit into the pavilion for scarlet fever or diphtheria, or whatever the disease may be. If the diagnosis is uncertain the child becomes an inmate of the observation cells. There are 12 of these, six on each side of a long corridor—the so-called "clean corridor"—whilst on the outer side of each series of cells there is another corridor, the "infected corridor," through which the cells may be entered. The cells are constructed mainly of glass and iron; a cell in the centre is elevated, and is used by the nurse, who in this way can supervise all the cells. By this system the patients are separated from each other, but they can be seen by friends and students from the clean corridor without risk of propagation of disease, and if found infectious or non-infectious are treated accordingly, without themselves running any risk, as would be the case if they should be sent into an infectious ward with an uncertain diagnosis. This clinic has 66 beds, besides 22 beds each in the diphtheria and the scarlet fever pavilion, and one of the chief objects of the clinic will be a thorough instruction of nurses and medical practitioners in the management of infants' diet. There are also several cots—*couvenses*—for infants born prematurely, and the greatest care has been taken to secure efficiency in every detail.

The Throat Clinic, under Professor Chiari, is likewise a modern building accommodating 50 in-patients in spacious lofty wards. Special attention has been paid to the fitting up of the out-patient department in this clinic. In the darkened hall 20 patients can be examined by the medical men and students at a time, and the sterilisation of instruments, mirrors, speculums, and probes is effected by boiling water, into which wire-gauze cups filled with the instruments are dipped. Bronchoscopic work is possible on a large scale, as well as rhinological and laryngological operations, both minor and major, such work being performed in special operating theatres. There are also a fine library and excellent laboratory facilities. The large number of patients will make the work most instructive, and there is no doubt that this clinic is at present the largest and finest of its kind.

As a visitor justly remarked, the hospital patients, mostly in poor circumstances, are now better cared for than patients of the wealthier classes; for the best medical advice and the best therapeutical appliances of every kind, in excellent wards and in the most favourable hygienic conditions, can be had free of charge by the poor in these new clinics. All this, however, has to be paid for, and it is not surprising that each patient costs the hospital at least 6*s*. per day, whilst an operation with an anæsthetic costs anything between 15*s*. and 40*s*. net expenditure. The expenses of carrying on the institutes are in fact so high that special collections are now being made for their benefit.

Nov. 20th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

New York City Death-rate.

WITH the month ended Oct. 31st the death-rate was the lowest for any month in the history of New York city. According to the Health Commissioner, Dr. Lederle, the decrease took place in practically all diseases, the greatest decrease, however, occurring in diseases of children, in which the death-rate fell 50 per cent. The mortality-rates from infectious diseases have also decreased for the entire city, and for the first time for years the death-rate from heart disease and Bright's disease has been considerably below the average.

Higher Entrance Requirements for Medicine at Cornell University.

Cornell University Medical College opened this year with a smaller enrolment of students than for years past. This is attributed to the new requirement of a bachelor's degree in science or arts, with somewhat longer than one year's work in physics, chemistry, and biology.

The New York County Medical Society.

This society held its 106th annual meeting on Oct. 24th, and adopted a new constitution to replace that drawn up in 1806, when it had 371 members; it has now 2400 members, and feels the need of adapting its rules to the exigencies of modern practice. A lively debate was held over the proposal to move the historic New York Hospital to Sixty-fourth-street and Tenth-avenue, a district already fairly well served, while the northern part of the city is almost destitute of ambulance service. The new officers are: President, Dr. Charles G. Kerley; Vice-Presidents, Dr. Brooks H. Wells and Dr. T. Passmore Berens; secretary, Dr. John Vandoren Young; treasurer, Dr. Charles H. Richardson.

Food Law Violations.

A New York grocer made his fourth appearance before a judge the other day, accused this time of selling ice-cream which was sour, 26 per cent. below the required fat content, and liberally adulterated with gelatin. He blandly explained to the judge that he was ready as usual to pay a fine, and was considerably taken aback when he found himself sentenced to 30 days' imprisonment. Fines ranging from £2 to £20 were then imposed on first offenders for selling decayed fish, skimmed and watered milk, rancid butter, and eggs of dubious age. Imprisonment seems to be the only efficient remedy for food law violations; the recently imported immigrant looks upon fines as a sort of licence fee and pays them cheerfully.

Motor-car Accidents in Massachusetts.

The Massachusetts Highway Commission has reported that there were 1357 motor-car accidents in the State during ten months of the present year, in which 1100 persons were injured and nearly 100 were killed. In 1910 there were 77 deaths and 963 injured caused by motor vehicles in the same State.

Eugenics in Michigan.

The State Board of Health of Michigan has decided to employ an expert in eugenics to investigate the condition and extent of feeble-mindedness in Michigan.

Anti-typhoid Vaccination in the United States.

Throughout the United States the use of anti-typhoid vaccination is rapidly increasing. It is now compulsory in the army. Several States also propose to employ this preventive measure.

Investigation of Pellagra.

The Department of Tropical Medicine of the New York Post-Graduate Medical School is making plans for the investigation of pellagra in the Southern States during the coming spring.

Do American Lifts Shorten Life?

Professor Franz Bergmann, of Berlin, has informed a newspaper reporter of Los Angeles, California, that the lifts in American 20-storey buildings shorten life by the successive shocks they administer to passengers in their abrupt method of starting on, which frequently causes vertigo in a foreigner. Elevator boys, however, do not seem to suffer, and men accustomed to the speedy lifts, which are an absolute necessity, never complain. Professor Bergmann also asserts that the tight shoes of American women are causing the disappearance of the little toe. We are not taking our learned visitor very seriously.

Diphtheria in Indianapolis.

Diphtheria is reported to be alarmingly prevalent in Indianapolis. Proprietors of places of amusement, especially of moving picture shows, have been advised not to admit children, and parents have been requested by the health authorities to keep at home all children under 16 years of age.

Death of Dr. Henry Clay Dalton.

Dr. Henry Clay Dalton died recently from acute appendicitis at St. Louis, where he had practised since 1885. During

his tenure of office as superintendent and surgeon in charge of the St. Louis City Hospital he gained a high reputation as an abdominal surgeon. He is said to have been the first surgeon to operate successfully on stab wound of the liver.

Nov. 11th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Accelerated Promotion in the Indian Medical Service.

AT the present moment, when it is generally accepted that the War Office has decided to abandon the system of acceleration of promotion to the rank of major, which was introduced with the first session of the Royal Army Medical Corps in 1903, it is interesting to note that the Indian Government has notified that rules for accelerated promotion will be given retrospective effect and made applicable to (1) existing majors of the Indian Medical Service who have not completed 16 years' service and have not been able to obtain study leave to qualify for accelerated promotion; and (2) majors of the Indian Medical Service who entered the service after Jan. 30th, 1893, and had already taken study leave and qualified for accelerated promotion in the rank of major before completing 16 years' service.

Lahore Medical College.

It is understood that Major J. Stephenson, I.M.S., is likely to be employed as Professor of Biology in the Government College, Lahore, for a further period of five years from Oct. 1st.

The Dufferin Fund.

Not the least important of the reforms being introduced by Surgeon-General C. P. Lukis, Director-General of the Indian Medical Service, is a proposal to establish a graded service of medical women for the Dufferin Fund and to provide a provident fund for medical women serving under the Fund. The reforms are estimated to cost between three and four lakhs of rupees per annum, and as the funds of the central committee are already fully allotted, the fate of the proposals depends upon the attitude of the Secretary of State and the Government of India. At a meeting of the central committee, under the presidency of Lady Hardinge, on Oct. 7th, it was resolved to lay the scheme forthwith before the Secretary of State through the Government of India. The scheme, in addition to its financial aspects, introduces new disciplinary clauses which are intended to give medical women, of proved fitness, more freedom in their own hospitals in their relations with the local civil surgeons.

The Bedford Scientific Research Scholarships.

The following *communiqué* has just been issued by the private secretary to the Viceroy: "Colonel C. H. Bedford, M.D., I.M.S., lately chemical examiner and bacteriologist, Burma, has munificently decided to bequeath from the date of the death of himself or his wife, whoever may be the survivor, a sum of several thousand pounds sufficient to afford ample endowment for two or more scholarships, and to provide necessary working funds in connexion therewith, for the prosecution of scientific and technical research in connexion with the development of Indian industries."

Ambulance Work in India.

The annual report of the Indian branch of the St. John Ambulance Association has just been published. It shows the amazing amount of progress which can be achieved in a comparatively short space of time, and reflects especial credit on the honorary secretary who has devoted his leisure for the past three years to the movement. There are now no less than 54 working centres, and a short report from each centre is published showing that all are in working condition. The roll of life members has been materially added to and the financial condition of the branch is sound. A detailed account of the work done under the following headings is given: Military Forces, Volunteers, Railways, Police and Jails, Schools and Colleges, Mercantile Marine, Indian Mines, Imperial Service Troops, and Frontier Militia, whilst a brief account is also given of the vernacular translations of the Association's manuals, the Indian stores depôt, and the annual competitions for some handsome trophies possessed by the branch. One of the most interesting features of the report is the account of ambulance work in feudatory India. Centres have been formed in ten independent states and the following ruling princes are shown as actively interested in the movement—viz., the Maharaja of Mysore, the Maharaja Gaekwar of Baroda, the Maharaja of Jaipur, the Maharaja Scindia of Gwalior, the Maharaja of Indore, the Begum of Bhopal, and the Rajahs of Faridkot and Nagod. The work appears after many years' effort to have at last taken firm root in India, and the Government of India should feel especially grateful to the medical officers of both services who are devoting so much of their scanty leisure to promote this great humanitarian propaganda amongst the natives.

Sanitation in India.

There is growing up amongst educated Indians a steady demand for better sanitary conditions, and everywhere one finds them demanding that Government should give the subject more attention. In the legislative assemblies many speeches have been made on the subject, and in his presidential address delivered at the meeting on Sept. 26th of the Third Punjab Hindu Conference at Amritsar, Rai Bahadur Lal Chand made some very pertinent observations regarding the comparative urgency of the claims on public funds of sanitation and free primary education. The speaker maintained that sanitation was not of less importance than free education. He went on to say: "People must live healthy, be strong and fit in physique before they can take advantage of elementary education. What is the use of literate boys and girls whose health is ruined by malaria and phthisis and various other diseases due to insanitary conditions? In my opinion the first question is to live, and live long and healthy lives. Where is the use of insisting on taxation for free education when the majority of children die before they are a year old?" The position taken by the Rai Bahadur is that if additional taxation were to be levied the proceeds should be spent in promoting sanitation rather than in organising a scheme for free and compulsory education. This is a view with which most sensible persons find themselves in agreement. In this relation we find that most of the provincial governments are showing activity on the subject, the most recent move being that of the Madras Government, which has just passed orders on a scheme for investigating the causes of malaria. At Ennore, a village on the sea coast a few miles away from Madras, in which a number of European residents possess bungalows and which is a popular week-end resort, measures are also to be taken for the discovery and destruction of mosquito-breeding places. The Government say that the correspondence that they have had with various medical authorities lays particular stress upon the danger to the city of Madras which arises from the conditions now prevailing at Ennore, and emphasises the need for carrying out preventive work in a thoroughly efficient manner and under the supervision of an officer possessed of special qualifications and superior status. His Excellency the Governor in Council is in general accord with this view of the position and agrees with the officers consulted as to the necessity for initiating a definite campaign of preventive work without further loss of time. The scheme approved falls under two main heads—viz.: (1) a detailed investigation of the cause of the prevalence of malaria in Ennore and the vicinity, and (2) the location and destruction of breeding places of anopheline mosquitoes in that neighbourhood. Major T. S. Ross, I.M.S., is placed in charge of the work.

Oct. 24th.

DONATIONS AND BEQUESTS.—The Governors of Westminster Hospital have applied the sum of £2000 out of the amount paid for seats to view the Coronation procession to form an endowment in perpetuity of two beds, to be named respectively "King George's Bed" and "Queen Mary's Bed," in commemoration of their Majesties' Coronation on June 22nd, 1911.—The late Miss Bell, of South Marston, Wilts, has bequeathed £1000 to the funds of the Victoria Hospital, Swindon.—Mr. Harry Speakman Webb, M.R.C.S. Eng., formerly of Welwyn, Herts, who died at Winchester on July 2nd in his 84th year, has bequeathed a legacy of £500 to the Essex and Hertfordshire Benevolent Medical Society.—The Royal Dental Hospital, Leicester-square, has received a donation of £100 and a new yearly subscription of £50 from Mr. James Buchanan, a donation of £52 10*s.* from N. M. D., and £10 10*s.* each from the Skinners' Company and Messrs. Drummond.

Medical News.

UNIVERSITY OF LONDON.—At examinations held in October the following candidates were successful:—

THIRD (M.B., B.S.) EXAMINATION FOR MEDICAL DEGREES.

Honours.—*George Gushue-Taylor, London Hospital; *John Cecil Jefferson, Victoria University of Manchester; †Oswald Robert Kelly, Westminster Hospital; *‡Henry Linnington Martyn (University medal), King's College Hospital; *Sidney Bertram Radley, Victoria University of Manchester; *Edward Gustave Schlesinger, B.Sc., Guy's Hospital; and *Theodore Henry Whittington, King's College Hospital.

* Distinguished in Medicine. † Distinguished in Forensic Medicine. ‡ Distinguished in Surgery.

Pass.—Gilbert Alan Blake, Guy's Hospital; Gertrude Brooks, London (Royal Free Hospital) School of Medicine for Women; Monamy Aston Cornwall Buckell, University College Hospital; Ronald Herbert Candy, London Hospital; Alfred Bernard Clark, University of Sheffield and University College Hospital; Frank Cook, B.Sc., Guy's Hospital; Thomas Peters Edwards, St. Bartholomew's Hospital; Ralph Franklin Eminson, Charing Cross Hospital; Cyril George Galpin, St. Mary's Hospital; Geoffrey Hadfield, St. Bartholomew's Hospital; Herbert Leslie Hopkins, Guy's Hospital; Arthur Webb Jones, St. Thomas's Hospital; David William Jones, London Hospital; Evan Hugh Jones, St. Thomas's Hospital; Thomas Lewis Jones, Guy's Hospital; Ernest Charles Lindsay, London Hospital; George William Lloyd, St. Bartholomew's Hospital; Joseph Howell Lloyd, London Hospital; Mary Francis Lucas, London (Royal Free Hospital) School of Medicine for Women; John Tiley Montgomery McDougall, Guy's Hospital; Melville Douglas Mackenzie, St. Bartholomew's Hospital; Geoffrey Marshall, Guy's Hospital; James Menzies, St. Mary's Hospital; Douglas Ashley Mitchell, Guy's Hospital; Clement Treves Neve, St. Bartholomew's Hospital; Ambrose Wilfred Owen, St. Mary's Hospital and University College, Cardiff; Alfred Alexander Webster Petrie, University of Edinburgh; Reginald Edward Porter, London Hospital; Walter Woodall Pratt, University of Bristol; Noel Ravenchil Rawson, London Hospital; Maude Margaret Richards, London (Royal Free Hospital) School of Medicine for Women; Charles Frank Schuler, St. Thomas's Hospital; David Scurlock, St. Mary's Hospital; Edward Bertram Smith, St. Bartholomew's Hospital; Albert Joseph Tonkinson, London Hospital; Edith Eleanor Tucker, London (Royal Free Hospital) School of Medicine for Women; George Edgar Septimus Ward, Middlesex Hospital; Harvey Henry Vincent Welch, St. Thomas's Hospital; James Cowan Woods, London Hospital; Roger Michael Wright, University of Bristol; and James Montagu Wyatt, St. Thomas's Hospital.

The following candidates have passed in one of the two groups of subjects:—

Group I.—Gilbert Charles Chubb, D.Sc., University College Hospital; Irene Nancy Clough, London (Royal Free Hospital) School of Medicine for Women; Vincent Glendining, Guy's Hospital; Thomas Herbert Holroyd, University of Birmingham; Edward Lewis Hunt, St. George's Hospital; Charles Dones Killpack, Guy's Hospital; Harold Arundel Moody, King's College Hospital; Henry Brice Parker, London Hospital; Bernard Rayne Parmiter, Guy's Hospital; Mary Minnie Patterson, London (Royal Free Hospital) School of Medicine for Women; and Neville Alexander Dyce Sharp, Guy's Hospital.

Group II.—John Wroth Adams, St. Bartholomew's Hospital; Melville Mortimer Adams, Guy's Hospital; Edwin Augustus Attenborough, London Hospital; Joseph Henry Campain, Guy's Hospital; William Chalmers Dale, St. Bartholomew's Hospital; John Lloyd Davies, University College Hospital; John Beatson Dunning, Guy's Hospital; Macormack Charles Farrell Easmon, St. Mary's Hospital; Archibald Ferguson, St. Bartholomew's Hospital; James Maurice Foord, University of Leeds; Norman Frankish Graham, London Hospital; Arthur Sydney Hahn, University of Sheffield; Guy Fleetwood Haycraft, Guy's Hospital; Robert Hamer Hodges, King's College; William Henry Kauntze, Victoria University of Manchester; Andrew Bonar Lindsay, London Hospital; Martin Wentworth Littlewood, St. Thomas's Hospital; Robin Pearse, St. Bartholomew's Hospital; Cecil Joseph Herbert Pearson and Emmanuel Prinski Scott, London Hospital; Reginald Gershom Sparkes and Arthur Hitchings Thomas, St. Mary's Hospital; and Francis Silvanus Williams, University College, Cardiff, and St. Bartholomew's Hospital.

B.S. EXAMINATION (*for Students who Graduated in Medicine in or before May, 1904*).

James Bruce-Bays, M.D., St. Mary's Hospital; and Lewis Cook, Westminster Hospital.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Hathey, Oberarzt of the University Ophthalmic Clinic, has been appointed to act as Professor of Ophthalmology during the vacancy caused by Professor v. Michel's death; Dr. Albrecht, late of Tübingen, Assistant to Professor Killian, has been recognised as *privat-docent* of Otology and Laryngology.—*Clermont:* Dr. Perrin has been appointed to the chair of Natural History in succession to the late Dr. Girod.—*Marburg:* Dr. Hohmeier, of Greifswald, has been appointed Oberarzt of the Surgical Clinic of the University; Dr. Wilhelm Grüter has been recognised as *privat-docent* of Ophthalmology; Dr. Ludwig Kirchheim as *privat-docent* of Medicine.

MIDLAND OPHTHALMOLOGICAL SOCIETY.—On Nov. 14th Mr. D. C. Lloyd Owen presided at a dinner held in Birmingham for the purpose of founding a Midland Ophthalmological Society. About 20 ophthalmic surgeons gathered from Birmingham and other Midland towns and unanimously decided to form the society. Mr. Lloyd Owen was elected president, Mr. H. Eales treasurer, and Mr. J. Jameson Evans and Dr. T. Harrison Butler secretaries. It was decided to confine the membership to ophthalmic surgeons and to hold bi-monthly meetings throughout the year. Members have been enrolled from Birmingham, Leicester, Nottingham, Gloucester, Cheltenham, Walsall, Newcastle, Leamington, and other towns in the Midland area.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Hans Ruge, *privat-docent* of medicine, with the titular rank of professor in the University of Berlin, aged 54. His first post was that of assistant in the Pathological Institute, Heidelberg, under Professor Arnold, and he then migrated to Berlin as assistant in the Second Medical Clinic of the Charité under Professor Gerhardt. He went during the summer to Kudowa, where he was official physician to the baths. For many years he was secretary to the Balneological Society. His contributions to medical literature on pathological matters were numerous. For some considerable period before his death he had been in bad health.—Dr. Hans Steinert, extraordinary professor of medicine in the University of Leipsic, aged 36. He had very recently returned from Davos, where he had been hoping—unsuccessfully as it proved—to regain his health. His published papers dealt principally with subjects connected with diseases of the nervous system.—Dr. Hermann Gareis, assistant in the bacteriological laboratory of the municipality of Munich, from typhus fever contracted in the course of his laboratory work. His age was only 36.—Dr. Philipp Stoehr, professor of anatomy in the University of Würzburg, aged 62. He had been a student under Kölliker and afterwards anatomical assistant in Greifswald under Budge and in Breslau under Haase, returning to Würzburg in 1876 as assistant to his old professor, whom he succeeded in 1897, after having filled the anatomical chair at Zürich for a time. His publications included a well-known text-book of histology, which has been translated into several languages.

NATIONAL DENTAL HOSPITAL.—The annual dinner of the past and present students of the National Dental Hospital and College, Great Portland-street, London, was held on Nov. 17th, in the Empire Rooms of the Trocadéro Restaurant, Sir William Ramsay, K.C.B., occupying the chair. After the usual loyal toasts, the chairman proposed the toast of "The National Dental Hospital and College." He reminded his audience that dentistry was an old profession. Papyrus writings had shown that the use of gold for stopping teeth had been in vogue in ancient times, and the stoppings buried with the patient. Dentistry was clearly a branch of surgery, and therefore had to keep pace with science. He pointed out the importance of good training before practice, and hoped that something effective would be done to protect the dental surgeon from the quack. Mr. Sidney Spokes, the Dean of the school, replied to the toast, and he was enthusiastically received. He reviewed the satisfactory progress that had been made at the hospital during the past year. Reorganisation had taken place all round, and he was glad to be able to report that the appeal for funds had met with a generous response, but they were still open to receive further donations. The school also had shown satisfactory progress. The returns at the examinations were very gratifying to both teacher and student. He emphasised the importance of educating the public to realise that the capable man is the right man. It was deplorable that a man could call himself a dental surgeon on a brass plate and so imply that he was a properly qualified man when he held no qualification at all. Dr. H. L. Eason proposed the toast of "The Past and Present Students," and referred to the good feeling which existed between the dental schools of London and to the evils of unqualified practice. The dental profession, he thought, were hardly treated by the Government. The toast of "The Visitors" was proposed by Mr. Kenneth Goadby (Vice-Dean), to which Mr. Rickman J. Godlee, President of the Royal

College of Surgeons, responded. He remarked upon the importance of an aseptic mouth, and mentioned that an abdominal operation was more satisfactory in the absence of oro-sepsis. During the evening prizes were awarded to the successful students of the session 1910–11, and a musical programme was provided.

A BRISTOL CENTENARIAN.—Mary Emblem died recently in the Bristol Workhouse at the age of 101 years. She had resided in the institution for the past 11 years.

Dr. Gustav Wagner has been appointed Medical Adviser to the Prussian Minister of Public Works in place of the late Dr. Schwechten, general medical officer of ailways.

THE annual festival dinner of the West Ham and Eastern General Hospital will be held at the Hamilton Hall, Liverpool-street Hotel, on Friday, Dec. 8th, at 7.30 P.M., when the chair will be taken by the Right Hon. Sir Edgar Speyer.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. Norman Porritt, M.R.C.S. Eng., L.R.C.P. Lond., who has retired after 31 years' practice in Huddersfield, has been presented by his patients with an illuminated address, articles of furniture, a type-writer and desk, and many individual gifts. Mrs. Porritt has received a gold watch and bracelet, and Miss Porritt a watch bracelet.

GLASGOW UNIVERSITY CLUB, LONDON.—This club will dine at the Trocadero Restaurant, Piccadilly-circus, W., on Friday, Dec. 1st, at 7.30 P.M. precisely. The chair will be taken by Principal J. Yule Mackay, of University College, Dundee. Members who intend to be present or to bring guests should give early notice to the honorary secretaries, Mr. W. Craig Henderson and Dr. David S. Roxburgh, at 30, Seymour-street, W.

UNIVERSITY OF OXFORD AND PHARMACOLOGY.—The trustees of the Oxford University Endowment Fund have offered the sum of £1100 for the provision and equipment of a department of pharmacology in the University Museum; the delegates of the Common University Fund will shortly proceed to the election of a University Reader in that subject. Information as to the conditions attaching to the readership may be obtained from the Registrar of the University.—The following have been appointed to examinerships:—Dr. David Hepburn (human anatomy), Dr. W. H. Thompson (physiology), Professor Georges Dreyer (pathology), Mr. F. E. Fremantle (forensic medicine and hygiene), Dr. H. D. Rolleston (medicine), Mr. Charters J. Symonds (surgery), and Dr. F. W. N. Haultain (obstetrics).

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill: New Clauses.

ABOUT 20 new clauses were added to the National Insurance Bill on Thursday, Nov. 16th, at the instance of the Chancellor of the Exchequer, and most of them falling under the closure were not even discussed. A separate set of Insurance Commissioners and also a separate Insurance Fund have been given to Wales. One of the new clauses gives to the Insurance Commissioners power to make special orders specifying classes of employment in which a custom prevails to give full remuneration to employees during periods of disease or disablement. In these cases employers who are ready to give six weeks' remuneration may obtain a reduction of a penny per week where the employed contributor is a man, and a halfpenny per week where a woman. The employed contributor obtains a reduction of a penny. It is assumed that hospital nurses may come within the operation of this clause.

The new clause in respect to Local Medical Committees is as follows:—Where a Local Medical Committee has been formed for any county or county borough, and the Insurance Commissioners are satisfied that such committee is representative of the duly qualified medical practitioners resident in the county or county borough, they shall recognise such committee, and where a Local Medical Committee has been so recognised it shall, subject to regulations made by the Insurance Commissioners, be consulted by the Local Health Committee on all general questions affecting the administration of medical benefit, including the arrangements made with medical practitioners giving attendance and treatment to insured persons, and shall perform such other duties, and shall exercise such powers as may be determined by the Insurance Commissioners.

It is anticipated by Ministers that the National Insurance Bill will probably come into operation in July. Mr. LLOYD GEORGE will make an announcement on the matter during the proceedings on the report stage of the Bill.

Committee Concluded.

The Committee stage of the National Insurance Bill was concluded in the House of Commons on Tuesday, Nov. 21st.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 15TH.

Health at Osborne College.

Lord CHARLES BERESFORD asked the Secretary to the Admiralty whether there were cases of scurvy at Osborne College last July; whether a London specialist was sent for to attend the cadets suffering from this affection; whether mysterious complaints of the eyes, known as pink-eye, were constantly occurring; and whether he had official reports showing that there was more illness at Osborne College than at any other public school in England.—Mr. MACNAMARA replied: There were no cases of scurvy at Osborne last July. No London specialist was sent down on this account. There have been no mysterious complaints of the eyes, but, as frequently happens in all schools, mild cases of conjunctivitis have cropped up from time to time. No such official reports as are referred to have been received, and it is not considered that any comparison can usefully be made between the conditions at Osborne, where there are some 400 boys, all of whom are from 12 years and 8 months to 15 years old, and over 200 of whom change every year, and the average public school where the ages vary considerably more and the boys remain for a much longer period.

Mr. HUNT: Is it not well known that Osborne College is unhealthy for boys?—Mr. MACNAMARA: No, Sir.

Sanitary Condition of Harrogate.

Mr. LANE-FOX asked the Chancellor of the Exchequer what was the date of the report on the sanitary administration of Harrogate; whether that report was based on an inspection made fully a year previous to its issue; whether the report referred to a small proportion of the houses in the town; and whether later sanitary reports by the medical officer of health for the borough recorded the remedying of the defects mentioned.—Mr. MCKINNON WOOD (on behalf of Mr. LLOYD GEORGE) replied: The report in question, as my right honourable friend was careful to state on Thursday, is dated Nov. 16th, 1908. It is admitted that the state of affairs to which he called attention existed at the date of its publication in February, 1909. The later reports of the medical officer of health record the remedying of defects, but they also indicate that they existed to a serious extent. I am aware that action has been taken by the council since the report of the Local Government Board inspector, but inquiries that my right honourable friend has since instituted have convinced him that there are still houses in Harrogate unfit for human habitation.

Mr. LANE-FOX: Will the right honourable gentleman point out to the Chancellor of the Exchequer the serious injury such partial statements may do to a growing health resort?—Mr. MCKINNON WOOD: I cannot admit that the statements are partial. I think a good deal of the ratepayers' money is often spent on the more showy portions.

Mr. LANE-FOX: The Chancellor of the Exchequer quoted one report and not the others. Does the right honourable gentleman consider that is a fair way of dealing with the matter?

No reply was given.

Inflammable Flannelette.

Dr. C. ADDISON asked the President of the Board of Trade whether, in view of the Report of the Departmental Committee (Coroners) published in 1910, and the evidence afforded by coroners' inquests held on infants and children that great dangers arise from the use of inflammable kinds of flannelette, the Government was prepared to take steps to prevent the sale of flannelette which did not conform to a standard test, to be prescribed by Government, as to non-inflammability.—Mr. MCKENNA (for Mr. S. BUXTON) said in reply: No steps to prevent or regulate the sale of inflammable flannelette could be taken without legislation for the purpose, and I cannot hold out any immediate hope of the Government undertaking legislation on this subject. The committee considered the question of establishing a standard test, but regarded the suggestion as impracticable.

The Use of Lead Paints.

Mr. GILL asked the Secretary of State for the Home Department whether he had received from the central office of the International Association for Labour Legislation at Basle a petition drawing his attention to a resolution of the association recommending that the use of lead paints and colours should be prohibited for interior work, and that all receptacles containing lead should be required to be clearly marked to that effect, and, if so, what reply had been sent as to what steps he proposed to take.—Mr. MCKENNA answered: I have received through the British section of the association a communication calling my attention to the resolution referred to in the question. The question of the use of lead in paints is now being investigated by two departmental committees, and I do not propose to take any action in the matter pending the receipt of their reports. In any case, further legislation would be necessary before effect could be given to the recommendation of the association that the use of lead should be prohibited for interior work. I have informed the British Section that the recommendations have been noted.

Lead Glaze in Pottery.

Mr. GILL also asked the right honourable gentleman whether he had received from the central office of the International Association for Labour Legislation at Basle a petition drawing his attention to a resolution of the association recommending that the use of lead glaze should be prohibited in the manufacture of china and earthenware fired at a high temperature; that in the manufacture of earthenware fired at a low temperature a list of articles should be drawn up for which no lead should be allowed; that occupiers should be assisted by the Government in making experiments into the use of lead glazes; and, if so, what reply had been sent as to what steps he proposed to

take.—Mr. MCKENNA replied: I have received through the British section of the association a communication calling my attention to the resolution referred to in the question. The question of the use of lead in the manufacture of pottery has recently been the subject of an exhaustive investigation in this country by a departmental committee who did not see their way to recommend restrictions on the use of lead as suggested by the association, but submitted instead proposals for more stringent regulation of the conditions of employment which the Home Office is taking steps to bring into effect. The conclusions of the committee must, I think, in the present state of knowledge on this subject, be accepted as final.

THURSDAY, NOV. 16TH.

Lead-poisoning at Portsmouth.

In reply to Mr. FALLE, Mr. MACNAMARA said that the number of cases of lead-poisoning which had occurred this year in the Gun Wharf shop, Portsmouth, were five, in the dockyard generally five. The numbers of deaths from lead-poisoning were: men employed in the Gun Wharf shop, none; men employed in the dockyard generally, two.

Patent Medicines.

Mr. LYNCH asked the Secretary of State for the Home Department whether he was aware that amongst the patent medicines sold in this country there were some of which the advertisements were merely thin disguises for the suggestion of illegal practices, and that the consequences in a number of cases did not rest with the immediate result sought but produced severe general poisoning, such as lead poisoning; and whether steps would be taken to put a stop to or mitigate these evils.—Mr. MCKENNA replied: I am aware that some of the advertisements suggest illegal practices, but they are in such veiled language, and in many cases the drugs are in fact so innocuous, that it would be impossible to prosecute successfully. This will be a matter for the consideration of the proposed Select Committee.

Mr. LYNCH also asked the right honourable gentleman whether he was in a position to state the general character of the Select Committee he had promised to appoint next session to consider the question of patent medicines, particularly in regard to the terms of reference and the adequate representation thereon of medical opinion.—Mr. MCKENNA answered: I am not in a position yet to make any announcement.

Mr. LYNCH further asked the right honourable gentlemen whether, in view of the fact that many of the patent medicines sold in this country consisted mainly of cheap and innocuous drugs sold at 50 times the real value, he would issue as a Parliamentary Paper a statement of the analyses of the more prominent of such patent medicines, or would take steps to give wider publicity in the general interest to the results of analyses of popular patent medicines obtained by the experts employed by the *British Medical Journal*.—Mr. MCKENNA said in reply: The analyses published by the *British Medical Journal* are no doubt most useful, but I think that the honourable Member will understand that I cannot without independent investigation adopt and publish them officially. The question is one which I must leave to the Select Committee.

Mr. C. BATHURST: Is anything being done to accelerate the appointment of this committee?—Mr. MCKENNA: I have stated already that I propose to appoint the committee next session. It will be appointed early.

Tuberculosis in the Army.

The Marquis of TULLIBARDINE asked the Under Secretary of State for War what percentage the number of men discharged for tuberculosis during the last three years from the regular army at home and abroad bore to the total number of men serving in the army during these three years, taking each year separately—Colonel SERLY replied: The figures are as follows:—

	Average annual strength.	Number of cases discharged.	Per-centage.
1908	223,744	306	0·14
1909	231,316	339	0·15
1910	230,500	285	0·12

MONDAY, NOV. 20TH.

Royal Naval Medical Service.

Mr. BENNETT-GOLDNEY asked the Secretary to the Admiralty whether the Admiralty had received any report from the consultative committee of the Royal Naval Medical Service, and when did they receive it; would he give instructions that this report in its original form should be laid upon the table of the House; had the Admiralty been advised by the consultative committee that the only practical means of obtaining the additional number of medical officers of the high standard necessitated by modern requirements to make up the shortage in the Royal Naval Medical Service is by offering a substantial increase of pay; was this opinion endorsed by the Admiralty; had the Admiralty received any communication from the Army Council upon the subject to the effect that the Army Council would view any decision of the Admiralty to make the career in the Royal Naval Medical Service more attractive by offering a higher scale of pay as antagonistic to the desired flow of candidates to the Royal Army Medical Corps; and, if so, did the Admiralty intend to allow the Royal Naval Medical Service to continue to suffer both in efficiency and numbers in order to enable the Army Council to keep down the pay of members of the Royal Army Medical Corps to its present rate.—Mr. MACNAMARA replied: The Committee on the Naval Medical Service forwarded a report relating to naval medical officers on July 2nd, 1909. My right honourable friend the First Lord is not at all convinced that the public interest would be served by laying this report on the table, which deals fully with medical organisation in time of war, and he hopes the House will not press for it. In reply to the third and fourth parts of the question, the Committee advised that the question of pay was a most important factor to be considered when endeavouring to obtain the requisite number of medical officers of the standard necessary and framed proposals which would substantially increase the emoluments of naval medical officers. The Admiralty endorsed this view and obtained authority for increasing their emoluments. The revised scales of pay and allowances were published in circular letter of August 11th last, a copy of which I am forwarding to the honourable Member. The Army Council agreed that a margin of superiority in rates of pay should be given to the Naval Medical Service, and the scales of pay promulgated in the circular letter quoted provided for this margin in future.

The Medical Examination of Intoxicated Persons.

Mr. BURGOYNE asked the Secretary of State for the Home Department whether he was aware that the Metropolitan Police regulations did not allow of the examination by an independent medical man of a person who had been taken into custody and charged by the police with being found drunk on licensed premises, although the opinion of the police surgeon as to the condition of such person was invariably obtained for the purposes of the police prosecution of such person and the licensee of the premises; and whether, having regard to the subsequent proceedings under the Licensing Acts which usually followed against the licensee of the premises upon which the alleged drunken person was found, he would recommend that in those cases in which application was made to the police by the licensee facilities would be granted for an independent medical examination of the person alleged to be drunk, and, if not, was he prepared to recommend that the person charged should at the same time be informed by the police that if he so desired he might be examined by an independent medical man at his own expense instead of by the police surgeon.—Mr. MCKENNA said in reply: The Metropolitan Police regulations require that the divisional surgeon be at once sent for when a prisoner charged with drunkenness denies that he is drunk, and they further provide that the prisoner's own doctor be sent for if he wishes. There could be no more independent examination than that of the divisional surgeon, who holds his appointment from the Secretary of State and is always a practitioner of good standing.

Collectors or Medical Men.

Mr. JOWETT asked the Secretary to the Treasury whether he was aware of the number of persons employed as collectors for medical men who would be deprived of their employment if the National Insurance Bill was passed; whether he would make it an obligation on the part of Local Health Committees in arranging their financial relations with medical practitioners and surgeons to arrange also to compensate their collectors for loss of employment; and, if not, whether he intended to leave the collectors referred to without means of support for themselves and their families.—Mr. MCKINNON WOOD answered: I am afraid that I cannot undertake on behalf of my right honourable friend to introduce into the Bill this additional complication in the relations between the Local Health Committees and the medical men.

TUESDAY, NOV. 21ST.

Ireland and Medical Benefit.

Mr. WILLIAM O'BRIEN asked the Prime Minister whether, for the convenience of Irish Members, he could say when the proposed restoration of medical benefit to Ireland under Clause 59 of the National Insurance Bill would be under discussion.—Mr. MCKINNON WOOD (Secretary to the Treasury): I will answer this question. As the Chancellor of the Exchequer stated during the discussion on Clause 59 in Committee, his only reason for proposing the omission of medical benefit in Ireland was that he found that Irish opinion, as a whole, desired this alteration. He has received no sufficient evidence that Irish opinion has undergone a change in this respect, and he does not, therefore, as at present advised, propose to ask for the recommittal of the Bill for the object indicated by the honourable Member.

Hospital Staffs in India.

Dr. ADDISON asked the Under Secretary of State for India whether it was the intention of the Government, in connexion with the hospitals and sanatoriums that might be erected in India by public money in connexion with the memorial to King Edward VII., to appoint Indian medical men to serve on the staff of these institutions so far as their experience and training might qualify them for holding such posts.—Mr. MONTAGU replied: I am unable to make a definite statement on the intentions of the Government of India with regard to filling appointments which have not yet been created. With regard to the general question involved, perhaps my honourable friend will wait for my answer to his next question.

Dr. ADDISON asked the honourable gentleman how many Indian medical men held appointments as professors or chief teachers in the teaching hospitals and medical colleges of India; and whether it was the intention of the Government to appoint suitable Indian medical men to such posts so far as opportunity might provide.—Mr. MONTAGU replied: None of the highest posts is at present held by an Indian, but the question of appointing Indians to two such posts is now under consideration. The answer to the second part of the question is in the affirmative. The decision of the Secretary of State in 1909 to allow no further increase in the civil side of the Indian Medical Service was intended to have among its results the appointment of Indian medical men to some professorial appointments of the first rank.

Vaccination in the Isle of Man.

Mr. POINTER asked the Secretary of State for the Home Department whether his attention had been drawn to the fact that since August prosecutions for non-vaccination of children had been taking place nearly every week in the Isle of Man; whether the Island Legislature had considered the question of introducing the exemption clause similar to that operating in England, Wales, and Scotland; and, if not, whether he would bring to the notice of the Governor of the Isle of Man the desirability of legislation which would give Manx objectors to vaccination the same rights as those possessed by their fellow citizens of Great Britain.—Mr. MCKENNA wrote in reply: I understand that there have been several prosecutions lately. The Lieutenant-Governor informs me that the insular Legislature has not considered the question of exemption, and that no representations have ever been made to him as to the desirability of the legislation suggested. If there is any grievance the matter is one for the insular Legislature to consider.

Discharged Lunatics.

Mr. ASTOR asked the Secretary of State for the Home Department whether he would state what number of certified lunatics had, during the last five years, been discharged from asylums and subsequently readmitted.—Mr. MCKENNA furnished the following reply: The Commissioners in Lunacy inform me that they have no means of supplying this information. In Appendix B, Table III., of the annual reports of the Commissioners there will, however, be found the figures of the number of persons admitted to asylums during the year who are known to have been at some previous time in an asylum. Of 23,266 persons admitted during the year 1909 to county and borough asylums 3462 were known to have been in asylums before.

Defective and Epileptic Children.

Mr. GOLDSTONE asked the President of the Board of Education how many local authorities had put the Elementary Education (Defective and Epileptic Children) Act, 1899, into operation; how many children of the various classes were treated by such local authorities during the last statistical year; and what was the estimated number of children not treated through the inaction of those authorities which have not adopted the Act.—Mr. J. A. PEASE (in a written answer) replied: The answer to the first part of the question is 142. With regard to the second part of the question, the number of children on the registers of special schools under the Elementary Education (Defective and Epileptic Children) Act, 1899, in England and Wales on July 31st of this year was 17,333, of whom 12,253 were mentally defective, 4703 physically defective, and 377 epileptic. I have no information with regard to the last part of the question.

WEDNESDAY, NOV. 22ND.

Medical Members of Health Committees.

Mr. CROOKS asked the Secretary to the Treasury whether medical men sitting as members of the Local Health Committees would be allowed to practise under the National Insurance Bill—viz., receive fees for service on attendance upon sick persons.—Mr. MCKINNON WOOD replied: Membership of a Local Health Committee, which is a purely honorary position, will not debar a medical man either from private practice or from attending patients under the insurance scheme.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, London.

My Life Story. By Emily, Shareefa of Wazan. Edited for Mme. de Wazan by S. L. Bensusan, author of "Morocco," &c. With a Preface by R. B. Cunninghame Graham. Price 12*s.* 6*d.* net.

BAILLIÈRE, J. B., ET FILS, Paris.

Nouveau Traité de Chirurgie Clinique et Opératoire. Publié en fascicules sous la Direction de A. Le Dentu et Pierre Delbet. XIX. Maladies de l'Œsophage. Par Michel Gangolphe, Professeur Agrégé à la Faculté de Médecine de Lyon, Chirurgien-Major Honoraire de l'Hôtel Dieu. Price, paper, Fr. 3; boards, Fr. 4.50.

BAILLIÈRE, TINDALL, AND COX, London.

Aids to Practical Pharmacy for Medical Students. Adapted for the Examinations in Practical Pharmacy and Materia Medica of the Conjoint and other Examining Boards, and for General Use. By A. Campbell Stark, M.B., B.S. Lond., L.S.A. Eng., Ph.C. Second edition. Price, paper, 2*s.* 6*d.* net.

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CHATTO AND WINDUS, London.

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Sir John Burdon Sanderson. A Memoir. By the late Lady Burdon Sanderson. Completed and edited by his Nephew and Niece. With a Selection from his Papers and Addresses. Price 10*s.* 6*d.* net.

KING, P. S., AND SON, 2 and 4, Great Smith-street, Westminster.

Quackery (Quack Remedies and Quack Practice) and Medical Law Reform. A Plea for a Royal Commission. By Henry Sewill. Price 6*d.* net.

LAURIE, T. WERNER, Clifford's Inn, London.

Through India and Burmah with Pen and Brush. By A. Hugh Fisher. Price 15*s.* net.

Zoo Folk. Interviewed by W. J. Roberts, F.Z.S. With 25 illustrations by the author. Price 3*s.* 6*d.* net.

MACMILLAN AND CO., LIMITED, London.

The Treatment of Fractures by Mobilisation and Massage. By James B. Mennell, M.D., B.C. Cantab., &c. With an Introduction by Dr. J. Lucas-Championnière. Price 12*s.* net.

MASSON ET CIE, Paris.

La Pratique Neurologique. Publiée sous la Direction de Pierre Marie, Professeur à la Faculté de Médecine de Paris, Médecin de la Salpêtrière. Par MM. O. Crouzon, G. Delamare, E. Desnos, Georges Guillain, E. Huet, Lannois, A. Léri, François Moutier, Poulard, Roussy. Secrétaire de la Rédaction: O. Crouzon. Price Fr.30.

La Pratique de l'Opothérapie. Principes, Indications, Posologie. Par M. L. Hallion, Directeur adjoint du Laboratoire de Physiologie pathologique des Hautes Études, Professeur remplaçant au Collège de France. Price, Fr.2.

PROGRÈS MEDICAL, ADMINISTRATION DU, 41, Rue des Écoles, Paris, 5e.

Medicus. Guide-Annuaire des Étudiants et des Practiciens. 39e Année, 1911–1912. Price Fr.5.

REYNOLDS-BALL'S GUIDES, 27, Chancery-lane, London, W.C.

Sport on the Rivieras. Edited by Eustace Reynolds-Ball, F.R.G.S., and C. A. Payton, M.V.O. ("Sarcelle," of *The Field*). Price not stated.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION (Secretary, W. D. Haggard, M.D., Nashville, Tenn., U.S.A.).

Transactions of the Southern Surgical and Gynecological Association. Vol. XXIII. Twenty-third Session. Held at Nashville, Tenn., Dec. 13th, 14th, and 15th, 1910. Edited by W. D. Haggard, M.D. Price not stated.

TAYLOR AND FRANCIS, Red Lion-court, Fleet-street, London.

Calendar of the Royal College of Surgeons of England. August 1st, 1911. Price not stated.

THIEME, GEORG, VERLAG VON, Leipzig.

Diagnostik und Therapie der Magenkrankheiten. Von Prof. Dr. I. Boas, Spezialarzt für Magen- und Darmkrankheiten in Berlin. Sechste völlig neubearbeitete Auflage. Price M.17.

Einführung in die Physiologie, Pathologie und Hygiene der menschlichen Stimme. Von Dr. Ernst Barth, Königlicher Oberstabsarzt a.D., Arzt für Hals- und Ohrenkrankheiten. Price M.15.

Die Gastroskopie. Von Dr. Hans Elsner, Berlin. Price M.8.

URBAN UND SCHWARZENBERG, Berlin und Wien.

Die Experimentelle Pharmakologie als Grundlage der Arzneibehandlung. Ein Lehrbuch für Studierende und Aerzte. Von Dr. Hans H. Meyer, Wien, und Dr. R. Gottlieb, Heidelberg, Professoren der Pharmakologie. Zweite, neubearbeitete Auflage. Price, paper, M.12; bound, M.14.

Fortschritte der Naturwissenschaftlichen Forschung. Herausgegeben von Prof. Dr. E. Abderhalden, Berlin. Dritter Band. Price, paper, M.16; bound, M.18.

Die Methoden der Untersuchung des Magens und ihre diagnostische Verwertung. Von Dr. Emil Schütz, privat-dozent an der Universität Wien. Price, paper, M.9; bound, M.11.

Untersuchungen über die Struktur der Blutzellen. Von. Priv.-Doz. Dr. Alfred v. Decastello, Assistent, und Dr. Alexander Krjukoff (Moskau), derzeit Hospitant der medizinischen Klinik in Innsbruck. (Ausgeführt mit Subvention aus dem Legate Wedl der kaiserlichen Akademie der Wissenschaften in Wien. Der Akademie vorgelegt in der Sitzung am 18. Oktober, 1910.) Price, paper, M.16; bound, M.18.

Meine Präparationsmethode des Operationsfeldes mittels Jodtinktur. Von Kgl. Rat Dr. Antonio Grossich, Primarchirurg am Ospedale Civico in Fiume. Price, paper, M.3.

Taschenbuch für die Behandlung der Hautkrankheiten für praktische Aerzte. Von Dr. Oskar Scheuer, Facharzt für Haut- und Geschlechtskrankheiten in Wien. Price, bound, M.4.50.

VIGOT FRÈRES, Paris.

La Responsabilité Attenuée. Lois faites dans les divers Pays, Lois à faire concernant les Criminels à Responsabilité attenuée. Par le Docteur L. Mathé, Rapporteur au Troisième Congrès International de Médecine Légale (Bruxelles, 1910), Inspecteur des Écoles. Préface de M. Joseph Reinach, député. Price, Fr.2.

Traité Pratique des Maladies du Cœur et de l'Aorte. Par Ernest Barié, Médecin de l'Hôpital Laënnec. Préface par le Professeur Potain, Membre de l'Institut. Troisième édition, entièrement refondue. Price, Fr.20.

Thérapeutique Chirurgicale et Chirurgie Journalière. Par G. Phocas, Professeur de Clinique Chirurgicale à la Faculté de Médecine d'Athènes, et J. Barozzi, Ancien Interne des Hôpitaux de Paris, Lauréat de la Faculté de Médecine de Paris. Price Fr.16.

WITHERBY AND CO., 326, High Holborn, London.

A Naturalist on Desert Islands. By Percy R. Lowe, B.A., M.B. Cantab., Member of the British Ornithologists' Union. Price 7*s.* 6*d.* net.

WRIGHT, JOHN, AND SONS, LIMITED, Bristol. SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London. WOOD, WILLIAM AND CO., New York.

An Index of Treatment. By Various Writers. Edited by Robert Hutchison, M.D., F.R.C.P., and H. Stansfield Collier, F.R.C.S. Sixth edition, revised and enlarged. Price 21*s.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ASHBY, T. EWART, M.R.C.S., L.R.C.P. Lond., has been appointed Second House Surgeon at the Royal Berkshire Hospital.

BICE, FRANK VEALE, L.R.C.P. Lond., M.R.C.S., has been appointed Public Vaccinator for the Third and Sixth Districts by the St. Columb Major (Cornwall) Board of Guardians.

COSTELLO, JAMES MICHAEL BODKIN, M.B., B.Ch., B.A.O. Irel., D.P.H. Irel., has been appointed District Medical Officer by the Cardiff Board of Guardians.

DONELAN, JAMES, M.B., M.Ch. Dub., has been appointed Laryngologist to the London Opera House.

HEBBLETHWAITE, SEPTIMUS MONTAGUE, M.D. Lond., M.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Honorary Clinical Pathologist to the Cheltenham General Hospital.

JOLLY, R. H. H., M.B., B.S. Lond., D.P.H., has been appointed Resident Medical Officer at the Victoria Hospital for Children, Chelsea.

KENDREW, ALEXANDER JOHN, M.B., B.S. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer for Bishops Tawton, Landkey, Stoke Rivers, and Swymbridge by the Barnstaple (Devon) Board of Guardians.

LAKE, NORMAN C., M.B., B.S. Lond., has been appointed Demonstrator of Anatomy at King's College.

MOLYNEUX, BENJAMIN ARTHUR, M.B., B.Ch., B.A.O. Dub., has been appointed Assistant Medical Officer at the Gloucester County Asylum, Barnwood.

ORTON, HARRISON, M.B., B.S. Cantab., has been appointed Honorary Radiographer to the Mount Vernon Hospital for Consumption.

PENNINGTON, DRURY, M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Samaritan Free Hospital for Women.

RAW, STANLEY, M.D., B.S. Durh., F.R.C.S. Edin., has been appointed Honorary Surgeon to the Children's Hospital in connexion with the Sunderland Royal Infirmary.

SUTHERLAND, D. P., M.B., B.S. Lond., has been appointed Medical Assistant in connexion with Tuberculosis to the Medical Officer of Health of Manchester.

WALLACE, JOHN, M.B., C.M. Edin., B.Sc. Public Health, has been appointed Medical Officer of Health of Weston-super-Mare and Medical Attendant and Superintendent of the Isolation Hospital.

WILSON, NORMAN, M.D., B.C. Cantab., has been appointed Medical Officer of Health for the Urban District of Sherborne.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £100 per annum, all found.

BATH ROYAL UNITED HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Second Anæsthetist.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £200 per annum, with rooms, fire, light, and attendance.

BRISTOL, COSSHAM MEMORIAL HOSPITAL, Kingswood.—House Surgeon. Salary £50 per annum, with board, lodging, and washing.

BRISTOL ROYAL INFIRMARY.—House Physician. Salary £100 per annum, with board, apartments, and laundry.

BURNLEY, VICTORIA HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with residence, board, and washing.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CAMBERWELL DISTRICT OF THE PARISH OF ST. GILES.—Medical Officer. Salary at rate of £125 per annum.

CARDIFF, KING EDWARD VII.'s HOSPITAL.—Three Honorary Assistant Anæsthetists.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Resident House Surgeon. Salary £50 per annum, with board and residence. Also Registrars and Clinical Assistants.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant for three months.

COLCHESTER EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £250 per annum.

DONCASTER, ROYAL INFIRMARY AND DISPENSARY.—Senior House Surgeon and Assistant House Surgeon. Salaries respectively £100 and £80 per annum, with board, lodging, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Physician. Also Physician.

EVELINA HOSPITAL FOR CHILDREN, Southwark, London, S.E.—House Surgeon for six months.

FARNHAM, SURREY, CROOKSBURY SANATORIUM FOR THE OPEN-AIR TREATMENT OF PHTHISIS.—Medical Officer. Salary £150 per annum, with board and lodging.

FLEETWOOD, ROSSALL SCHOOL.—Resident Medical Officer, unmarried. Salary £250 per annum, with board and residence.

FLORENCE NIGHTINGALE HOSPITAL FOR GENTLEWOMEN, 19, Lissongrove, N.W.—House Surgeon. Salary £100 per annum.

GLASGOW MATERNITY AND WOMEN'S HOSPITAL, OBSTETRICAL DEPARTMENT.—Two out-door House Surgeons at the Hospital and out-door House Surgeon (female) at West End Branch for three months.

HASTINGS, EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary at rate of £70 per annum, with residence, board, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

INDIAN MEDICAL SERVICE.—Twelve Commissions.

ITALIAN HOSPITAL, Queen-square, London, W.C.—Honorary Assistant Physician.

KENSINGTON DISPENSARY AND CHILDREN'S HOSPITAL.—Vacancy on the Honorary Medical Staff.

KING'S COLLEGE HOSPITAL.—House Anæsthetist. Also Assistant Anæsthetist.

LEICESTER INFIRMARY.—Honorary Assistant Surgeon.

LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Resident Medical Officer. Salary £250 per annum, with board and residence.

LONDON TEMPERANCE HOSPITAL.—Surgical Registrar. Salary at rate of 40 guineas per annum.

MANCHESTER CHILDREN'S HOSPITAL (OUT-PATIENTS' DEPARTMENT), Gartside-street, Manchester.—Medical Officer. Salary £180 per annum.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board, and washing.

MANCHESTER WORKHOUSE, Crumpsall.—Junior Resident Assistant Medical Officer. Salary £110 per annum, with apartments, washing, attendance, &c.

MULLINGAR DISTRICT LUNATIC ASYLUM.—Resident Medical Superintendent. Salary £400 per annum.

NAPSBURY, MIDDLESEX COUNTY ASYLUM, St. Albans.—Assistant Medical Officer. Salary £180 per annum, with board, lodging, washing, and attendance.

NEWCASTLE-ON-TYNE, HOSPITAL FOR SICK CHILDREN.—Honorary Surgeon. Also Honorary Assistant Physician.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Also Assistant House Surgeon. Salary in each case £100 per annum, with board, lodging, and washing.

PLUMSTEAD, WOOLWICH INFIRMARY.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, rations, and washing.

POWICK, WORCESTER COUNTY AND CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £180 per annum and all found.

PRESTON, COUNTY ASYLUM, Whittingham.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, apartments, and washing.

PRESTWICH, MANCHESTER, COUNTY ASYLUM. — Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, and washing.

ROYAL COLLEGE OF PHYSICIANS.—Milroy Lecturer for 1913.

ROYAL DENTAL HOSPITAL OF LONDON, Leicester-square.—Morning House Anæsthetist. Salary £25 per annum.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Honorary Ophthalmic Surgeon. Also Honorary Dental Surgeon.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—House Surgeon. Salary £30 per annum, with board, lodging, and washing.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Physician.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician. Also Surgical Registrar.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.

SHREWSBURY, COUNTY ASYLUM.—Second Assistant Medical Officer unmarried. Salary £170 per annum, with board, apartments, washing, attendance, &c.

SURREY, HOLLOWAY SANATORIUM FOR THE INSANE, Virginia-water.—Junior Assistant Medical Officer (lady). Salary £140 per annum, rising to £200, with board, lodging, laundry, and attendance.

THROAT HOSPITAL, Golden-square, W.—Honorary Assistant Surgeon.

WADSLEY, NEAR SHEFFIELD, WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary £140 per annum, with board, &c.

WEST LONDON HOSPITAL, Hammersmith, W.—House Physician for six months. Board, lodging, and laundry allowance.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Assistant Honorary Surgeon in the Eye, Ear, and Throat Departments.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Sidmouth, in the county of Devon; at Exmouth, in the county of Devon; at Cullingworth, in the county of Yorks, West Riding; and at Blaenavon, in the county of Monmouth.

Births, Marriages, and Deaths.

BIRTHS.

COURTNEY.—On Nov. 15th, at Barton, near Ampthill, Bedfordshire, the wife of Harold G. S. Courtney, M.R.C.S., of a daughter.

MARRIAGES.

LEA—BUZZARD.—On Nov. 18th, at St. George's Church, Hanover-square, Charles Edgar Lea, M.D., to Dorothy Cadell, younger daughter of Thomas Buzzard, M.D., F.R.C.P.

RIGDEN—MAY.—On Nov. 15th, at the Church of St. Barnabas, Kensington, Alan Rigden, M.D., to Catherine, daughter of the late Daniel May, of Dudley.

DEATHS.

O'MEARA.—On Nov. 15th, at Carlton House, Holbeach, William Henry O'Meara, L.R.C.P., L.R.C.S. Edin., L.A.H. Dub., Surgeon, R.N. (retired), aged 52 years.

WEBB.—On Nov. 18th, at The Hermitage, Exeter, William Wilfrid Webb, M.D., formerly a Major in the Indian Medical Service Bengal Army, in his 54th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE USE OF DIACHYLON AS AN ABORTIFACIENT.

To the Editor of THE LANCET.

SIR,—In consequence of the increasing prevalence of the habit of taking diachylon as an abortifacient and the evident ignorance of the public as to the poisonous nature of that substance, the Birkenhead and Wirral Association of Pharmacists is attempting to stamp out the habit and to protect those who will not protect themselves, so far as its area of influence is concerned, and at its last meeting unanimously passed the following resolution:—

That in view of diachylon being largely purchased as an abortifacient, this association recommends each of its members to discourage the sale of diachylon, unless he is perfectly satisfied it is going to be used for a legitimate purpose.

May I ask you the favour of inserting the foregoing in your valuable journal? I am, Sir, yours faithfully,

Nov. 16th, 1911. T. STEPHEN JONES, Honorary Secretary.

SOMALILAND HEALTH REPORT.

A REPORT on the Somaliland Protectorate for the year ended March 31st, 1911, has just been received at the Colonial Office. It states, *inter alia*, that no census of the population has ever been taken, but it is estimated that there are about 300,000 Somalis, 200 Indians, 300 Arabs, 20 Europeans and whites, and 100 mixed. The population is probably about stationary, owing to tribal disturbances affecting the general mortality. The country under present conditions is capable of sustaining a limited population only, owing to the limited water-supply and lack of agriculture. The general state of the public health is good. There are comparatively few diseases met with, and these seldom of a virulent type. Malarial diseases and pneumonia are the chief ailments of the winter. A routine examination of persons suffering from malaria is conducted, and any enlargement of the spleen is noted. It may be stated that splenic enlargement is quite uncommon as a rule, just as the usual malarial attack is of a distinctly mild form and occurs only during a very limited period of the year. It is a great deal owing to this fact that the public distribution of quinine, other than at the hospitals, is practically not called for. Occasionally exceptions are made, but the annual consumption of quinine is altogether only some 10 lb. to 12 lb. for the whole coast. At Berbera water is brought to the town and supplied by public fountains. The water is drawn from springs nine miles distant, and is at a temperature of from 95° to 100° F. at the springs. It is conducted through iron pipes, after being partially cooled in depositing tanks. The other towns are supplied from wells at a distance, the water being conveyed in skin bags to the consumers. The water at all the coast towns is more or less brackish, and is on occasion liable to produce severe colic and diarrhœa from mineral impurities and earths.

The Somali has still to learn the proper use of a house for shelter from cold, wind, and dew, and for the protection of his women and children from the ravages of hyænas. He lives chiefly in the open air by day and night. His hut is made of grass, mats, and sticks, occasionally plastered with mud, and is of such slight construction that it can usually be demolished and carried away on a camel at a few hours' notice. The huts of the poorer Somalis are usually about 12 ft. by 8 ft., and the only cleansing, or rather disinfecting, agent they know is the smoke of the smouldering fire which they use for cooking their food. The saving quality of these huts is that they cannot last longer than three or four years.

The climate is chiefly remarkable for its very dry character. Sickness is more prevalent in the winter months, but this is chiefly because during this period of the year caravans from the interior come down to the coast, which is to a great extent abandoned during the extreme heat of summer by the greater part of the population.

A general hospital is situated at each of the three principal coast towns—viz., Berbera, Bulhar, and Zeyla. A disinfecting station, furnished with a Clayton disinfector, exists at Berbera. The withdrawal of the troops from the interior necessitated the closing of the camp hospitals at Burao and Sheik, and has led to the necessary abandonment of the isolation hospital for tuberculous disease and the small-pox hut, which were outside the limits of the town of Berbera. Matting huts were erected as required to meet a small-pox epidemic at each of the three towns. These huts were found to answer the purpose well, owing to the dryness of the climate. The number of admissions to the hospitals was 347; the number of deaths in hospital, 9. These figures are exclusive of 698 cases with 139 deaths from small-pox treated at the small-pox camps. There are three dispensaries, one being attached to each of the three coast hospitals. The attendance of patients during the year totalled 23,151. At Berbera Hospital a room is available for laboratory purposes; this was built last year and steps have now to be taken to supply scientific apparatus and fittings. Ordinary blood examinations and urine testing have been carried out, but apparatus is still needed for proper bacteriological investigation. The medical service of the colony consists of two medical officers assisted by three sub-assistant surgeons, the latter having received their qualifications in India. Native Somalis are employed as hospital servants. There are no special health officers or registered medical practitioners.

HYGIENE IN THE BAKERY.

THERE has recently been started an Electric Machine Bakery at Golders Green by Messrs. R. and T. Pritchard, who deserve a word of praise for applying to practical bread-making sound hygienic principles. The installation affords an interesting contrast to the old, and we are glad to think now obsolete, underground bakery. The objection, also, to the dough coming into contact with the hands of a diligent perspiring "kneader" is entirely overcome by the adoption of a kneading machine worked by the electric current. Further, the flour before being worked into dough is sifted thoroughly from foreign matters by an electric sifter placed immediately above the kneader into which the cleansed flour is fed. Other appliances, as, for example, ovens, automatic weighing and moulding plant, have been installed which also secure the healthy preparation of bread, cakes, and confectionery. Bread made under this clean and sanitary environment needs no commendation from us, who have for years insisted upon sanitary reform being enforced in the baking trade. We are pleased to find such striking evidence of the correct impressions and deductions which our exposures published some years ago have given.

VOICE PRODUCTION.

Mr. Hermann Klein will give an afternoon *causerie* at Bechstein Hall on Monday, Dec. 4th, at 5.30, taking as his subject "The Method of Manuel Garcia and the Stroke of the Glottis." Many medical men are interested in the technique of vocal art, and certain questions of voice production, which have been variously discussed, have a distinct anatomical bearing. We are informed that for the first time on this occasion the famous master's own standpoint will be publicly explained and demonstrated. Mr. Klein was Garcia's pupil and cooperated with his master in a text-book.

THE DOMEN ADHESIVE ELASTIC BANDAGING.

WE have received from the Domen Belts Company, of 456, Strand, W.C., a sample of the Domen adhesive elastic bandaging and have submitted it to tests. It resembles ordinary strapping in that it is adhesive, but it differs from adhesive strapping by its elasticity. It is made from a material something like domette or crêpe, in that it is openly woven, so that it possesses a certain amount of elasticity, which allows it to adapt itself to irregular surfaces. It is porous, so that it allows perspiration to escape. It will stand hot or cold water, and water does not harden it; it is easily removed, although it adheres readily. The adhesive composition is said to contain no lead plaster or rubber or gum; it is certainly very unirritating, so that it may be applied to tender skins. Each bandage is 4 yards in length, and it is made in various widths from ½ inch to 4 inches, the price ranging from 10*d.* to 4*s.* for the 4 yards.

PRINCESS AELFRIDA'S CHARITY.

"Princess Aelfrida's Charity" is the reputed Manor of Old Court, Greenwich, which was originally a grant by Princess Aelfrida, third daughter of King Alfred the Great, of her "inheritance of Lewisham and Greenwich and Woolwich, with meadows, pasture lands, wood, serfs also, and all the above-mentioned inheritance in its entirety" to the Monastery of Blandinium. In two neat little pamphlets with the above title, the Rev. Henry Lansdell, D.D., chaplain of Morden College, Blackheath, records graphically, and often in vigorous terms, the vicissitudes of this charitable gift. The first pamphlet covers the 600 years period, A.D. 918 to 1536, at which time the Manor was diverted from its original purposes to augment the possessions of Henry VIII. The second continues the story from that period until 1699, when the property fell to Sir John Morden, Bart., who gave it as a part of the endowment of his College for "decayed merchants," then building at Blackheath. There are many quaint historical data of interest in these brochures.

R. H.—It is always worth while to try the vaccine treatment of acne with stock vaccine at first, and then if this should fail vaccines prepared from the patient himself may be employed. Our correspondent does not say what form of acne is present; are there only comedones or are there many pustules as well? The mixed vaccine should be used if many pustules are present. The age of the patient is a factor. Diet is important.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
November (Rome).—Fourth International Congress of Physical Education.
Dec. 1st (The Hague).—International Opium Conference.
,, 4th–9th (Havana, Cuba).—American Public Health Association.
,, 19th–23rd (Moscow).—Third Pan-Russian Therapeutical Congress.

In 1912:—

Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
March 23rd–April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
,, (London).—First Congress of Pure Food and Health Society of Great Britain.
,, (Berlin).—Thirty-third Balneological Congress.
April 1st–7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
,, 14th–20th (Rome).—Seventh International Congress on Tuberculosis.
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

MONDAY.

ODONTOLOGICAL SECTION (Hon. Secretaries—W. W. James, Stanley Mummery): at 8 P.M.

Casual Communications:
Mr. Frank Coleman: (1) Fistula of the Antrum Closed by Sliding Bone Flaps; (2) An Important Sign in the Diagnosis of Fracture of the Jaw.

Paper:
Mr. A. H. Parrott: Local Anæsthesia with Special Reference to Injection Methods.

TUESDAY.

MEDICAL SECTION (Hon. Secretaries—Sir John F. H. Broadbent, Robert Hutchison): at 5.30 P.M.

Papers:
Dr. F. Craven Moore and Dr. H. E. Allanson: The Influence of Certain Accessory Food-stuffs on Gastric Secretion.
Dr. Parkes Weber: The Association of Hysteria with Malingering, and the Phylogenetic Aspect of Hysteria as Pathological Exaggeration (or Disorder) of Tertiary (Nervous) Sex Characters.

FRIDAY.

LARYNGOLOGICAL SECTION (Hon. Secretaries—W. H. Kelson, Dan McKenzie), at 11, Chandos-street, W.: at 4.30 P.M.

Cases
Will be shown by Dr. William Hill, Dr. Jobson Horne, Dr. Kelson, and others.

SECTION OF ANÆSTHETICS (Hon. Secretaries—Mrs. Dickinson Berry, H. J. Scharlieb): at 8.30 P.M.

Paper:
Dr. Dudley Buxton: Crawford W. Long, the Pioneer of Ether Anæsthesia. The Methods of 1842 and 1911. To be followed by Discussion.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8 P.M., Clinical Meeting. Cases will be exhibited by Dr. de Havilland Hall, Mr. Stebbing, Mr. E. M. Corner, Dr. W. Carr, Mr. D. Fitzwilliams, Mr. W. Low, and others.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith-road, W.

FRIDAY.—8.30 P.M., Dr. S. Taylor: Unrecognised Diphtheria.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. E. Dore: Clinique (Skin). 5.15 P.M., Lecture:—Dr. G. Oliver: On Prœdema and Nascent Œdema, their Detection and Treatment.
TUESDAY.—4 P.M., Dr. J. Taylor: Clinique (Medical). 5.15 P.M., Lecture:—Mr. J. E. Lane: Syphilis d'Emblée.
WEDNESDAY.—4 P.M., Sir A. Pearce Gould, K.C.V.O.: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. W. H. B. Stoddart: The Nature of Hysteria.
THURSDAY.—4 P.M., Mr. E. L. Evans: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. R. H. A. Whitelocke (Oxford): Treatment of Displaced or Injured Semilunar Cartilage of the Knee-joint.
FRIDAY.—4 P.M., Mr. K. Campbell: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. G. Stewart: Treatment of Organic Paralysis.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Pritchard: Clinical Pathology.
WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine. (Lecture IV.).
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. G. Stewart: Treatment of Hysterical Paralysis.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Disease.
SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 3.15 P.M., Special Lecture:—Dr. R. Wells: Modern Theories of Heart Disease.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Special Lecture:—Mr. Cantlie: Surface Anatomy.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Sir John Bradford: Epilepsy and Epileptiform Fits.
SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Pathological Demonstration (Dr. Duncan).
TUESDAY.—Clinic; 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld).; Surgical (Mr. Howell Evans); Gynæcological (Dr. A. B. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Mr. Howell Evans: Surgical Conditions of Antenatal Origin.
WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen): Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Pathological Demonstration (Dr. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. B. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappell). 4.30 P.M., Demonstration:—Dr. T. R. Whipham: Selected Cases of Children's Disease.
FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Pathological Demonstration (Dr. Duncan).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Inman: Secondary Infections in Pulmonary Tuberculosis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Mr. D. Armour: Surgery of the Nervous System.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Mr. C. Nourse: Accessory Sinuses.
FRIDAY.—3.30 P.M., Lecture:—Dr. W. Wingrave: Vaccines.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Dr. Sibley: Electrical Treatment in Dermatology.
THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell; Paratuberculides (due to Tuberculous Toxins)—I., Macular; II., Papular; III., Pustular; IV., Pigmentary.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Mr. E. S. Bishop: Urinary Surgery. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (29th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (30th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (2nd).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 22nd, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 16	29·55	S.W.	0·04	63	58	49	52	52	Cloudy
,, 17	29·24	S.W.	0·33	75	54	49	52	52	Overcast
,, 18	28·85	S.W.	0·23	51	48	46	46	46	Raining
,, 19	28·76	WNW	0·24	45	44	40	41	42	Overcast
,, 20	29·33	N.W.	0·40	54	48	40	43	44	Overcast
,, 21	29·57	N.	...	61	41	38	37	38	Overcast
,, 22	29·42	N.W.	...	45	40	32	36	37	Foggy

The following journals, magazines, &c., have been received:—Middlesex Hospital Journal, St. Thomas's Hospital Gazette, Annali di Medicina Navale e Coloniale, Office International d'Hygiène Publique, South African Medical Record, Canadian Practitioner and Review, Medico-Surgical Journal of the Tropics, British Journal of Dermatology, British Journal of Dental Science, Albany Medical Annals, Revue de Médecine, Revue de Chirurgie, Canadian Medical Association Journal, Cornell University Medical Bulletin, American Journal of Obstetrics, Journal of Tropical Medicine and Hygine, London Hospital Gazette, Journal of Obstetrics and Gynæcology, China Medical Journal, Transactions of the Society of Tropical Medicine and Hygiene, New Orleans Medical and Surgical Journal, American Journal of Surgery, Journal of Pathology and Bacteriology, Birmingham Medical Review, Science Progress, Symons's Meteorological Magazine, Transactions of the Ophthalmological Society of the United Kingdom.

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I.—International Congress of Entomology, Lond., Secretary of; Hon. Mrs. Ives, Halstead; *The Ironmonger*, Lond., Editor of.

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Two Lectures

ON

UNICELLULA CANCRI;

THE PARASITE OF CANCER.

Delivered before the Royal College of Surgeons of England

BY SIR HENRY BUTLIN, BART., F.R.C.S.,

PAST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; HUNTERIAN PROFESSOR.

LECTURE II.*—THE PARASITE OF CANCER.

MR. PRESIDENT AND GENTLEMEN,—It will now be convenient to consider how far the theory advanced in the previous lecture will account for the phenomena of malignant disease, as we know them in man and animals. Dr. Charles Powell White, in his lectures on the Pathology of Cancer,[1] says:—

> We can say, then, that cancer is not due to a specific parasite or parasites, but, on the other hand, we can say that cancer cells themselves act as parasites. This view will explain all the phenomena of cancer.

And Dr. James Ewing, in his Cancer Problems,[2] says:—

> The whole basis, objective and theoretical, of the cancer parasite has been traversed again and again, with the uniform conclusion of those who finish the journey that the cancer parasite is the cancer cell.

Dr. White's statement is general and sweeping, but I believe it to be in the main correct, although I am not aware of any detailed analysis on which it rests. So far as time will permit I propose to supply the deficiency.

There are two great phenomena of malignant disease (cancer) which overshadow all the others, and to which most of the other phenomena are subordinate, and on which they are more or less dependent: (1) the tumour and (2) the metastases. The tumour may exist without metastases, and there are reasons for believing that metastases may exist without the presence of a tumour.

1. THE TUMOUR.

The tumour is the primary disease, so far as we know it. Until a very few years ago the presence of a mass was regarded as an essential to the diagnosis of malignant disease. Now we know that the primary—the initial—lesion of cancer (I use the word as synonymous with malignant disease) may exhibit nothing more than a really trivial thickening of a small area of the skin or mucous membrane. From this trivial beginning arise all the various phenomena which go to make up the history of a case of cancer, and from it originate all the misfortunes and sufferings of the individual—the host. For, if this tiny area be examined with the microscope, it will be found to be composed of cancer cells, which are either massed together, as if without law or order, or which may, on the other hand, be arranged with singular and wondrous skill, so that the appearance of the disease may closely simulate that of a natural tissue or organ of the body. (Fig. 6.) There is also provision for the maintenance of the cells, in the form of vessels, and often of scaffolding or framework, in which the cells are arranged. And there are usually numbers of other cells—leucocytes, lymphocytes, granulation cells for the most part—in the outskirts of the tumour. So that the mass is made up of several elements, of which the essential element is the cancer cell. All the conditions connected with the tumour depend, directly or indirectly, on the behaviour of the cancer cells.

Phenomena of Cancer Growth.

The cells may fail to maintain themselves, in which case the tumour comes to an untimely end. They degenerate, shrink, waste, die, and are devoured by phagocytes. How often this happens no one can conjecture, but probably much more frequently than is supposed.† On the other hand, the cells may thrive, may grow and multiply, in which case the tumour extends its area. When it occurs in the substance of an organ, such as the breast, it may become quite a large lump, or if it occur in a limb around the bone it may attain an enormous size. Examine the structure of such a mass, and you will find that the cancer cells and framework have taken the place of the tissues which ought to be there. Fat, fibrous tissue, muscle, have disappeared, or are broken up and separated by groups and masses of cancer cells with their framework. Examine the tissues beyond the apparent limit of the tumour and you will often find isolated cells or groups of cells between the muscular fibres or in the minute or larger lymphatics.[3] (Fig. 8.) And you may find little

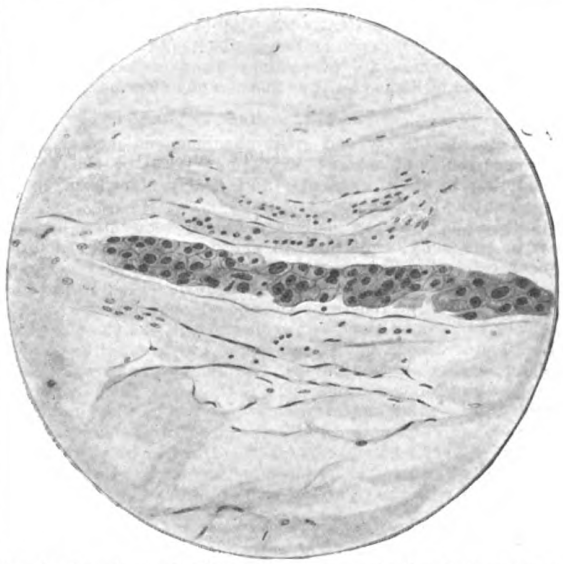


FIG. 8.—Lymph vessel filled with cancer cells (lymphatic permeation, from Sampson Handley), Cancer of the Breast, Pl. III, London, 1906.

masses of cancer cells projecting into the lumen of a blood vessel, the wall of which may be destroyed or still unbroken.[4] (Fig. 9).

These conditions are not discovered in all cases of malignant disease, even in all cases of the same variety of cancer of the same part of the body. In some cases not a single isolated cell or group of cancer cells will be discovered in the tissues beyond the apparent limit of the tumour. I do not say they are not there, but they are not recognised, so that they cannot be either large or characteristic. Where they are found, however, they may directly produce new phenomena, for a single cell or group of cells may grow to form a mass in the midst of the muscle or tissue where it lies.

Destruction of Natural Tissues.

The advance of the tumour is characterised by one great phenomenon—destruction. Every tissue which it attacks is destroyed, and replaced by the cancer cells and their suite. Hard tissues, soft tissues, vascular tissues, and tissues without vessels, are all destroyed—not all at the same pace or all precisely in the same manner. For such tissues as cartilage and elastic tissue resist the attack much longer than soft tissues, and even than bone. There is also indirect destruction of tissue whose nutrition is interfered with by the growth of the tumour. If the tumour makes its way towards the surface, the epidermis is raised and stripped off, and the mass of cancer cells is exposed. With the exposure of the cells a new series of events may be expected. Micro-organisms, bacteria and bacilli, gain access to the cancer cells. Sepsis, suppuration, ulceration, and sloughing take place, and the condition of the host is seriously prejudiced by these occurrences, which may even compass his death. Sometimes the tumour may shrink, and even when it is adherent to the skin may not break through. It undergoes atrophy from the wasting and death of the cells in its central parts. But it is not cured; for while the centre dies or withers the margin often flourishes and widens.

Resemblance to Attacks by Parasitic Protozoa.

In all these circumstances which attend the growth and development of the tumour there is nothing which

* Lecture I. was published in THE LANCET of Nov. 25th, 1911, p. 1457.

† Dr. Clowes spoke to me of this on the journey up from the meeting of the British Medical Association at Exeter in 1908, and suggested to me that recovery from an attack of cancer is probably not so very infrequent.

does not equally occur in the attacks of certain parasitic protozoa on their hosts—for instance, *Myxobolus cyprini* invades, destroys, and takes the place of the kidney epithelium of the carp; *Myxobolus pfeifferi* destroys and takes the place of the muscles of the barbel. It is the same story, common to both the cancer cells and to the protozoa which are not toxic—destruction of the natural tissues and their replacement by the cancer cells or parasite. And just as the masses formed by cancer cells are attacked by bacteria, and break down and ulcerate when they are exposed, so do the masses formed by *Myxobolus pfeifferi* break down from similar causes when they reach the surface of the body and are exposed. (Fig. 2.) All these phenomena of the tumour are perfectly intelligible if the cancer cell is accepted as an independent organism, pursuing the two great objects which are pursued by the parasitic protozoa—maintenance of itself and continuation of its species.

2. METASTASIS.

And now for the second great phenomenon—metastasis—the occurrence of masses in various parts of the body, resembling in their elements, and nearly always in their arrangement, the tumour.‡

Collections of cancer cells are found, sometimes in one part of the body, sometimes in another, composed, not of cancer cells of different varieties, but of cells of the same variety as those which compose the tumour. (Figs. 10 and 11, Figs. 12 and 13.) Wherever they occur they are associated with the same conditions as are observed in the tumour—the formation of vessels and a framework, and a satellite collection of other cells (leucocytes, lymphocytes, and the like). The grouping of the cancer cells is the same, the substances which they secrete, the degenerations which they undergo, the mode of reproduction—all are those of the cells of the tumour. Every metastasis is, as the Director of our Cancer Research has truly said, a reproduction of the tumour, and corresponds with the results of implantation.

Mode of Conveyance of Cancer Cells.

It is due to the presence of cells from the tumour in those parts of the body in which the metastases occur. On this matter there is practically no difference of opinion, nor is there any serious difference of opinion on the coarse mechanism of metastasis. The cells may be deposited on a surface which is constantly or frequently in contact with the tumour, may become fixed there, and may grow and multiply (auto-inoculation). They may be conveyed in the air or in the food, from the larynx to the lung, or from the stomach to the intestine, and may form metastases in either place. But these are exceptions to the general rule, and are of rare occurrence. The metastases which we see daily are due to the penetration of the cancer cells into the interstices of the tissues or into the lymphatic vessels, along which they spread, and to conveyance by the lymph and blood. They can often be easily demonstrated in the tissues, between the fibres of voluntary muscle, for example, and in the lymphatics. But it is well-nigh impossible to detect them in the moving blood and lymph, probably because it is the young and least characteristic cells which are conveyed, and there is so little to distinguish them by, especially when they are on the move. In spite of the absence of direct evidence the circumstantial evidence in favour of conveyance in the blood and lymph is so strong that it is not questioned, and I need not occupy time by repeating it.§

Variation in Number and Seat of Metastases.

Seeing the variety of the mechanism of metastasis, it is only reasonable to expect that there should be some variation in the number and seat of metastases. And so, indeed, there is. Sometimes the metastasis is limited to a single tiny nodule in a distant organ, sometimes to a few tiny nodules within a limited area; sometimes it is greater in bulk than the tumour, and sometimes it seems as if it had been scattered broadcast, without order or method. Nor is there greater uniformity with regard to time than in regard to seat and size. Metastasis may be present at the moment the tumour is discovered, or it may be deferred for years, or it may never occur in cases in which it ought to. No wonder such variations have been a puzzle to those who study cancer, particularly to the experimental investigators. It seems so inconsequent, so void of method, that it has led one of the most able investigators of the present day to aver that the study of cancer in man and animals is rendered peculiarly difficult by the extraordinary variety in the histology and clinical behaviour of the malignant new growths which attack them.[5]

Necessity for Separate Study of Each Variety of Cancer.

I do not agree with this statement. It rests on a misapprehension, on a false conception of cancer, on imperfect observation, and on the manner in which the life-history of cancer has been studied. If all varieties of cancer in all kinds of animals are studied higgledy-piggledy—squamous carcinomas, spindle sarcomas, spheroidal carcinomas, myeloid sarcomas—in man, and mice, and dogs, and rats, it is perfectly correct. It would be equally true of the parasitic protozoa if they were studied in similar fashion. If Sarcosporidiidæ, Myxosporidiidæ, Coccidiidæ were all jumbled together, and an attempt were made to describe the histology and clinical behaviour of the jumbled mass, the result would be confusion and profound perplexity. But no naturalist thinks of studying them in such a fashion. Each family is studied separately—not only each family, but each variety—and the characters and life-history of each is gradually deduced with clearness. Precisely the same method must be directed to the study of the organisms of cancer. Each must be studied separately. For more than 30 years I have insisted on the necessity of the separate study of each variety of cancer in the part in which it occurs.[6] And Mr. Stephen Paget more than 20 years ago, in an excellent paper in THE LANCET,[7] showed the necessity for this same separate study, particularly in relation to metastasis. To some extent this has been done by the clinical pathologists, and here are some of the results.

Some Characteristics of Different Types of Cancer Cells.

Take, first, a *round-celled sarcoma*. Let it be of the femur and subperiosteal. It grows very rapidly and is one of the most surely fatal of diseases. Amputate the limb above it, far above it, and take the bone out at the socket. It is, nevertheless, likely to return in the muscles of the stump. And even if it does not do so the patient will almost inevitably die from metastasis, even if the tumour was removed as soon as it was discovered.

Of all places the lungs are most likely to be the seat of the metastases. The femoral and inguinal glands are not usually affected. But metastases may occur in distant lymphatic glands, in the skin and subcutaneous tissue, in the liver—indeed, almost everywhere. Most of the patients are dead within a year or 15 months. And the instances in which a patient can be claimed to have been cured of this most terrible variety of cancer are so few that they can be counted in units.‖

Now, take a *spindle-celled sarcoma* of the testis—also a very deadly disease, but not to be compared in this respect to subperiosteal sarcoma of the femur. It forms a tumour, often large, in the cavity of the scrotum. It is easy to remove it, and there are many instances in which there is no recurrence in the stump and the patient is cured by the operation. But there are many more cases in which, at the end of an indefinite period—perhaps a year, two years, or more—a mass is discovered in the abdomen, which grows until it kills the patient. It is formed by metastasis in the glands, in the liver, and other viscera of the abdomen.

Take a *spheroidal-celled carcinoma* of the breast. The metastases will occur first and chiefly in the glands of the axilla, then in the liver and lungs, but particularly in the liver.[8] They may attack the bones—the sternum, the humerus, the femur, and the vertebræ—particularly the vertebræ of the lumbar region. And if the disease recurs

‡ Almost all the knowledge we possess of metastasis—in any case, the useful knowledge—is the result of clinical pathology, not of experimental observation or of laboratory investigation. This is, in itself, so good an excuse for the continued pursuit of clinical pathology and so admirable an illustration of its use that it alone would suffice to encourage clinical pathologists and to furnish proof that the day of clinical pathology is far from set.

§ There is really only one point on which there is grave doubt—whether the cancer cells are mere passive bodies in their migration or whether they are active agents (Bland-Sutton, Clinical Journal, 1910). As this does not affect the argument it is not necessary to discuss it now.

‖ Dr. Coley claims to have cured some cases of subperiosteal sarcoma of the femur by his injections. We have not been very successful in this country, and I only hear of a very occasional success from the use of Coley's fluid. But it is probable Dr. Coley and his pupils are more skilled in the management of the fluid than the English and continental surgeons.

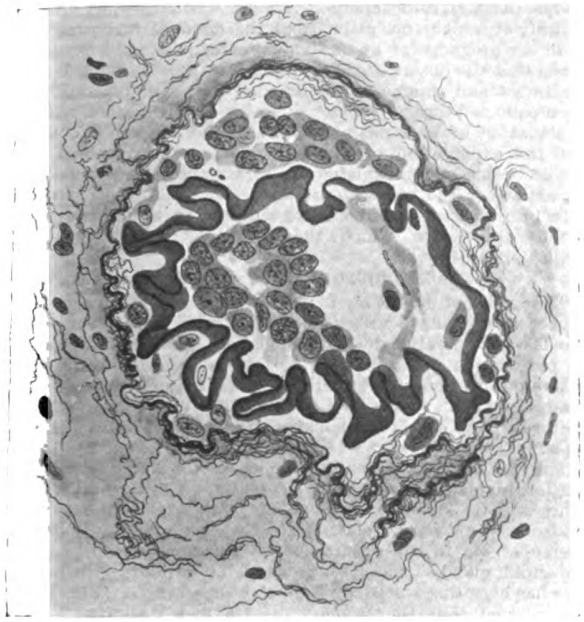


FIG. 9.—Cancerous infiltration of vessel wall (E. E. Goldmann). Studien zur Biologie der Bösartigen Neubildungen. Taf. IV., Tübingen, 1911.



FIG. 11.—Glands removed from same case (10)—duct cancer—at same time.

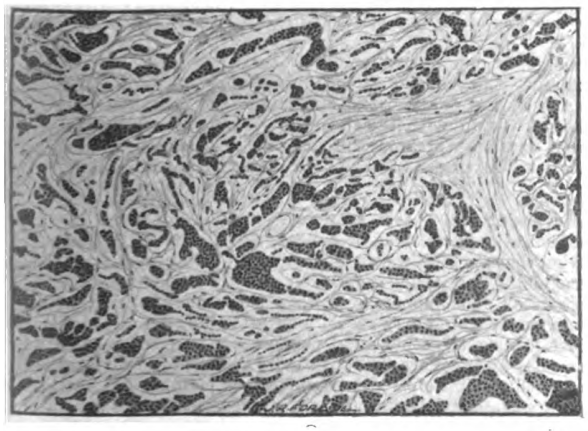


FIG. 13.—Recurrent nodule removed from muscle of same case (12). Removed October, 1900; patient well in 1906.



FIG. 10.—Duct cancer of breast.

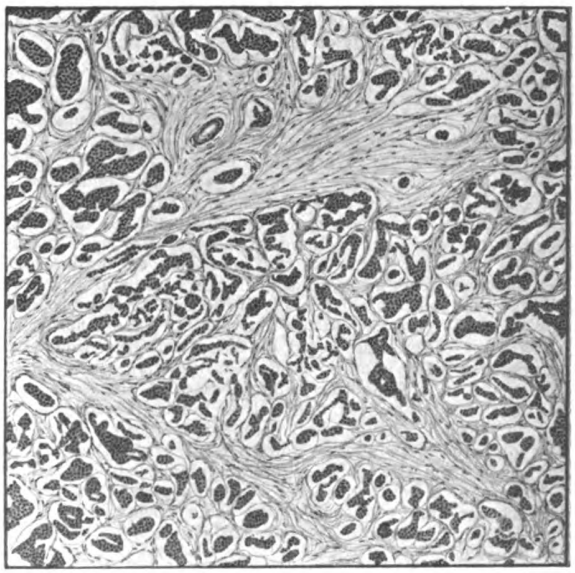


FIG. 12.—Spheroidal carcinoma of breast, removed December, 1896.



FIG. 14.—Squamous-celled carcinoma of the groin glands of a chimney-sweep, in whom no primary disease was discovered. This case is published by Dr. John Stacy, of Norwich, in the British Medical Journal, 1892, vol. ii., p. 578. After the death of the patient Dr. Stacy sent me slides cut from the glands. I do not know whether any similar case has been drawn.

in situ, it frequently forms numerous little flat nodules or plaques in the skin and subcutaneous tissue.¶ If the breast and glands are removed there may be no distant metastases. But the pathologist would be a bold or ignorant man who would assure the patient that the disease would certainly be cured by the operation. Again, take a *columnar-celled carcinoma* of the rectum. The metastases will be in the abdominal lymphatic glands and in the liver, in preference to any other part.

Take *squamous carcinoma* of the tongue, where the limitation of metastasis becomes much more restricted. It takes place in the neighbouring lymphatic glands, and sometimes in the glands on the opposite side of the neck. If the primary disease and the glands are successfully removed, so that there is no recurrence in tongue or glands, there is so little likelihood of distant metastases that they are practically left out of the account. The possibility is admitted, but the event is so infrequent that we do not fear it.

Finally, take *rodent ulcer* of the face. The extension of the disease beyond its apparent limit—the destruction effected by the cells—their tenacity of life and power of multiplication—have long assured for rodent ulcer a place among the malignant tumours. But the cells of which it is composed seem to be quite incapable of flourishing in any other parts than the immediate neighbourhood of the tumour, and there are no metastases. I do not say that metastasis never takes place, but it is so rare that its occurrence is not provided for in the pathology of the disease.

Similarity of Courses run by each Variety of Cancer.

Every case of a particular variety of cancer of a particular part of the body does not run precisely the same course as every other case of the same variety of cancer of the same part. Nor does every case of parasitic protozoon of a particular animal run precisely the same course as every other case of the same protozoon in the same animal. But compare a hundred cases of squamous carcinoma of the tongue with another hundred cases of the same disease of the same part, and let the conditions be similar for each hundred cases as regards operation, &c., and I venture to say that the resemblance of the second hundred to the first hundred cases would be marvellous. I am sure that no greater differences would be discovered than would be discovered if one hundred cases of *Sarcocystis miescheriana* were compared with another hundred cases of the same parasite in the same animal, and not so much difference as would be found if one hundred cases of *Myxobolus pfeifferi* were compared with another hundred cases, but the barbel were taken from two quite different streams. In the same way compare a hundred cases of carcinoma of the breast with another hundred cases of the same variety of carcinoma of the same part, and see how little difference there will be between them.

When studied in this fashion the results are so constant that we, the surgeons, presume upon them. We trade on them. We do not remove the lymphatic glands in cases of rodent ulcer because we are confident, however long the disease has existed, the glands will not become diseased. And we are equally confident that there will not be metastasis in any other part of the body. We remove the primary tumour and the associated glands for squamous carcinoma of the tongue, with the full assurance that if the operation is successful in preventing occurrence or recurrence in those structures, we shall save the lives of many of our patients. We amputate the breast, remove the muscle and the contents of the axilla, and dissect away wide areas of the fascia for spheroidal carcinoma. When the disease is not extensive or rapid in its course we expect to save the lives of more than half our patients. But we have not the same hope of the result of a successful operation as we have if the operation is successful in rodent ulcer or in squamous cancer of the lip. For the spheroidal cell may thrive and multiply in the liver, the lungs, and bones. And this may happen five or six or more years after the successful removal of the breast and the associated structures.**

So with regard to other varieties of cancer in various parts of the body. In all cases our treatment is adapted to what we know, or believe we know, of the course of that particular variety of cancer in that particular part of the body. And if it be charged against us that we are often wofully at fault in our estimate of the effect of an operation or in our prognosis of an individual case, it must be remembered that the observations on which our present methods of treatment and prognosis are founded have all, practically, been collected during the last 40 years or little more. The explanation of metastasis is migration of the cancer cells, and the explanation of the seat of metastatic tumours is precisely that which explains the occurrence and seat of the metastases of the parasitic protozoa—the penetration of the cells into those places which are suitable to their existence—those places in which they can live and thrive and multiply.

SOME PHENOMENA OF CANCER.

Time will not permit me to deal with all the phenomena of cancer as they have arisen before my mind in the course of the last few months, during which these lectures have been in preparation. I shall have to reserve some of them for future publication, and I shall also have to reserve the consideration of this theory as a working theory of cancer. But there are two or three phenomena to which I should like to refer.

The first has puzzled many pathologists for many years. I tried to explain it more than 20 years ago with indifferent success.[9] It is the occurrence of metastases without the evidence of primary disease. The best examples of it have been observed in the occurrence of squamous carcinoma of the groin glands in sweeps, in whom no primary growth or sore has been discovered by competent observers. (Fig. 14.) I suggested that the primary disease had "aborted"—in other words, got well—but not before some of the cells containing the material of cancer had been conveyed to the lymphatic glands. My explanation was very near the truth. That cancer should "abort"—get well—was not much in the minds of pathologists 20 years ago. To-day everybody knows that it does get well, both in animals and human beings,[10] and many of us are prepared to believe that it gets well much more commonly than we know of at present. But in these cases before it does so some of the cancer cells have already migrated to the groin glands and have made good their footing there.

The occurrence of ossification, calcification, and chondrification in many of the sarcomata, is a phenomenon which has never puzzled me when the tumour is connected with a bone, or when the metastasis is of a tumour growing from a bone. It seems natural—only what might be expected—that the framework of such tumours should contain bone or cartilage. But I confess it has puzzled me when the tumour is of a part which has no connexion with bone or periosteum. For instance, such a tumour is sometimes—though very rarely—found in the female breast. Why should cells derived from the glandular or connective tissue of the breast command a framework or scaffolding in which bone or cartilage cells are prominent constituents? Bashford explains it on the grounds that such conditions occur in association with inflammatory processes. He shows how frequently it occurs in mammary tumours in the dog, and says:

> It seems to demonstrate that the connective tissue of the dog is very liable to such metaplastic changes, just as the connective tissue of the rat or of the mouse is liable to the changes characteristic for these animals.[11]

There is one phenomenon of cancer which no theory explains—the constancy with which spontaneous cancer begins at one point instead of many. It can scarcely be made to fit in with the theory of "removal of restraint," but it does not threaten the stability of this, or many other theories. At present I have no explanation to offer of it.

APPLICATION OF THEORY.

Reviewing, in a few sentences, the application of this theory to the phenomena of cancer, I will not undertake to affirm that all the known phenomena of cancer can at once be explained by it, but it *does* offer a ready explanation of the first great phenomenon of cancer—the tumour—and of all the changes which may occur in it. It offers an explanation of metastasis, the other great phenomenon of cancer; of the reasons why it occurs; why it occurs in one place rather than in another; of deferred metastasis; of metastasis without primary tumour. In fact, it explains so simply so many of the phenomena of cancer that it is necessary to make diligent search to discover the two or three phenomena which are

¶ The mechanism of these metastases has been very well described by Mr. Sampson Handley in his book on Cancer of the Breast.

** In speaking of "successful operations" in the preceding paragraphs, I hope it will be understood that I am only referring to the success of the operation in preventing recurrence in the parts which were diseased.

not explained by it. And of these it may be said that there is not one of them which endangers the acceptance of the theory, and that they are equally inexplicable by any other theory which has yet been advanced. It fulfils also the conditions laid down by a writer in the *British Medical Journal*,[12] who pointed out that, to make my case good, my parasite must be tried by the laws laid down by Koch—to wit, "A specific micro-organism must be constantly associated with a given disease; it must be isolable and studiable apart from the disease, and when introduced into a healthy animal it must be able to reproduce the disease in that animal, and in the animal in which the disease has thus been experimentally reproduced the organism must be found under the original conditions." It fulfils these conditions with a fidelity which is remarkable. The only one of them on which any dispute could arise would be whether the cell is "isolable and studiable apart from the disease" in the sense in which Professor Koch used the expression. If that is all that is lacking we are not likely to have to wait long for it. Indeed, Carrel and Burrows maintain that they have already solved that problem in the Rockefeller Institute of Medical Research.††

I now come to the last part of my task:

WHERE DOES THE CANCER CELL COME FROM?

Six years ago[13] I summed up the evidence in favour of the only two views which could reasonably be put forward: *Entrance from without* or *formation within* the body; and came reluctantly to the conclusion that the evidence of "formation within" was stronger than the evidence in favour of "entrance from without." I say "reluctantly," because it led to the logical conclusion that new species of living creatures are created from a source and in a manner which has never hitherto been imagined. Nevertheless, during the last six years the evidence in favour of "formation within" the body has grown steadily stronger, while nothing has been added to the evidence in favour of "entrance from without."

Evidence of "Formation within" the Body of Cancer Cell.

I cannot stop to dwell on the points of each piece of evidence, but must content myself with enumerating them:—1. The resemblance of the cancer cells to those of the natural tissues in which the cancer appears to start. 2. The resemblance of the secretion of the cancer cells to the secretion of the natural cells. 3. The resemblance of the degenerations of the cells to those of the normal cells (fatty, caseous, calcareous, &c.). 4. The resemblance of the grouping of the cells to the grouping of the natural cells. 5. The resemblance of the phenomena of reproduction in the cancer cells to those of the natural cells which they resemble. All these may be regarded as traits of atavism, and it is upon these that the explanation of some of the phenomena of cancer rests.

Explanation of Conduct of Cancer Cell.

Students of cancer, research workers, biologists who have studied cancer, are all practically agreed that the cancer cell is derived from the cells of the part in which it takes its origin, or appears to take its origin, and they are bent on finding an explanation of the reasons which lead the cancer cell to behave so differently from the cells from which it is derived. Escape from natural restraints—the acquirement of the habit of growth—the theory of embryonic rests—chemical stimulation—a self-contained and ordinarily invisible micro-organism living in symbiosis with the cell—these are some of the theories by which learned men have sought to explain the strange conduct of the cancer cell.

Empty phrases! They might account for variations in colour, size, shape, secretion, degeneration, physical activity—for a multitude of the variations from the normal cell exhibited by the cancer cell—but how can any of them account for the vital difference which I will express in two short sentences? Implant the normal cell, and you cannot make it live. Implant the cancer cell, and you cannot kill it.

There is one, and only one, explanation of the conduct of the cancer cell—that it has been endowed with that wondrous gift which no man has seen and which no man can understand—the gift of life; and that, owing to that gift, it has become an independent creature, a new creation of living thing. The host in which it dwells has fashioned it out of his own tissues and in the likeness of his tissues and, to borrow the figurative language of Scripture, the Creator has breathed into it the breath of life, and it becomes a veritable Frankenstein's monster, bent on the destruction of its host. After ages of past and present civilisation, during which searchers and philosophers have sought to explain the origin and nature of life, we have come no further than this, and he who discovers the true origin of cancer will have solved the enigma which has hitherto baffled the searchers and philosophers in all ages and of all countries.‡‡

"*Unicellula Canori.*"

If the cancer cell be in truth a new creature, to what class of creature does it belong? It is nearest to the protozoa—so near, indeed, that it is difficult to keep it out of the protozoa. Every new observation of the last six years—every new discovery—has brought it nearer to the protozoa. But the biologists will have none of it. I must therefore make a special place for it and provide it with a name. It shall be *Unicellula canori*. And for the different varieties the shape of the cell can be expressed in simple terms which will be familiar to us all. On the one hand, *Unicellula* (*canori*) *squamosa*, *Unicellula spheroidalis*, &c.; on the other hand, *Unicellula* (*canori*) *fusiformis*, *Unicellula rotunda*—and so on. These names will serve still, even if the cells eventually join the great phylum of the protozoa.

I am perfectly conscious of the far-reaching consequences of admitting that unicellular bodies derived from such a source are a new species of created beings, but there is no alternative. The facts are plain, and cannot, I believe, be otherwise interpreted. If the theory is false, I can only say it is very remarkable that it should explain, in so satisfactory a manner, the chief and nearly all the subordinate phenomena of cancer.§§

A Parable.

In conclusion, I should like to tell you a parable. A learned professor, walking in the desert, observed a curious little object on the ground. It had a rounded snout and flattened head, large eyes, a flattened body, short fore-legs and very long hind-legs. It sometimes walked and sometimes jumped. The professor asked whence it came, and it replied: "I am a child of the desert, born of the grains of sand." This astonished the learned man. He took it home with him, and called together many of his friends, and set the little beast in their midst. They all looked at it, and said it must be a frog, for it looked like a frog, and behaved like a frog, particularly in its ability to jump. But when they heard its origin they were all amazed, and each one gave his explanation of the occurrence. One said, "It is a changeling; it is not what it looks to be." Another said, "It was surely made to swim, for its feet are webbed, and having no water to swim in it has acquired the habit of jumping." A third said, "It has been gingered." A fourth said, "Some restraint must have been taken off it to enable it to jump." And the professor himself said, "No, it has a flea inside which lives within it as its familiar spirit, and that gives it the power of jumping." Then the professor said to the little object: "We are very sorry for you. You are neither animal nor vegetable, for neither animal nor vegetable can be created from the sands of the desert. There is, therefore, no place for you among living creatures." The little creature jumped and crawled away. But as it did so it looked back at the group of learned men, and said: "There is no place in the living world for me owing to the misfortune of my birth. Thank you, gentlemen, but I have already found a place for myself, and you will find it very difficult to oust me from it."

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†† Alexis Carrel and Montrose Burrows, Journal of the American Medical Association, 1910, vol. lv., pp. 1379, 1554, 1732. Mr. Arbuthnot Lane told me he had seen the specimens of growing sarcoma cells in the Rockefeller Institute.

‡‡ "No power of genius has ever yet had the smallest success in explaining existence."—Emerson, Representative Men. London: Macmillans, 1893, p. 314.

§§ Mr. Darwin, in the last chapter of the Origin of Species, says: "It can hardly be supposed that a false theory would explain, in so satisfactory a manner as does the theory of natural selection, the several large classes of facts above specified. It has recently been objected that this is an unsafe method of arguing, but it is a method used in judging of the common events of life, and has often been used by the greatest philosophers."—Origin of Species, sixth edition London, 1889, p. 421.

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THE FIRST AND LAST KINK IN CHRONIC INTESTINAL STASIS.[1]

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I AM very conscious of the honour you have done me in asking me to address you on this occasion. I have chosen the subject of chronic intestinal stasis since it has occupied my attention for many years, and because it promises to throw a great light upon disease. The causation of intestinal stasis, its symptoms, and the deleterious influence it exerts on the several tissues of the body, are full of interest for us. In a communication of this sort one must necessarily go over much material recapitulated many times before, but this is, I fear, unavoidable in the circumstances.

By chronic intestinal stasis I mean such a delay of the contents of the gastro-intestinal tract as involves the absorption into the circulation of a quantity of toxins greater than can be dealt with effectually by the organism. This condition of defective drainage may affect any portion of the gastro-intestinal tract, and in a degree which varies considerably with the locality of the obstruction. While the delay may be general there is usually one point where the obstruction is more marked than elsewhere. Sometimes the obstruction may be definitely local It is purely mechanical in character. In early life it is produced by abnormal distension of the intestine as a consequence of too frequent feeding and of unsuitable articles of diet. Later it is determined and exaggerated by the erect posture of the trunk, which in our state of civilisation is constant during our waking hours.

I wish now to call attention particularly to the great importance of the last kink or obstruction which is developed in our drainage scheme and which affects the large bowel where it crosses the brim of the true pelvis on the left side. The fuller recognition of the function of this kink, the lowest in position, has helped me to understand the physiology of the large bowel both in the savage and civilised communities. It has also enabled me to deal surgically with the conditions of defective drainage of the intestine more effectually and at less risk to the life of the individual than I was previously able to do. This kink develops very early in life; indeed, I believe the bands which form on the outer surface of the mesentery of this portion of the large bowel, and which, like all the other acquired mesenteries and adhesions, are the crystallisation of lines of resistance to downward displacement, are the earliest to form in the body. They appear before the erect posture is assumed. I have found them excellently developed in a child 2 years of age whom I short-circuited for extensive tuberculous disease of the hip-joint. This band obviously develops in order to resist the tendency to the downward displacement of the large bowel into the true pelvis, where it would seriously incommode the functioning of the several organs which already occupy it. As this new band or mesentery contracts and becomes a definite ligament quite distinct from the normal mesentery, on whose outer aspect it exists, it fixes the large bowel securely at this level and performs a function of the greatest importance. It is so arranged as to oppose the backward passage of fæces from the pelvic colon upwards into the large bowel, which is likely to take place if this kink or obstruction is not efficiently developed. It is often supposed that fæcal matter moves continually onwards in its progress through our intestines. That this is not always so is shown exceedingly well in those cases in which this particular kink or obstruction is not developed.

When I first performed ileo-colostomy for chronic intestinal stasis I divided the ileum and put it into the sigmoid loop, as it was usually the portion of the large bowel most readily and safely adapted for the performance of this operation. At the same time I took great precautions to free that obstruction at the pelvic brim to which I have just called your attention by dividing the new mesentery and by suturing it over in such a way as to try to obviate its re-formation. This operation was frequently followed by the passage of material back along the descending, transverse and ascending colon to the cæcum, often necessitating the removal of the large bowel at a later date. Owing to the recognition of this fact I then removed the large bowel down to a level of the junction of the ileum with the sigmoid, performing both operations at the same time. The only objection to this operation was the occasional development of adhesions between the small intestine and the abdominal parietes. When these adhesions develop they are liable sooner or later to cause symptoms of obstruction, as manifested chiefly by pain and distension. If it were not for the occasional development of these inflammatory adhesions the operation of the removal of the large bowel would be accompanied by little or no risk.

It was clear that if I could obviate the back flow of fæcal matter into the large bowel above my junction I would avoid the removal of the colon in a great number of cases and reduce very materially the risk of the operation. I then determined to effect a communication between the ileum and the large bowel in the true pelvis below the level of the last kink. This I found most successful. In many cases the operation was very easy to perform, since, in a large number of cases, the stasis is due chiefly to a progressive elongation of the pelvic colon. This elongated rectum puddles in the floor of the pelvis, and its contents are expelled with the greatest difficulty by any increase of the intra-abdominal pressure, however great the expulsive effort, since it acts at such a mechanical disadvantage. In consequence of this arrangement the rectum elongates very considerably. In a child operated on for extensive tuberculous disease of the hip the loose pelvic colon measured about 39 inches.

I believe that no one can become affected by tuberculous disease or by rheumatoid arthritis unless the resisting power of the individual to the entry of organisms has been depreciated by auto-intoxication consequent on the presence of chronic intestinal stasis. So in these conditions, and especially in the case of progressive tuberculous affections of joints, I employ no local operative procedure to the affected joint other than rest, and, if necessary, aspiration of any fluid material that does not readily become absorbed after the operation, but proceed to free the patient of the auto-intoxication by putting the ileum into the pelvic colon below the kink at the brim of the pelvis. In these cases the results of the operation have been most successful and the patient has improved both locally and generally. In one case we were surprised to find that the weight of the patient did not increase nor the local trouble improve in the marked manner we were accustomed to expect. The causation of this was readily determined by the X ray examination of the child after the administration of four ounces of bismuth by the mouth.

The systematic examination at frequent intervals of the patient by means of X rays after the administration of six ounces of carbonate of bismuth by the mouth in the adult and of four ounces in the child, is performed in every case before and after operation, every precaution being taken to render the state of the patient as normal as possible. In the case of the tuberculous child which obtained but little benefit for a period from ileo-colostomy, it was found that the fæcal material reached the rectum in the normal time. It accumulated there for a time, but instead of being evacuated a portion commenced to ascend the large bowel, some of it going as far as the cæcum. It was noted in this case at the time of the operation that the acquired band of peritoneum which produces the kink at the pelvic brim had not developed. It seemed as if the child could not be effectually relieved of the auto-intoxication from which she suffered unless the large bowel were removed, or a kink made artificially in its normal position by means of a running suture. Fortunately a regular evacuation of the rectum was obtained by the employment of a glycerine enema and a small quantity of aloes, and we hope in this way to educate the rectum to evacuate its contents, and so obviate the auto-intoxication kept up by the regurgitation of fæces into the large bowel.

I learnt from this case that the kink not only affords an obstruction to the downward passage of fæces from the sigmoid into the rectum, but that its chief action is to

[1] A paper read before the Derby Medical Society on Oct. 17th, 1911.

obviate the ascent of fæces from the rectum, which, I believe, occurs normally to a considerable extent in many people. I have found many patients complain that if they are prevented from evacuating the bowel when they feel the desire they are unable to do so for a long time, sometimes not till the usual time next day. I think it probable that an X ray examination with bismuth will show that in these cases fæces ascend from the pelvic colon into the sigmoid. I therefore determined that when the acquired ligament was absent or imperfect I would construct such a kink having the same position as the acquired band. This I have done by means of a suture passed through the outer wall of the bowel, through the mesentery and through the peritoneum of the iliac fossa. This has enabled me to deal with such patients effectually without exposing the patient to the added risk entailed by the removal of the large bowel.

While in these tuberculous cases the establishment of a direct junction of the end of the ileum with the side of the rectum is performed at little or no risk, and with considerable facility once the details of the operation have been mastered, the formation of the same anastomosis in the case of an adult, especially in a fat male subject in whom the rectum is fixed firmly to the wall of the pelvis and has no sort of mesentery, may be one of the greatest difficulty.

The accurate closure of the peritoneal interval between the ileum and the rectum is a matter of vital importance. I did not at first recognise the necessity of shutting off this interval. It seemed to me that the space between the two intestines was so great that no obstruction could arise however much bowel passed through it. I found that in some cases the operation was followed by frequent motions. This is most unusual, since, owing to the tenuity and laxity of the intestinal walls, it is not infrequently necessary to use paraffin or a drug to obtain a daily evacuation. On opening the abdomen I found that the prolapse of the small intestine into the pelvis had produced a torsion on its long axis of the terminal portion of the ileum where it entered the side of the rectum. This reduced its lumen and so produced the disability which led to frequent and painful evacuations. The closure of the interval between the intestines at once removed the trouble and restored the patient to comfort.

An œsophageal tube is passed up the rectum into the ileum through the junction. This by facilitating the passage of fæcal matter through the junction and by draining the small intestine of its gaseous and fluid contents has served to reduce the risk of this operation to a minimum. It is fastened in position by a suture which in the female is best passed through the back of the labium, since this part is much less sensitive than the skin in the vicinity of the anus. It is retained in position for six days.

As soon as the anæsthetic is commenced several pints of normal saline solution are introduced into the subcutaneous tissue of the axillæ. The absorption of this fluid serves to raise the blood pressure, and so reduce any shock to a minimum. Probably for the same reason the operation is very rarely followed by vomiting. It also serves to nourish the patient till food can be readily taken. It can be repeated without discomfort if necessary. The young child apparently sustains no shock whatever from the operation, and as soon as the period of anæsthesia is passed a distinct improvement in the child's mental condition is patent to everyone. (At the Hospital for Sick Children, Great Ormond-street, where we do a number of these operations on patients suffering from progressive tubercle, and who are distinctly on the down grade, the degree of stasis is determined by bismuth in every case before and after operation. These with the weight charts afford excellent evidence of the benefit resulting from the altered drainage. These are being collected and classified by Mr. Barrington Ward, the medical superintendent. The X ray photographs are taken by Dr. Ironside Bruce.) The bowels act regularly; the appetite improves wonderfully. An appearance of health replaces that of disease, and the weight of the patient goes up in a remarkable manner.

I think I need hardly remind you of the influence exerted by the auto-intoxication of chronic intestinal stasis in the circulatory and cerebral system, as well as on all the tissues of the body. I would allude particularly to the influence on the female breast. I regard the degenerative condition of that organ as manifested by induration, cystic change, &c., as a barometer of the degree of stasis in the individual. The degree of this degenerative change is influenced very materially by the colour of the hair and by the amount of absorption of prostatic secretion. The great importance of this latter factor is one that will sooner or later be impressed on the mind of the profession. I am uncertain whether the administration by the mouth of prostatic extract is likely to afford a result similar to that produced by thyroid extract. It is made in tabloid form by a firm in Chicago, and it is used very largely in the United States and elsewhere. Time will show whether this method of introducing the very stimulating extracts of this organ is of service or not. I have no doubt whatever that these degenerated breasts are very liable to develop cancer. I have found multiple foci of cancer in such degenerated breasts in cases of chronic intestinal stasis in which there was no reason whatever to suspect their presence.

That many find a difficulty in realising the causal relationship of chronic intestinal stasis with these breast conditions and other similar conditions is well illustrated by the elaborate report presented to the International Congress at Brussels by the distinguished French surgeon Paul Segond.[2] While accepting the general principles laid down he takes some exception to the causal relationship of intestinal stasis to what I would call "end results." Dr. F. Lejars also discusses the subject at length.[3] The views he expresses are in accordance with those of Segond. He refers very largely to a very careful study[4] of 50 cases of chronic intestinal stasis made by Mr. Harold Chapple. Mr. Chapple had assisted at a considerable number of these operations, and he had himself thoroughly investigated the career of each up to the date of publication. These form only a portion of the number of cases I have operated on, but they were the only ones that he was at that time able to see and investigate personally. He has also published an account[5] of several cases of progressive tuberculous disease treated by ileo-colostomy.

Before leaving the subject I would remind you of the obstruction that so frequently develops in the end of the ileum and which plays such an important part in the production of the group of symptoms which are regarded by the physician as evidence of indigestion. This so-called indigestion is entirely and solely mechanical in its origin and is chiefly due to the development of this obstruction at the end of the ileum. Besides the minor effects of the damming back of contents resulting from this kink we have the development of the duodeno-jejunal kink, the dilatation and inflammation of the duodenum, the dilatation and inflammation of the stomach, which not infrequently leads to the development of cancer of this organ, the infection of the biliary and pancreatic ducts, followed by the formation of gall-stones, pancreatitis, and by cancer of the biliary ducts and pancreas. This explanation of the causation of duodenal ulcer, &c., shows the futility of gastro-enterostomy except for mechanical obstruction.

I have dealt with this kink and its consequences in several papers,[6] and Dr. Franklin Martin[7] and Dr. Charles Mayo[8] have also published their observations on the subject. The latter paper contains beautiful illustrations of the condition, and I cannot close these remarks without acknowledging the very valuable assistance we have received from Dr. A. C. Jordan, who has done much excellent work in tracing bismuth meals by X rays through our patients. He has written two papers[9] which deal very fully with many of the appearances in chronic intestinal stasis.

Cavendish-square, W.

[2] Le Traitement Chirurgical des Colites Chroniques, par Paul Segond, Professeur de Clinique Chirurgicale à la Faculté de Médecine.

[3] La Stase Intestinale Chronique, par Dr. F. Lejars, Professeur agrégé à la Faculté de Médecine de Paris. La Semaine Médicale, May 24th, 1911.

[4] Chronische Darmstase, behandelt mittels Kurzer Zirkularer Umschneidung oder Kolektomie. H. Chapple, Berliner Klinische Wochenschrift, April 24th, 1911. Chronic Intestinal Stasis Treated by Short-circuiting or Colectomy: A Brief Study of the Life Histories of 50 Cases. H. Chapple, Brit. Med. Jour., April 22nd, 1911.

[5] A Consideration of Some Cases of Advanced Tuberculous Joints Treated by Ileo-colostomy. H. Chapple, THE LANCET, April 29th, 1911.

[6] The Kink of the Ileum in Chronic Intestinal Stasis, THE LANCET; Distension Changes in the Duodenum in Chronic Intestinal Stasis, Surgery, Gynæcology, and Obstetrics, March, 1911; The Kinks which Develop in Our Drainage System in Chronic Intestinal Stasis, Brit. Med. Jour., April 22nd, 1911.

[7] The Significance of the Lane Kink of the Ileum, Surgery, Gynæcology, and Obstetrics, January, 1911.

[8] Intestinal Obstruction Due to Kinks and Adhesions of the Terminal Ileum, ibid., March, 1911.

[9] Radiographic Demonstration of Lane's Ideal Kink, Practitioner, April, 1911; Duodenal Obstruction as Shown by Radiography, Brit. Med. Jour., May, 20th, 1911.

THE ASSOCIATION OF HYSTERIA WITH MALINGERING:

THE PHYLOGENETIC ASPECT OF HYSTERIA AS PATHOLOGICAL EXAGGERATION (OR DISORDER) OF TERTIARY (NERVOUS) SEX CHARACTERS.[1]

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HYSTERIA was at one time, as the derivation of the word from the Greek ὑστέρα (uterus) shows, regarded as a disorder connected with the female sexual organs, but the frequent occurrence of similar symptoms (hysteria being sometimes as pronounced in males as in females) has long since proved that the idea of the exclusive connexion of hysteria with the female sexual organs is absurd.

Phylogenetic Aspect of Hysteria.

Sex characters may be divided into: (1) primary, those concerned with the sexual organs; (2) secondary, those concerned with the breasts, the facial hair, the features, the voice, the form of the skeleton (e.g., the shape of the pelvis and the cubital angle of the outstretched upper extremity), the development of the skeletal muscles, and the general conformation; and (3) tertiary. By tertiary sex characters I mean those dependent on the nervous system, including both characters of instinct and characters of mind (reasoning). Such nervous characters, unlike primary sex characters, are not the exclusive property of either sex; they are called male or female characters merely accordingly as they predominate in one or the other sex. From the phylogenetic point of view I believe that hysteria, or rather much of what is now grouped together as hysteria, may be regarded as a pathological exaggeration (or disorder) of certain tertiary (nervous) female sex characters.

According to this (phylogenetic) conception the exaggeration (or disorder) of so-called tertiary female sex characters in the male would account for occasional cases of "male hysteria." I am not here concerned with the temporary "hysterical" conditions not rarely observed in the male as the result of violent emotions, starvation, and grave nutritive disturbance, or as forming a familiar part of the effect of certain toxic substances such as alcohol. The phylogenetic aspect of hysteria is, as far as I can see, not necessarily opposed to Pierre Janet's, Babinski's, and some other modern views on the subject.

Pathomimia.

I shall not trouble to bring forward any special evidence here to prove that ordinary hysterical symptoms are frequently associated in the same patient with attempts to simulate disease, accident, or injury, and with deception of all kinds ("mythomania," &c.). The fairly frequent occurrence of such association is recognised by all; so much so, that in a recent paper on Hysteria and Mythomania Dupré and Logre quote Hartemberg as maintaining that hysteria (which Charcot called "la grande simulatrice") "est d'essence mythopathique; elle peut se définir la *mythomanie des syndromes*."[2] Moreover, the frequent use of the term "hysterical malingering" or "hysterical simulation" proves that the occurrence of such associations is generally acknowledged.[3] In fact, hysteria is frequently characterised by two kinds of simulation of disease, or "pathomimia," if I may be allowed to borrow a term suggested by Paul Bourget for his friend Dr. Dieulafoy, who employed it in one of his most sensational medical communications:[4] (1) the unconscious mimicry of disease, so well referred to in the writings of Charcot, Sir James Paget, &c.; and (2) the conscious, more or less voluntary, imitation of disease that may be termed "hysterical malingering."

Hysterical Malingering.

I need simply explain my conception of hysteria and my view of the kind of simulation so frequently associated with it ("hysterical malingering") in order to show what I believe to be the pathological connexion between the two, though it is possible that some of the multitudinous morbid phenomena which have been described by various authors as "hysterical" may find no place in my scheme. To avoid confusion I shall refer only to such universally recognised features or symptoms of hysteria as: (*a*) "functional" muscular paralyses and spasms and hysterical convulsions; (*b*) hysterical pains and paræsthesiæ (hysterical "clavus," "globus," &c.); (*c*) hysterical disorders of the circulatory system (hysterical palpitation, pulse irregularity, and vaso-motor disorders); (*d*) the well-known suggestibility of hysterical persons and loss of spontaneous will-power. I maintain that all these features or symptoms of hysteria can be explained as resulting from pathological exaggeration (or disorder) of tertiary (nervous) female sex characters—characters which, in normal degree, might have been useful in regard to selection by the other sex.

Thus (*a*) and (*b*) may be regarded as exaggerations of the slight ailments to which the "weaker sex" are supposed to be naturally more liable than the "stronger sex," and which call for the sympathetic interest of the protecting males. Some at least of the hysterical symptoms grouped under (*c*) may be regarded as representing an exaggeration of the normal vaso-motor excitability ("erethism" if more than normal) of young females (including facile blushing and responsive emotional changes in pulse frequency), which constitute part of their attractiveness to the other sex. So also (*d*) may be regarded as an exaggeration of the tendency of the female mind to bend to the opinion of (male) authority, a tendency which when recognised as present is (or has been) often gratifying (flattering) to the male.

I now come to the question of "hysterical malingering" and all kinds of deception and simulation without any adequate rational cause. In past ages (from early prehistoric times onwards) simulation or deception of various kinds must often have been serviceable to the weaker female in protecting herself from the stronger (and sometimes cruel) male, as well as in enabling her sometimes to get her own way by "getting round" her male partner. By a natural process of "survival of the fittest" the facility for effective deception would, in a barbarous age, persist or gradually increase in the females—that is to say, it would become a tertiary sex character; and it must be recognised that the average female of the present day seems not to have altogether lost this inborn aptitude for deception.

Of course, deception and "tricks" of various kinds were also often useful to the male in his struggle for life, but they were more necessary to the female, and therefore at the present time the facility (instinct) for deception is probably greater in the average female than in the average male.[5]

In both sexes this tendency to deceive is normally from an early age kept in check by the exercise of memory and reason, but in many hysterics the tendency in question is present in such an abnormal (pathological) degree that it cannot be suppressed. Such persons practise simulation and deception of various kinds without any adequate (rational) grounds, and such "hysterical malingering," hysterical "mythomania," &c., may be justly regarded, I think, as an exaggeration (or disorder) of an instinct resulting by a process of survival of the fittest from the necessities of our primitive ancestors (especially female ancestors). According to this view the greater frequency of such "hysterical malingering," "hysterical mythomania," &c., in women than in men is explained as a result of the fact that the tendency or facility (instinct) for deception is normally greater in women than in men.

Relationship of Deception to Hysteria.

From my point of view, therefore, the intimate relationship of deception (without adequate rational motives) to hysteria is clear. I would, in short, claim that most (but not necessarily all) of the phenomena ordinarily classed under the heading "hysteria" are dependent on a special kind of instability of the nervous system and may be regarded as the

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[1] A paper read before the Medical Section of the Royal Society of Medicine on Nov. 28th, 1911.

[2] Proceedings of the Twenty-first Congress of Alienists and Neurologists, 1911, Presse Médicale, Paris, August 12th, 1911, p. 660.

[3] I am about to publish elsewhere two remarkable cases which I have had an opportunity of following over a great number of years and which illustrate the intimate association of simulation and hysteria. Hysterical anæsthesia and hysterical paralysis occurred in both cases.

[4] Communicated to the Paris Academy of Medicine, June 9th, 1908; Presse Médicale, Paris, June 10th, 1908, p. 369.

[5] H. Campbell ("Differences in the Nervous Organisation of Man and Woman," London, 1891, p. 54) writes: "Women, it has been said, are born actors. May not the cunning and dissimulation so frequently found in the hysteric state be in some measure attributable to an innate tendency in this direction, evolved in the manner indicated?"

expression of a pathological exaggeration or disorder of certain tertiary (nervous) sex characters, the presence of which in normal degree can be accounted for on a phylogenetic or evolutionary basis.

Some at least of the normal tertiary sex characters are psychical and are due to hereditary functional properties of the higher central nervous system, functional properties which have gradually developed as the result of sexual selection and the survival of the fittest in past ages. The tendency to simulation and deception (without adequate motive) characteristic of some hysterical subjects may be regarded as an exaggeration (or disorder) of an instinct which is normally greater in women than in men, the greater prominence in women of the tendency or instinct to deceive constituting a normal psychical sex character. Such psychical sex characters, whether normal or hysterical (i.e., exaggerated or disordered), are not acquired by means of memory and reason, but are inborn or developmental "instincts," the term "instincts" being here applied to functional reactive properties of the higher psychical portion of the central nervous system, reactive properties which have been acquired not owing to repeated ancestral, voluntary, or rational efforts, but simply owing to the laws of evolution acting by the survival of the fittest.

Like other instincts (for instance, the instinct of self-preservation) they may be to some extent controlled by the exercise of memory and reason and, on the other hand, may be rendered conspicuous and dangerous to their possessor (or their possessor's neighbours) by influences such as mental and physical overwork and shocks, which weaken the normal rational action of the mind in its restraining influence over the instincts. The therapeutic preventive indications are, therefore, largely educational, but prevention in such matters can obviously only be rendered really effectual by means of sexual selection and eugenics; in fact, just as sexual selection in the past is responsible for the existence of the tertiary (nervous) sex characters and their abnormal variations of the present day, so sexual selection in the present and future will modify the nervous sex characters, as well as all other instinctive nervous tendencies of future generations.

Concluding Remarks.

My brief exposition of what I call the phylogenetic or evolutional conception of hysteria, as being due to an exaggeration (or disorder) of tertiary (nervous) female sex characters, has also, I hope, explained why hysteria (according to my conception of hysteria) is so frequently associated with a tendency to simulate disease, accident, or injury, or deceive in some kind of way in the absence of any adequate (rational) motives.

I would here repeat that the so-called tertiary (nervous) female sex characters, though naturally best marked and most striking in the female sex, are not the exclusive property of the female sex. They occur likewise, though they are usually less conspicuous, in the male sex, and it is by their occasional exaggeration (or disorder) that I explain the occurrence of hysterical and irrational (apparently motiveless) deception and simulation ("hysterical malingering") in males.

Teleology (that is to say, the modern Darwinic or evolutional idea of teleology) finds a place in the phylogenetic aspect of hysteria, and it seems to me also to claim a place in regard to other conceptions (Babinski, Freud, Janet, and others) of hysteria. For instance, is it not conceivable that hysterical excessive suggestibility may, on the whole, be useful rather than harmful for persons whose own will-power is pathologically deficient? Moreover, in cases in which wretched experiences have made their psychical marks or "psychical traumata" in the past, and in which the present condition is in some way gravely affected by subconscious reminiscences, "separation of consciousness" may be supposed to bring not only inconveniences and dangers, but also a certain kind of relief.

Some functional nervous symptoms usually classed as hysterical are not readily explained by my conception of hysteria. So-called "hysterical vomiting" seems to be a pathologically exaggerated action of the reflex defensive mechanism by which poisonous or irritating ingesta are normally rejected. But it may sometimes be on the borderland between hysteria and voluntary action simulating disease.[6]

[6] Cf. F. P. Weber, remarks in Brain, London, 1904, vol. xxvii., p. 193.

Furthermore, in regard to the greater frequency of simulated diseases, self-inflicted skin lesions, &c., in women than in men (I do not, of course, here refer to simulation of diseases and accidental mutilations in cases in which the simulation is attempted for obvious reasons, such as to escape military duty in countries where conscription is practised) it may be remembered that when a woman is depressed and altogether discontented with the life she has to lead, she is more likely than a man would be to try to attract attention or pity by simulating disease or injury. A man usually has much more open to him; he can seek a new country or (if he does not endeavour to obtain relief by drink or gambling) he can take part in dangerous ventures of various kinds which bring excitement and temporary relief.

ACUTE OSTEOMYELITIS OF THE VERTEBRAL COLUMN.

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REPORTS of cases of acute osteomyelitis of the spinal column are rare, at least in this country, and it is thought that the following account of a successful operation for this condition may be of sufficient interest to justify publication.

A boy, aged 9 years, previously in excellent health, fell on his right buttock in an asphalt yard on Sept. 21st, 1909. The accident was not a serious one, and though he complained of pain and stiffness he was able, after rubbing with embrocation, to walk without discomfort on the following morning. After a few hours, however, the pain came on again, and he was seen by Mr. W. G. Mumford, who found nothing more than such as to suggest an ordinary bruise or sprain. The boy was kept in bed and treated with hot fomentations, but on the following day he had diarrhœa, and in the evening his temperature rose to 104° F., and the pain in the back and buttock became much more acute. On the next day the temperature was still 104°; the boy was delirious and had extremely acute pain and tenderness in the left lumbar region. There were also some abdominal pain and distension, but nothing definite could be made out in the abdomen or the chest.

The patient was then admitted to the Royal United Hospital, where he was first seen by us. He lay perfectly flat on his back, without a pillow, and with his left thigh flexed on his abdomen. His face was flushed, his eyes staring, and his expression that of intense anxiety. His breathing was rapid and shallow, his pulse 84, temperature 103°, and his tongue coated but moist. No physical signs were present in the chest or abdomen. The pupils were equal and reacted, and there was no optic neuritis. He complained of intense pain in his back, and any attempt to extend the thigh or to raise the head caused him to shriek with pain.

On examining the back there was seen to be very slight fulness in the left ilio-costal space, and two inches to the left of the third lumbar spine there was a point of particularly acute tenderness. The spines themselves were not tender to pressure or percussion, and as far as could be seen the column was moveable when the boy turned on his side. No evidence of disease of the hip-joints or sacro-iliac joints was present, and pain was not elicited by jarring the spine by forcibly thrusting the femur against the acetabulum. There was no paralysis of the lower limbs and no affection of sensation could be made out. No tendon reflexes could be elicited, but the superficial reflexes were present, and the plantar reflex gave an ill-defined extensor response. The rectum and bladder were under proper control and the urine was normal.

The diagnosis being uncertain hot fomentations and salicylate of soda were ordered, but the boy kept the whole ward awake at night by his shrieks, and on the following morning his condition had decidedly changed for the worse. He was now more or less delirious, there was some retraction of the head, and the retinal vessels were beginning to be engorged. There was rather more swelling in the left ilio-costal space, and the skin of the lumbar region was slightly œdematous. The third and fourth lumbar spines were now

definitely tender, but not nearly so much so as the above-mentioned point two inches to the left of the middle line. The Babinski reflex was more marked. Owing to the mental condition it was impossible to satisfactorily test the sensation, and no paralysis or paresis of the legs could be discovered.

It was now felt that the combination of such extremely acute symptoms in the lumbar region, with signs of commencing meningeal infection, pointed to acute spinal osteomyelitis as being the most probable cause of trouble, and the very grave condition of the patient indicated that an exploratory operation should be undertaken without delay. It was thought advisable not to attempt a lumbar puncture on account of the risk of conveying infection into the theca if the needle should chance to pass through a collection of pus on its way into the spinal canal. Dr. G. A. Bannatyne, physician to the hospital, kindly saw the case in consultation, and strongly supported the view that a determined attempt should be made to find pus in connexion with the spine.

The situation of the swelling and of the most acute point of tenderness to the left of the spine, coupled with the comparative absence of tenderness over the spinous processes themselves, had led to the supposition that the disease had started in the bodies of the vertebræ, and that pus was tracking back between the tendons of origin of the psoas. A long vertical incision was therefore made over the outer border of the left erector spinæ; this muscle was pulled inwards, the posterior layer of the lumbar aponeurosis divided, and the finger insinuated between the psoas tendons to the front of the spinal column. Nothing abnormal was found and the wound was closed by deep and superficial sutures.

A second long incision was then made in the median line, and the left side of the lumbar laminæ was exposed. They appeared to be normal. An exploring needle was then introduced into the spinal canal between the third and fourth laminæ, when thick grey-green pus at once appeared in the syringe. The operation was then completed by the removal of the second, third, and fourth lumbar laminæ. The inner surface of the third lamina was black and necrosed, and the spinal canal was full of pus and lymph. The theca was carefully cleansed and the wound well washed with hot saline. There was no escape of cerebro-spinal fluid, and after removal of the pus the theca pulsated freely. A rubber tube was laid along the opened canal and the wound closed over it in layers by catgut sutures. The duration of the whole proceeding was 55 minutes and the boy was immensely relieved by it.

For six days afterwards convalescence was satisfactory, and then cerebro-spinal fluid began to flow freely from the wound. The patient did not appear much the worse for this, but a week later he had a severe secondary hæmorrhage, from which he nearly died. He was again put under anæsthesia, both wounds were opened up, cleansed, and packed with iodoform gauze. A hole could be seen in the theca from which cerebro-spinal fluid was running. An attempt to close it failed as the sutures cut out of the inflamed meninges. After this the boy made an uneventful recovery. The flow of cerebro-spinal fluid stopped in a week, and the wounds granulated up from the bottom. A small sinus was left for several months, but gradually closed. Two months after the operation slight knee-jerks were present and the Babinski reflex had disappeared.

The pus removed from the spinal canal was examined by Dr. Rupert Waterhouse, pathologist to the hospital, and found to contain staphylococcus aureus in pure culture.

Mr. Mumford informs us (November, 1911) that the boy is in good health, and that there is remarkably little weakness of the spine, though a poroplastic jacket is still worn as a matter of precaution.

From an examination of such of the literature as has been accessible to us, it appears that our case may be taken as a fairly typical instance of the most acute variety of spinal osteomyelitis. The disease is apparently not a very common one, but it has evidently so often been mistaken for other affections that it may perhaps not be so rare as is generally supposed.

For the short account of its general characters which follows we must express our indebtedness to the papers of Makins and Abbott, of Otto Hahn, and especially to the elaborate analysis of 68 recorded cases by Hunt in the *New York Medical Record* for 1904. A further list of papers on the subject is given below.

The subjects of the disease are generally under the age of 20, though occasionally it occurs in persons over middle age. What appears to be the first reported instance occurred in a man aged 63, whose case was described by Delafield at the Pathological Society of New York in 1875. In most instances there is a history of some slight injury such as a blow or strain, and sometimes some local cause of sepsis, such as furuncle, is present. The onset is accompanied by high fever and very severe local pain. In our case the extreme severity of the pain was such as to create an impression in our minds that we had never met with anything quite like it before. Rigidity and tenderness of the spine are usually present, sometimes retraction of the head, or opisthotonos. It is said that jarring of the spine does not produce pain as it does in Pott's disease, and this was so in our case.

Abdominal pain and distension are nearly always present, and may lead to much difficulty in distinguishing the disease from some acute abdominal condition. In a case reported to THE LANCET by Totherick in 1885, the abdominal symptoms were so marked that a surgeon was called in with a view to laparotomy. No operation was done, however, and the patient shortly afterwards died from pyæmia.

The nerve symptoms, when fully developed, are those of pressure on the cord at the segment affected—viz., root-pains with paralysis and exaggerated reflexes below. The paralysis has been known to spread rapidly upwards owing to burrowing of pus in the peri-dural cellular tissue, thus giving rise to a mistaken diagnosis of Landry's paralysis.

Unless early relief is given by operation, these cases rapidly go from bad to worse, and are characterised by continued high fever, rigors, splenic enlargement, formation of abscesses in situations varying according to the locality of the lesion, visceral complications, and pyæmia.

The disease has been mistaken for enteric fever, pneumonia, peritonitis, and acute spinal meningitis, and considering the varied and puzzling character of the symptoms which may arise in its course, this is not to be wondered at.

The outlook is always grave, the mortality being estimated by different writers at from 60 to 75 per cent. It is obvious that the only possible chance of recovery must lie in early diagnosis and prompt operation.

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LEAD BULLET REMOVED FROM METATARSAL BONE AFTER 23 YEARS.

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IN THE LANCET of Oct. 1st, 1910, p. 1010, I reported a case of the removal of a bullet 11 years after the battle of Omdurman, where it was received. On March 16th, 1911, I removed at the Khartoum Civil Hospital, after 23 years, a leaden bullet from the fourth metatarsal bone of the left foot of a Jaalin Arab, aged about 45, who had received it in 1888 at Handub, near Suakim, in a small engagement when Colonel Kitchener (Lord K.) attacked Osman Digna with partial success.

The only symptom the man complained of was that when he put on his putties the foot swelled. There was no pain, although his principal occupation is walking and carrying messages about Khartoum. There was the story of the bullet wound of the foot, with two months' incapacity afterwards, with discharge of pus and blood. Afterwards he noticed

nothing until a fortnight previous to applying to hospital, when, I presume, the slightly increased pressure in the veins by the putties caused some little swelling or a feeling of tightness in the foot.

On examination the fourth toe looked shorter, and there was some thickening of the shaft and base of the fourth metatarsal bone. The wound of entrance was represented by a scar on the dorsum of the foot. As the man said that he had seen the bullet and had held it in his hand, and was certain that it came out again, I was rather surprised to see the indications of a foreign body present on the X ray plate—a print of which I send, and which was kindly taken by Major Carroll at the Egyptian Army Hospital at Khartoum.



Skiagram showing position of bullet.

On cutting down on the bullet a leaden ball of the circumference of a thumb-nail was completely covered with bone on all sides, and was situated near the base of the bone. On gouging through the osseous tissue I came across tiny specks, or particles, of lead, more numerous the nearer the bullet was approached, as if the bullet on reaching its destination had splashed fragments of lead all round, the splashes being fainter the farther away from the bullet. The bullet was contained in a round smooth cavity, lined like the smooth porcelain surface of an osteo-arthritic joint, and resembling a diminutive acetabulum after the bullet was extracted. It showed no signs of erosion and fitted tightly into its bony cavity.

The bullet had evidently fractured the bone and lay amongst the fragments, and had become encysted amongst the osseous fragments when the bone healed up, and had remained quiescent for 23 years, neither eroding the bone nor being acted on by the tissues or fluids of the body. Finally, the bullet was a round lead bullet about the circumference of an adult thumb-nail, probably from a gun of an old type (? a muzzle-loader).

Remarks.—I do not know of a reported case of a bullet being removed after 23 years. It had caused the man no trouble practically for 23 years, and had not interfered with his occupation, although it was embedded in his foot, and his occupation involved much walking about. It was firmly encysted in the bone, and I do not think that more inconvenience was caused by its presence than if it had not been there at all, nor was there any greater disturbance of the surrounding tissues than the original fracture of the bone itself would account for.

Finally, I do not think a foreign body becomes, as a rule, absorbed by the tissues or tissue fluids of the body when embedded in them, nor does it tend to move about unless it is alive, like a guinea-worm, or infected by micro-organisms; nor will it, as a rule, by its mere presence cause any harm at all, and this is, I think, contrary to the usual teaching.

Khartoum.

THE LYMPHATICS OF THE SCROTUM

IN RELATION TO THE RADICAL OPERATION FOR SCROTAL EPITHELIOMA.

BY JOHN MORLEY, CH.M. MANCH., F.R.C.S. ENG.,
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THE investigations that follow were undertaken under the conditions of tenure of the Tom Jones Surgical Scholarship of Manchester University.

I became convinced of the need for this work by the following considerations. In the first place, my experience of surgical practice in the Manchester Royal Infirmary during the past few years led me to believe that epithelioma of the scrotum is, in Lancashire at any rate, by no means so rare a disease as is generally supposed, and that glandular metastasis is, on the whole, neither late nor unusual. The frequency of the disease has been definitely established, however, by the work (at present unpublished) of Mr. S. R. Wilson, who, in the course of an etiological investigation into epithelioma of the scrotum, has collected a series of 40 cases from the records of the Manchester Royal Infirmary and the Christie Cancer Hospital during the past ten years.

I find that in the five years 1906–10 inclusive 30 cases of scrotal epithelioma were admitted to the Manchester Royal Infirmary, an average of six per annum, and it is worth noticing that during the same period there were admitted only 25 cases of epithelioma of the penis.

Secondly, the disease receives very meagre treatment in most of the surgical text-books, and in the chief works on operative surgery is not even mentioned. Further, the description of the scrotal lymphatics in the various anatomical text-books, of which the best is found in Poirier et Charpy (Tome II., Fasc. 4), did not appear to me so complete as the practical importance of the region demanded.

I have approached the subject from a frankly surgical point of view, with the object of attempting to place the operation for radical cure of cancer of the scrotum on as sound an anatomical basis as that for malignant disease of the breast.

With this object I have set myself to elucidate the following questions:—

1. The arrangement of the lymphatic vessels draining the scrotum and the collecting trunks into which they lead.
2. A more precise knowledge of the topography of the inguinal glands into which they drain.
3. Do any of the scrotal lymphatic trunks pass by the inguinal glands without entering them, and go primarily to the intrapelvic glands along the external iliac artery?
4. The effect of age upon the condition of the scrotal lymphatic drainage apparatus, and more particularly its condition in the age of greatest predisposition to cancer.

Classification of the Superficial Inguinal Glands.

The conventional text-book and clinical division of these glands is into (1) a superior or oblique set, just below and parallel to Poupart's ligament, with which their long axes are also parallel; and (2) an inferior or vertical set, grouped round the upper two inches or so of the internal saphenous vein, and elongated in a vertical direction.

The first group is described usually as receiving the lymphatics from the lower trunk, gluteal and perineal regions, and from the skin of the external genitals; the second, as receiving most of the superficial lymphatics of the lower limb. This classification has been accepted generally on account of its simplicity and its rough and ready accuracy.

I venture to think, however, as has been pointed out by Poirier, that it is an inadequate classification. In the first place, there are a number of glands, round or irregular in shape, which lie round the sapheno-femoral junction, which cannot be assigned definitely to either group by dissection. Secondly, injection experiments entirely fail to show any such simple arrangement of the afferent vessels as that usually described. This is borne out by clinical work, for it must have fallen to the lot of every surgeon to see some glands of the vertical chain infected from a primary lesion of the genitals, or some of the upper oblique set of glands involved in septic conditions of the foot.

There is, in fact, no possibility of a perfectly clear natural classification of these glands, so variable are they in their arrangement and drainage areas. Since, however, some classification of so large a group is imperative from the surgical standpoint, I have adopted the clear but arbitrary division of Poirier, following Quénu. He draws two imaginary straight lines, one vertical, the other horizontal, which meet at the junction of the saphenous with the femoral vein. We thus get four groups of glands—viz., supero-external, supero-internal, infero-external, and infero-internal (see figure). It will be observed that the lower part of our imaginary vertical line corresponds roughly with the internal saphenous vein, which is the surgeon's most important landmark in the subcutaneous tissue of this region. I have not adopted Poirier's fifth or central group of glands, lying over the saphenous opening, as this brings an unnecessary complication into our artificial classification.

Technique.

I have worked exclusively with Gerota's fluid (a suspension of Prussian blue in turpentine and ether), and my injections have been made by means of a mercurial constant pressure apparatus prepared from the specifications of Professor J. K. Jamieson of Leeds, and described by him and Mr. J. F. Dobson.[1] The finest hypodermic needles were used. A pressure of 10–15 cm. Hg was found the most useful.

Successful injections were made in the bodies of four stillborn infants and 13 adult males. The latter were found the more satisfactory to work with, especially if emaciated. In the case of the stillborn infants the injections were made within a day of birth, and the subjects were hardened in 10 per cent. formalin before dissection, but the adults were injected 5–6 days post mortem when rigor mortis had passed off. They were then preserved by the usual formalin injection, and the arteries were finally injected with starch and vermilion. The somewhat laborious dissections of the lymphatics were completed after this.

Results.—Influence of Age.

The lymphatics of the scrotum are remarkably well developed at all ages. The fœtal vessels are easier to inject, but more difficult to dissect out on account of their minuteness and the abundance of fat in the groin.

The 13 adult bodies injected varied from 36 to 80 years of age, and the majority were over 50. I found after some practice that I could invariably obtain a successful injection, and that old age brought no perceptible diminution in the number and calibre of the lymphatic vessels. The size and number of the inguinal glands varied considerably in different subjects, but some of the oldest bodies possessed uncommonly large glands.

Microscopical sections of glands taken from a series of six subjects aged from 70 upwards showed, however, marked age changes when compared with fœtal glands. The central medullary portion of the gland becomes entirely replaced by fibrous tissue. Some cases show extensive fatty degeneration. The fibrous capsule is also greatly thickened, and only in the attenuated cortical zone does lymphoid tissue remain. Such of the lymphoid tissue as remained appeared, however, quite normal in structure, and the peripheral lymph sinus was quite evident in all.

[1] Journal of Anatomy and Physiology, October, 1910.

Network of Origin.

In the deeper layers of the cutis vera and superficial to the dartos muscle is a very rich and fine network of lymphatic capillaries. The blue injection can be seen through the delicate scrotal skin shooting out in all directions from the point of the needle into this network. By a single puncture one can often obtain an injection of practically the whole of the scrotum and penis.

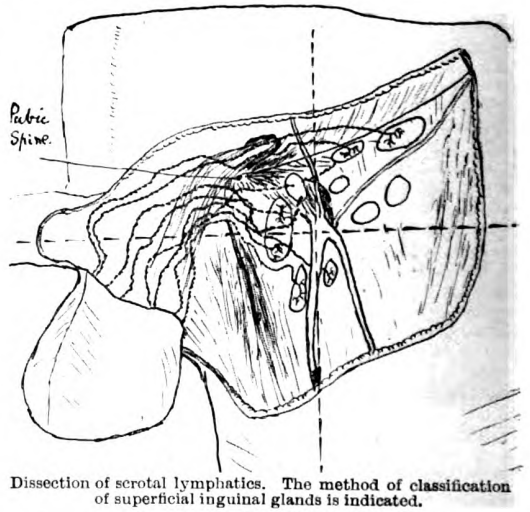
It should be noted particularly: (1) That there is a free communication by means of this network between the lymphatics of the two sides of the scrotum, across the raphe; and (2) that there is an equally free communication with the superficial network of lymphatic capillaries in the skin of the penis. The network also spreads into the skin of the thighs and perineum, but here it becomes much less highly developed.

Collecting Trunks.

Taking origin from this delicate superficial network, one can see numerous collecting trunks of considerable calibre. They dip down at their origin through the dartos muscle and run in the subcutaneous tissue for the rest of their course to the glands. The thick blue lines of the injected trunks can be seen through the thin scrotal skin and dartos without any dissection, but as soon as they reach the groin, where the subcutaneous fat begins, they are hidden from view until dissected out.

From 10 to 15 collecting trunks leave the scrotum on each side. They show, when distended, a characteristic beaded appearance due to the very numerous valves, and vary considerably in thickness in different bodies. The thickest trunk that I have observed had a diameter at its most distended part, above a valve, of 2 mm., but the average maximum diameter is from 0·5 to 1 mm. The course of the trunks is tortuous, as might be expected in so mobile a region, and they cross one another and anastomose to some extent.

It is necessary for purposes of description to classify these trunks arbitrarily into three groups—viz., anterior, lateral, and posterior, according to the region of the scrotum from which they take origin.



Dissection of scrotal lymphatics. The method of classification of superficial inguinal glands is indicated.

Anterior trunks (see figure).—These are of chief importance, since epithelioma usually commences on this aspect of the scrotum. Further, the long and peculiar course of the medial trunks has not been accurately described, as far as I can ascertain, by other workers.

(*a*) The medial trunks, 2–3 in number, run up the anterior surface of the scrotum parallel and close to the raphe until they reach the root of the penis. Here, instead of turning

outwards at once, they mount up on to the lateral aspect of the penis, the highest and most medially placed trunk reaching a point on the side of that organ varying from 1 to 2·5 cm. from its root. Curving down on the dorso-lateral aspect of the penis they gain its root, pass outwards and slightly upwards into the subcutaneous fat of the abdominal wall about 1 cm. above the pubic spine, run at first parallel to and above Poupart's ligament, and then turning down and crossing it obliquely end, as a rule, in a gland of the supero-external group which lies just below Poupart's ligament with which its long axis is parallel.

This gland always lies definitely to the outer side of the line of the saphenous vein, and may be within 4 cm. of the anterior superior spine. In their course to this gland the vessels pass sometimes between the superficial epigastric vein and the skin, sometimes underneath it. It often happens that the lower of these trunks curves down from the region of the pubic spine, and ends in one of the supero-internal glands, leaving only a single trunk to take the long course described above.

(*b*) The *outer trunks* from the anterior surface, three or four in number, do not run upwards parallel with the raphe, but pass upwards and outwards, and gain the anterior aspect of the spermatic cord. At or a short distance below the level of the pubic spine they curve first outwards and then slightly downwards, and end, after various anastomoses, in glands of the supero-internal and infero-internal group.

Lateral trunks.—These are four or five in number. They run upwards on the lateral aspect of the scrotum and spermatic cord, and curve outwards 1–2 cm. below the pubic spine, to reach the supero-internal and infero-internal glands. Sometimes a trunk runs underneath the saphenous vein, just below its junction with the femoral vein, and ends in an infero-external gland.

Posterior trunks.—On each side of the raphe, and about 0·5 cm. from it, a large collecting trunk runs upwards from the most dependent part of the scrotum towards the perineo-scrotal junction. Into this trunk run four or five tributaries, which pass transversely across the posterior surface of the corresponding side of the scrotum from without inwards. The main trunk turns outwards a short distance below the junction of scrotum and perineum, runs at first upwards on the posterior aspect of the spermatic cord, and then turning outwards into the thigh about 2·5 cm. below the pubic spine ends in a gland of the infero-internal group, lying parallel with the saphenous vein about 2–4 cm. below the sapheno-femoral junction.

No collecting trunks accompany the perineal and internal pudic vessels into the pelvis.

In one subject I observed three or four trunks originating in the lower part of the anterior surface of the scrotum, which ran backwards through the lower part of the scrotal septum to end in the main posterior trunk. I have not been able to demonstrate this arrangement in other subjects.

The efferent trunks from the superficial inguinal glands sometimes run to other glands of the same group, and sometimes they join a gland of the deep femoral chain. Most of them, however, converge on two or three large thick-walled trunks which, after piercing the cribriform fascia, run up through the crural canal to the inner side of the femoral vein, and end in glands lying along the inner or pelvic side of the external iliac vessels.

I have never been able to find a trunk that passed by the inguinal glands and primarily entered the intrapelvic glands. There does not appear to be any communication between the superficial lymphatics and those of the tunica vaginalis and testis.

Practical Conclusions.

1. In consequence of the very free anastomosis between the superficial lymphatic network of opposite sides, it is obvious that whenever an epithelioma approaches the median raphe the glands of both groins must be removed.

2. In view of the termination of the medial trunks from the anterior surface in the supero-external glands, it is important that, when a growth approaches the anterior raphe, the subcutaneous tissue and glands should be removed to within one inch of the anterior superior spine of the ilium. I have seen recently a case in which a very determined attempt at a radical operation failed because the surgeon had not carried his dissection far enough in an outward direction (see figure). Recurrence took place within nine weeks of the operation in the extreme outer angle of the incision.

3. It is essential to remove the superficial inguinal glands and subcutaneous tissue in which they lie, from practically the whole of Scarpa's triangle, and to carry the upper limit of the dissection well above the inner half of Poupart's ligament. To clear the triangle efficiently the upper three inches (7·5 cm.) of the internal saphenous vein must be excised and the femoral sheath stripped clean.

In view of Handley's work on permeation of lymphatics and the protective process of peri-lymphatic fibrosis in cancer of the breast, it is scarcely possible, without further histological investigation, to dogmatise on the necessity of removing all the intervening lymphatic vessels, in addition to primary growth and glands.

It is certain that secondary malignant growths are, in this region, extremely rare in the course of the lymphatic trunks, as compared with growths in the glands; and it may prove that the vulnerability of the vessels is so slight as not to warrant the additional mutilation involved in their complete extirpation.

Many surgeons, however, will consider it their duty to aim at the ideal of complete removal of all possible malignant cells, here as elsewhere, and attention to the above description should provide the necessary anatomical data for an early case. It will rarely be possible after such an operation to bring the skin completely together. As far as the necessarily denuded root of the penis is concerned, it will be possible to cover it in the uncircumcised by incising the prepuce on the dorsum (if there should be a tendency to phimosis), and utilising the additional skin gained by its retraction. Apart from this, skin grafting would be required.

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Manchester.

THE SYSTOLIC BLOOD PRESSURE IN DISEASES OF THE HEART.

BY VISHNU T. KORKE, M.R.C.P. EDIN., D.T.M. LIVERP., L.M. & S. BOMBAY,

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THE observations recorded in this paper were made on patients suffering from: (1) simple, uncomplicated valvular lesions of the heart due to acute rheumatic endocarditis; (2) valvular lesions due to other causes; and (3) other heart affections. No systemic complications were observed in cases of valvular lesions due to rheumatic endocarditis. There were no cyanosis, dyspnœa, changes in the fundus oculi, febrile temperature, and albuminuria, though traces of albumin were sometimes detected in a few cases. The observations were made on patients of both sexes, of different ages, sent to the Convalescent Hospital from the Manchester Royal Infirmary. They were allowed a mild out-door exercise, and generally they were keeping in good health.

The apparatus used for the observations was a sphygmomanometer, a Martin's modification of Riva-Rocci. The systolic blood pressure was recorded by the armlet method during the recumbent posture of the patients. The observations were made daily, under similar circumstances, nearly an hour before dinner (at 1 P.M.), and in cases of doubt they were repeated two to three hours after 8 P.M. A record of pulse-rate and number of respirations was kept during the observations, and sphygmographic tracings of the pulse were often made to note the effect of blood pressure on the pulse. For the convenience of this article only the number of observations and the mean blood pressure are recorded.

The conclusions were arrived at by consulting the following table[1]:—

Age.	Normal systolic blood pressure.
Children and adolescents	90 mm. Hg.
Young and middle aged (35–45 years)	115–125 mm. Hg (mean 120).
Over 45 and elderly	135–145 mm. Hg (mean 140).

In women 5 to 10 per cent. less than the above figures.

[1] Oliver: Studies in Blood Pressure, 1908, pp. 81–82.

Analysis of Observations.

Case No.	Sex.	Age.	Cause of the lesion.	Disease.	Mean blood pressure mm. of Hg.	Remarks about blood pressure.	Number of observations.
1	M.	Mid.	Rheumatic endocarditis.	Aortic incompetence, hypertrophy of left ventricle, Cheyne-Stokes respirations occasionally.	170	Supernormal.	17
2	M.	Mid.	,, ,,	Aortic incompetence.	130	Little above normal.	12
3	M.	Mid.	,, ,,	,, ,,	147	Above normal.	18
4	M.	19	,, ,,	Aortic and mitral incompetence.	130	Well above normal.	22
5	F.	Mid.	,, ,,	Aortic incompetence, hypertrophy of left ventricle, signs of arterio-sclerosis.	223	Supernormal.	21
6	M.	39	,, ,,	Mitral incompetence.	134	Above normal.	28
7	M.	16	Acute rheumatic endocarditis.	,, ,,	116	,, ,,	8
8	M.	Mid.	?	Aortic incompetence, angina pectoris.	114	Below normal during interparoxysmal periods.	8
9	M.	20	Rheumatic endocarditis.	Mitral stenosis.	116	Normal.	25
10	M.	24	,, ,,	,, ,,	128	Above normal.	24
11	M.	15	,, ,,	,, ,,	112	Little above normal.	16
12	F.	18	,, ,,	,, ,,	113	Above normal.	10
13	F.	20	,, ,,	,, ,,	138	Well above normal.	29
14	F.	61	,, ,,	,, ,,	137	Normal.	28
15	F.	13	,, ,,	Mitral stenosis and incompetence.	111	Above normal.	9
16	F.	40	,, ,,	Mitral stenosis.	128	Little above normal.	5
17	F.	17	,, ,,	,, ,,	125	Well above normal.	4
18	F.	18	,, ,,	,, ,,	118	Above normal.	8
19	F.	18	,, ,,	Mitral incompetence and stenosis.	108	Normal.	21
20	F.	9	Rheumatism.	Acute endocarditis.	104	Little above normal.	5
21	F.	11	,,	Acute endocarditis (patient kept in bed all the time).	80	Little below normal.	39
22	M.	Mid.	,,	Acute endocarditis.	120	Normal.	11
23	M.	57	?	Cardiac muscle failure.	140	,,	11
24	M.	Mid.	?	,, ,,	160	Well above normal.	2
25	M.	23	?	,, ,,	117	Normal.	4
26	M.	Mid.	?	,, ,,	125	,,	7
27	F.	Mid.	?	,, ,,	196	Supernormal.	5
28	F.	14	Rheumatism.	Endocarditis and myocarditis.	130	Well above normal.	6
29	M.	Mid.	?	Aortic incompetence, stenosis, mitral stenosis, signs of arterio-sclerosis.	181	Supernormal.	9
30	M.	Mid.	?	Aneurysm of arch of aorta.	106	Below normal.	16
31	M.	25	—	Tachycardia.	150	Supernormal.	5
32	F.	26	Goitre.	Mitral regurgitation.	123	Normal.	9
33	F.	20	Chronic nephritis.	Hypertrophy of left ventricle, arterio-sclerosis.	180	Supernormal.	5
34	F.	16	History of diphtheria? No rheumatism.	Mitral stenosis.	130	Well above normal.	6

I.—In valvular lesions of the heart (with or without complications), due to rheumatic endocarditis and other causes, the blood pressure was found to be normal or above normal.

II.—In simple and uncomplicated valvular lesions of the heart, due to acute rheumatic endocarditis, the blood pressure was found always to be normal or above normal. These results agree with those arrived at by Starling.[2]

III.—In aortic incompetence complicated with anginal attacks, the blood pressure was found to be *subnormal* during the interparoxysmal periods. The low systolic blood pressure is, perhaps, an expression of the failing power of the myocardium.

IV.—Significance of high blood pressure in simple and uncomplicated valvular lesions of the heart due to rheumatic endocarditis. The high blood pressure observed in some of the cases is, I believe, a physiological compensation in those individuals, though it may be mistaken for a pathological state. As is well understood, the normal blood pressure is maintained by the coördination of the three factors—viz., (1) Rhythmic and forcible contraction of the myocardium; (2) tonic action of the arterial walls; and (3) contraction of the arterioles. In valvular diseases of the heart the defective normal action of the myocardium must be corrected, first, by making a demand on its reserve power; secondly, by supplying a proper amount of blood under the altered circumstances, thereby maintaining a new blood-pressure level. Vaso-constriction is the first effort made to correct the myocardial insufficiency by inciting the ventricles to restore the proper output to its previous amount (Starling).[3] Consequently the height of blood pressure may vary according to the degree of vaso-constriction, and condition and demand of the myocardium.

For such patients, therefore, who showed no complications and who were comparatively active and comfortable, an average level of arterial blood pressure *even above normal* was absolutely necessary to ensure the requisite speed of capillary blood flow.[4] In such cases the high blood pressure was not incompatible with average normal health.

V.—The blood pressure in cardiac muscle failure was normal or well above normal. I believe that the high blood pressure in cardiac muscle failure was due to various pathological causes which produced a change in the myocardium. It was pathological in nature.

VI.—In valvular lesions, complicated with chronic nephritis and arterio-sclerosis, the significance of supernormal blood pressure requires no comment. It is distinctly pathological.

Liverpool.

[2] THE LANCET, vol. ii., 1906, p. 847.

[3] Ibid., p. 848.

[4] For the support of these arguments see Janeway, New York Medical Journal, Feb. 2nd, 1907, pp. 193–97; and Oliver, Studies in Blood Pressure, 1908.

UNIVERSITY COLLEGE HOSPITAL.—Captain the Honourable Edward Stanley Dawson, R.N., has accepted the appointment of chairman of the Corporation of University College Hospital in succession to the late Earl Cathcart.

THE SPECIFIC GRAVITY OF THE BLOOD FROM THE CLINICAL ASPECT.

BY ATHOLE ROSS, M.D. CANTAB., M.R.C.P. LOND.,
PATHOLOGIST TO THE EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL, E.

I WAS recently asked by the late Dr. J. A. Coutts to assist Major Leonard Rogers, I.M.S., in the preparation of a number of glycerine-water solutions for taking the specific gravity of the blood; these were required for use in connexion with the treatment of epidemic enteritis by hypertonic salines and permanganates, on similar lines to the new methods of dealing with cholera recently introduced by Major Rogers and his co-workers at Calcutta. There are three methods of determining blood specific gravity:—

1. Hammerschlag employed a mixture of chloroform and benzol having a specific gravity between 1055 and 1060. A drop of blood is allowed to fall into this mixture from a pipette. If the blood floats benzol must be added and the solution stirred; if it sinks the addition of chloroform is required. When the drop floats suspended a urinometer is used to take the specific gravity of the mixture. Criticising this method Major Rogers observes that the smell of the mixture is objectionable, and quotes Da Costa for the statement that an ordinary hydrometer gives a reading exceeding the correct figure by from 3 to 10 degrees. What Da Costa exactly means by this is a little difficult to see, for if the hydrometer gives untrustworthy readings all the observations must be valueless. A great disadvantage of the method is the time it would consume when a dozen or so of determinations have to be made during the morning round; it also requires some manipulative skill, as the drop of blood is liable to break up in the mixture.

2. In Schmaltz's method the weight of equal quantities of blood and water are obtained by previously weighing a perfectly clean dry pipette and then filling it. The accuracy of this method is only limited by the technical ability of the observer and the sensitiveness of his balance. It is, however, quite unsuited for clinical purposes.

3. The remaining method is to make up a large number of glycerine-water solutions[1] whose specific gravities "should represent every other degree from 1040 to 1076." (Rogers.)

It would appear that the glycerine and water solution was used by some in precisely the same way as Hammerschlag's mixture of benzol and chloroform; for Dr. J. H. Drysdale, in the latest edition of "Allbutt's System of Medicine" (Vol. I., p. 650), writes: "In Roy's method, of which Hammerschlag's is a modification, the fluid employed was a mixture of water and glycerine. In both the principle is the same, and the method has been largely used in this country by Drs. Copeman and Lloyd Jones." Now Major Rogers, and presumably also Dr. Lloyd Jones quoted by him, makes use not of a single solution of about the specific gravity which it is expected the specimen of blood will be, but of a whole series of solutions of glycerine and water extending from specific gravity 1040 to specific gravity 1076. I am here concerned with a means of rapidly and easily preparing these solutions.

When Major Rogers made up the mixtures in my laboratory he simply mixed the water and glycerine in the rough proportions that he knew from experience would be wanted, and then by adding either water or glycerine, while testing with the hydrometer, obtained the various solutions. This method is rather uncertain except in experienced hands, and it is, moreover, decidedly tedious and lengthy. Major Rogers admitted that even he on occasion had had some trouble with this procedure. It is merely a matter of calculation to find how much glycerine of specific gravity 1·26 must be added to 500 c.c. of distilled water so that the resulting specific gravity of the mixture may be 1056 (about that of normal blood); 137·2 c.c. of glycerine are required. A table was constructed giving the calculated amounts of glycerine to be added to 500 c.c. of water in order to obtain mixtures of specific gravities 1036, 1038 to 1072, 1074 inclusive. On experimenting with certain of the calculated quantities it was found that the specific gravities of the solutions obtained were a few degrees out, either in excess or defect of what they should be. Having ascertained that by law the specific gravity of a sample of pure glycerine must be 1·26, I thought that, as glycerine was hygroscopic, some contraction in the total volume of the mixture must occur to account for the error found, and that also a correction could be applied to allow for this. On looking into the matter it became apparent that although glycerine is commercially sold as 1·26, it very frequently has a specific gravity of 1·265. Taking the gravity of glycerine 1·265 the quantity of glycerine required for the experiment above detailed would be 134 instead of 137·2 c.c. The full table was then abandoned and the following four solutions retained to form a basis for the preparation of the entire series. Taking the specific gravity of glycerine as 1·265, the result obtained was as follows:—

Distilled water.	Glycerine. Sp. gr. 1·265.	Sp. gr. of mixture—	
		As calculated theoretically.	As found by experiment.
A. 500 c.c.	88·9 c.c.	1040	1043
B. 500 c.c.	116·3 c.c.	1050	1055
C. 500 c.c.	146·3 c.c.	1060	1065
D. 500 c.c.	179·5 c.c.	1070	1075

The best way to use this table is to prepare from it four working solutions, A, B, C, D, and these may be each 500 c.c. (or better a litre) of distilled water plus the requisite quantity of glycerine.

Example.—Having made solution B, the addition of a small quantity of glycerine, while stirring and testing with the hydrometer, will bring the gravity to 1056. Of this 1056 mixture 200 c.c. are set aside; then by the addition of a further quantity of glycerine 1058 and 1060 are obtained—portions set aside for stock, and next by adding water to the remainder 1054 and 1052 are worked out. Afterwards Solution A is taken to make 1038 to 1050, and so on till all the 20 solutions required are prepared.

Some tall glass vessels 2 inches to 2½ inches in diameter are required, together with 100 c.c. measures and an accurate hydrometer. It is to be noted that although the exact specific gravities of the solutions obtained by adding the measured quantities of glycerine to the constant volume of distilled water will vary a little (and experiment will not quite agree with theory), we may be certain of getting *four working solutions whose specific gravities will lie within the limits of the series of mixtures that are required.* From them the whole series from 1036 to 1076 can readily be prepared. The small discrepancy between a specific gravity as calculated and one as found is due to the fact that, although the specific gravity of a trustworthy sample of pure glycerine must be 1·26, there is no relying on what the figure in the third decimal place will be. Evidently the specific gravity of the glycerine I employed was neither 1·260 nor 1·265. A large bore burette will be found useful for making small adjustments in the quantities of glycerine added. A crystal of thymol should be placed in each stock bottle as a preservative.

The best method of using the solutions clinically is outlined in Dr. Rogers's book. A series of small glass-stoppered testing bottles is put up, labelled, and boxed in numerical order.[2] A drop of blood is drawn up in a capillary pipette, fitted with a rubber cap, and gently expelled into the bottles in turn till one is found in which it just floats suspended, or, breaking up slowly, rises and falls at the same time: this bottle gives the required specific gravity. If it is found, for example, that the drop rises slowly in 1052 and sinks slowly in 1050 the specific gravity is intermediate—viz., 1051. The best way to obtain the blood in children is by placing a ligature round the big toe. I found in my own case that it makes no difference to the reading whether the blood is obtained from the thumb in this way or from the lobe of the ear without pressure.

From the few observations I have made I am inclined to think that the blood specific gravity in children is more variable than in adults, and that it is harder to fix a normal for them. The specific gravity certainly rules lower; and the test bottles at the higher end of the series are seldom

[1] I use the term "solution" in this paper when strictly "mixture" should be employed.

[2] The mixtures in these should be renewed from stock as soon as they become turbid and discoloured.

required, even when the blood has become concentrated by severe diarrhœa. I am rather doubtful if the blood specific gravity will prove so important a guide in the treatment of epidemic enteritis by the Rogers method as it appears to be in the case of cholera. Probably those who now working in the wards at Shadwell will soon be able to settle this question.

It is an undeniable fact that usually the specific gravity of the blood has not much importance from the clinical point of view, and it was only when asked to assist Major Rogers that my attention was directed to devising a means whereby the labour of making up so many glycerine-water mixtures to a prescribed degree of specific gravity might be lightened. No one, however, can read Major Rogers's book on cholera without being impressed by the important part which the determination of the blood specific gravity plays in his system of treatment, and it may well be that this is one of those exceptions which go far to prove the rule. That a parallelism exists between the specific gravity of the blood and the hæmoglobin content of the red cells is well known, and both Hammerschlag and Schmaltz have constructed tables showing the percentage of hæmoglobin, corresponding to different degrees of specific gravity. The suggestion has been made that the hæmoglobin content could be deduced from a determination of the specific gravity of a sample of blood, but the changes in the plasma in severe anæmia, leukæmia, dropsy, and diarrhœal disease render this practice unreliable. In conclusion, I have to thank Mr. Elms for independently confirming the figures given in the table.

Shadwell, E.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF GASTRO-ENTEROSTOMY.

BY PENROSE WILLIAMS, F.R.C.S. EDIN.,
HONORARY SURGEON TO THE BRIDGWATER HOSPITAL.

THE fact of a suture remaining dormant for three years and then being extruded in the happy manner described below is, I believe, unusual, and therefore the case seems worth recording.

The patient, a female, aged 32 years, was admitted to hospital in June, 1907, with a history of 17 years' ill-health. She had a sallow, muddy complexion, looked thin and badly nourished, complained of more or less continuous indigestion and constipation, and stated that she had been under medical treatment off and on for many years. There was no dilatation of the stomach or any other abnormal physical condition discoverable. I advised exploration with a view to gastro-enterostomy.

The operation was performed on June 6th, the abdomen being opened by a vertical incision above and to the left of the umbilicus and lateral dislocation of the left rectus muscle. A chronic ulcer was found near the lesser curvature and pylorus. This was left alone and a posterior gastro-enterostomy performed. The points especially observed were: (1) to take the highest possible part of the jejunum; (2) to make the incision in the stomach wall reach the greater curvature; and (3) to fix the margins of the opening in the meso-colon to the jejunum below the anastomosis by three points of suture, one anterior and two lateral, the whole line of suture being thus occluded within the lesser sac. Two continuous sutures of fine silk were used for the anastomosis in the usual way.

Recovery was uneventful and the patient was sent to the Weston Convalescent Home on July 22nd, returning from there a month later for inspection. She had gained considerably in weight, was in very good health, and immediately resumed her work as a domestic nurse, remaining at it in excellent health for nearly three years.

In June, 1910, the patient reported that she had noticed a gradually increasing swelling in her "stomach" for a few weeks, but that it caused her no inconvenience. On examination there appeared a globular fluctuating swelling, of the size of a large orange, presenting just above and to the left of the umbilicus. The swelling was below the stomach and fixed to the anterior abdominal wall, but was quite free of the operation scar, which was scarcely visible. She was readmitted and the swelling was carefully incised under general anæsthesia, and without opening the general peritoneal cavity. About half a pint of pus, free from smell, came away. Gentle digital exploration of the cavity did not reveal its relation to the transverse colon, and extensive manipulation being obviously undesirable, this point was not determined. A large drainage-tube was put in, and the outcome was awaited. Three days later a piece of silk, 7½ in. long, came away in the discharge. The wound then rapidly healed. The patient soon returned to work again, and has remained quite well.

This case is a fortunate example of the true function of a "foreign body" abscess—a collection of fluid formed for the twofold purpose of boring a way to the surface and floating out the offending substance. It also confirms the view that silk is an unnecessarily permanent material for internal suturing.

Bridgwater.

NOTES ON A CASE OF HEAT-STROKE OF THE HYPERPYREXIAL TYPE.

BY MARY A. BLAIR, M.D., B.S. LOND., B.SC. N.Z.

A WOMAN, aged 54, an inmate of St. Pancras Workhouse, was seen by me on the morning of July 22nd last, complaining of slight malaise. During the day she did her usual work in the kitchen of the workhouse, but she complained of thirst and was observed to be drinking large quantities of water. The temperature of the kitchen is reported to have been 91° F. About 6 P.M., while sitting on a bench in the workhouse yard, she was taken suddenly ill and was removed to the receiving ward.

On arrival there the woman was found to be very pale, with lips blanched, and the veins of the neck engorged. She was breathing without difficulty and her pulse was 100 and of good quality. She spoke a few words intelligently and then became incoherent, and afterwards restless and irritable, violently resisting examination. Her jaws were tightly clenched. Her pupils were at first slightly dilated, but in a few minutes they contracted, and complete unconsciousness supervened. The motions were passed under her. They were yellow and semi-fluid. Her skin felt very hot, and the temperature, taken in the axilla, was found to be 108°. Convulsive movements then began in the lower limbs and spread to the rest of the body. There were constant champing movements of the jaws throughout the attack.

Some cold sponging was done and the patient was removed to the ward. The whole body was then sponged with ice-cold water, but the temperature (taken in the rectum) remained at 105°. The patient was then covered with wet lint on which pieces of ice were placed, and finally the trunk and limbs were rubbed with pieces of ice. By 9 P.M. the temperature had fallen to 101·6°; the ice applications were discontinued and the patient was covered with a sheet. There was no vomiting, but several loose motions were passed. The convulsions continued, beginning sometimes in one or both arms and sometimes in the legs and spreading to the trunk. Movements of the jaws went on constantly. At 9 P.M. the convulsions became very severe, the limbs contracting so violently that it required several nurses to keep the patient on the bed. The pulse and respirations remained good. Chloroform was now begun and continued to full surgical anæsthesia before the movements could be controlled. With lighter anæsthesia the movements returned. The temperature rose again to 104·4°, but then fell steadily, no further sponging being given. At 1 A.M. the administration of chloroform was discontinued and the patient was watched for an hour, during which there was no return of convulsive movements, and the temperature continued to fall. At 8 A.M. she suddenly recovered consciousness, as if waking from sleep. She remembered nothing since being in the workhouse the previous afternoon.

Throughout the attack the patient suffered from hyperpyrexia and convulsions alone. The pulse remained strong and only slightly increased in rate, and the respirations were unaffected.

Recovery has been complete. No sequelæ have been

observed except occasional slight headaches, more noticeable on hot days, and slight vomiting on two occasions.

Vicarage-gardens, Campden-hill, W.

NOTES ON A CASE OF UTERINE FIBROID CAUSING GANGRENE OF THE LOWER LIMB.

BY F. S. CREAN, L.R.C.P. & S. IREL.,
ASSISTANT MEDICAL OFFICER, BERMONDSEY INFIRMARY.

I RECENTLY admitted to Bermondsey Infirmary a woman, aged 42 years, whose right foot showed signs of dry gangrene. At the time of admission the discolouration and anæsthesia extended from the toes to about the mid-tarsal joint. No definite history of injury could be obtained. The urine was carefully examined, but no abnormal constituent was found. She gave a history of rheumatism in childhood, and auscultation revealed the existence of a systolic mitral bruit. There was no evidence of failing compensation nor of pronounced arterial degeneration. As she was disinclined for a pelvic examination none was made. She stated that her menses were still regular. She was a multiparous woman whose last child was born several years ago.

Conservative methods and tonic treatment were tried for four days, but as the gangrene steadily spread along the foot and over the ankle amputation through the knee-joint was done on the fifth day after admission. On the day following the operation the patient's condition was very low, and a large purpuric-looking spot was observed over the right side of the sacrum. On the next morning the edges of the amputation flaps showed purple discolouration. The patient failed to respond to stimulant treatment, grew progressively weaker, while the vitality of the stump grew feebler, and on the fourth day after operation death occurred.

At the necropsy a large subperitoneal fibroid growing from the fundus uteri was found, pressing upon and almost entirely occluding the right external iliac artery.

Lower-road, Rotherhithe, S.E.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Influence of Certain Accessory Food-stuffs (Tea, Coffee, &c.) on Gastric Secretion.—Association of Hysteria with Malingering.

A MEETING of this section was held on Nov. 28th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Dr. F. CRAVEN MOORE and Dr. H. E. ALLANSON communicated a paper on the Influence of Certain Accessory Food-stuffs on Gastric Secretion. They said: The observations of Pawlow and his co-workers having established the varying influence of different dietetic substances on the rate of gastric secretion and the activity of the secreted juice in the dog, it was accepted as at least highly probable that a similar relation would obtain in the human subject, and in a limited fashion the truth of this has already been established. In view of these results it appeared to us that it would not only be of interest, but of some practical importance, to determine by observation on the human subject the varying effect on gastric secretion of certain food-stuffs, essential and accessory, which by their use or interdiction in disorders of gastric activity have been credited empirically with having some particular relation, ameliorative or causal, with such disorders. The substances so far included in our investigations are: water, tea, coffee, cocoa, milk, albumin water, meat extracts, and alcohol; in addition a few observations have been made on the effect of tobacco-smoking. The methods employed consisted in the administration on the empty fasting stomach, at 8 A.M., of a test-breakfast composed of four "breakfast biscuits" and 10 oz. of fluid, either water or freshly infused tea, coffee, or cocoa without milk or sugar, or milk, or albumin water containing the white of one egg in 10 oz. of water, or two teaspoonfuls of meat extract in 10 oz. of water, or 2 oz. of whisky with 8 oz. of water. The fluid was heated to an agreeable temperature. The stomach contents, removed one hour later, were immediately filtered, and in the filtrate the free hydrochloric acid and the total acidity were estimated by titration with decinormal soda solution, dimethylamidoazobenzol and phenol-phthalein, respectively, being used as indicators; the peptic activity was estimated according to the Edestin method of Fuld and Levison. The results obtained with the test-breakfast consisting of four biscuits and 10 oz. of water were made the basis for comparison throughout the observations, and in each individual case the measure of the secretory reactivity to water and to the particular substance under investigation was determined on the average of not less than three experiments with each. The 15 individuals on whom the observations were made included normal healthy subjects, and subjects both with and without definite gastric disorder. The results as expressed in the accompanying table are the averages of a series of observations made with each test-breakfast in the several individuals of the series.

On analysing these results it is found that an infusion of tea induces a greater secretion of gastric juice than does water; a comparison of the averages of

No.	Name	Sex	Age.	Water.			Tea.			Coffee.			Cocoa.			Milk.			Albumin water.			Meat extract.			Alcohol.			Tobacco.		
				HCl	T.A	P.	HCl	T.A	P.	HCl	T.A	P.	Hcl	T.A	P.	Hcl	T.A	P.	HCl	T.A	P.	HCl	T.A	P.	HCl	T.A	P.	HCl	T.A	P.
1	A. E. H.	M.	28	42·0	64·0	7·7	51·3	68·7	9·0	63·7	87·0	10·0	53·3	80·0	8·6	34·7	94·0	5·4	55·0	74·0	9·7	74·3	98·3	11·6	54·7	74·7	8·0	59·3	78·3	9·0
2	B. N. G.	M.	25	34·3	58·3	5·0	31·7	57·3	5·7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24·7	52·7	4·6	34·7	50·7	5·5
3	E. W.	F.	32	50·0	68·7	8·6	53·3	72·0	8·9	41·0	60·7	7·6	38·0	53·0	6·8	—	—	—	—	—	—	73·0	96·7	11·5	—	—	—	—	—	—
4	E. W.	F.	24	42·0	67·3	7·4	52·3	71·0	8·3	47·3	67·0	7·7	46·0	63·3	7·7	—	—	—	—	—	—	50·7	74·7	8·3	—	—	—	—	—	—
5	H. S.	M.	32	44·7	61·3	8·2	52·7	67·7	8·3	—	—	—	45·3	64·0	7·4	—	—	—	—	—	—	52·7	74·3	8·2	—	—	—	—	—	—
6	A. Y.	F.	45	46·3	60·7	8·2	60·3	74·3	8·8	71·0	84·7	11·0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	M. Y.	F.	54	47·7	62·0	7·9	70·0	86·0	10·3	—	—	—	—	—	—	—	—	—	—	—	—	59·3	89·7	8·6	—	—	—	—	—	—
8	F. M.	F.	17	44·0	64·0	7·5	64·0	80·7	9·4	—	—	—	66·7	86·7	10·4	—	—	—	—	—	—	68·0	98·3	10·0	—	—	—	—	—	—
9	E. E.	F.	24	55·3	76·0	8·2	71·3	88·7	10·3	—	—	—	60·7	82·3	9·4	54·3	102·3	8·8	—	—	—	78·0	102·3	12·7	—	—	—	—	—	—
10	G. D.	M.	50	35·5	45·7	5·5	54·0	63·3	8·0	73·3	82·3	11·0	—	—	—	57·0	98·6	7·0	—	—	—	61·7	75·0	9·7	—	—	—	—	—	—
11	M. P.	F.	36	47·3	68·7	3·0	43·3	61·7	6·0	—	—	—	—	—	—	12·0	70·7	2·6	—	—	—	44·0	69·7	6·1	—	—	—	—	—	—
12	A. P.	F.	26	37·3	60·7	5·6	62·8	80·7	9·4	—	—	—	—	—	—	13·0	67·0	2·9	—	—	—	55·0	87·7	8·2	—	—	—	—	—	—
13	A. W.	F.	20	31·7	52·7	5·0	37·0	56·0	6·0	43·7	52·0	6·0	—	—	—	—	—	—	—	—	—	41·7	73·3	6·2	—	—	—	—	—	—
14	E. M.	F.	37	40·3	61·3	6·0	40·3	60·7	3·5	—	—	—	—	—	—	—	—	—	61·7	84·7	8·8	53·7	87·7	7·3	—	—	—	—	—	—
15	J. McL.	M.	43	46·0	64·3	7·7	—	—	—	—	—	—	—	—	—	27·7	69·7	4·6	—	—	—	—	—	—	—	—	—	—	—	—

HCl = Free hydrochloric acid. T.A. = Total acidity, expressed in terms of number of cubic centimetres of decinormal soda required to neutralise respective acidities in 100 c.c. of filtrate. P. = Peptic activity.

the total observations in 14 cases demonstrates this very clearly:—

	Water.	Tea.
HCl	42·7	53·2
T.A.	62·2	70·8
P.	6·7	8·0

In the individual cases a similar, but varying, relation is seen to obtain in all but two (Nos. 2 and 11), where the secretion is actually diminished. In three individuals a number of observations were made with a solution of caffeine (3 gr. in 10 oz. of water) with a view of elucidating the secreterogenic factor in infusions of tea. In two the averages of repeated observations showed that such a solution of caffeine was more potent than tea; whilst in the third, whilst the stimulating effect was somewhat less than that of tea, it was much greater than water.

	Water.	Tea.	Caffeine.
HCl	46·5	54·8	54·9
T.A.	68·0	77·0	79·0

the average of the total observations showing that a watery solution of caffeine and an infusion of tea are equally stimulating. The results obtained with coffee indicate that individual susceptibility is more pronounced than in the case of tea, and that whilst the averages of the total observations in the six cases where comparison may be instituted appear to show that it is a somewhat more powerful stimulus of gastric secretion than tea, this depends chiefly on its marked effect on those who may be regarded as susceptible.

	Water.	Tea.	Coffee.
HCl	41·0	51·3	56·6
T.A.	59·8	67·5	72·3
P.	7·0	8·1	8·8

Cocoa, whilst showing some degree of individual variability in its action, is a stimulus to gastric secretion more powerful than water but less powerful than tea, as is shown by comparison of the following total averages in six cases:—

	Water.	Tea.	Cocoa.
HCl	46·3	57·4	51·8
T.A.	66·9	75·1	71·5
P.	8·0	9·1	8·4

The results of the observations with milk are particularly interesting in view of its general and somewhat empirical use as a food in disorders of the stomach and in conditions of general debility. In five out of six cases in which observations were made it proved to have a stimulating effect on gastric secretion less than that of water:—

	Water.	Milk.
HCl	43·8	33·1
T.A.	63·2	83·7
P.	6·3	5·2

This peculiar relation of milk to gastric secretion depends in all probability upon the inhibitory action of the fat contained in it. It is of interest to note that whilst the stomach contents after a milk test-meal show considerably less free HCl and pepsin than after the administration of water, there is a great access in the total acidity; so far as we have been able to investigate this phenomenon it would appear to be due to the presence of fatty acids resulting from the splitting of the milk fats. A watery infusion of a meat extract is a powerful stimulus of gastric secretion, as appears from a comparison of the following averages of the total observations in 12 cases:—

	Water.	Tea.	Meat extract.
HCl	47·0	54·3	59·3
T.A.	68·0	71·6	85·6
P.	7·3	8·0	9·0

Similarly albumin water appears to exert a considerable stimulating effect on gastric secretion, as is shown by repeated observations on two individuals. The observations on the action of alcohol and tobacco-smoking on gastric secretion made on two normal individuals are of interest in that they show that either agent may have a stimulating or a depressing effect on secretion, probably in accordance with the susceptibility of the individual.

Dr. F. PARKES WEBER read a paper on the Association of Hysteria with Malingering: the Phylogenetic Aspect of Hysteria as Pathological Exaggeration (or Disorder) of Tertiary (Nervous) Sex Characters, which will be found on p. 1542 of this issue of THE LANCET.

PATHOLOGICAL SECTION.

Arteriomyomatosis.

A MEETING of this section was held on Nov. 21st, Dr. R. T. HEWLETT, the President, being in the chair.

Mr. S. G. SHATTOCK recorded under the name of Arteriomyomatosis a hitherto undescribed arterial lesion which he had observed in the vessels of a large soft fibroma removed from the connective tissues by the side of the vagina. The vessels were of the size of the smallest arterioles and presented a remarkable overgrowth of the muscular tissue. This was not disposed anatomically as in a simple hypertrophy (as in the hypermyotrophy unassociated with renal disease described by Savill or in chronic Bright's disease), but the bundles of muscle cells, in the most marked enlargements, intersected without relation to the axis of the vessel, and after the manner of a proper myoma. The muscular overgrowth was in some cases markedly asymmetrical, and might even take the form (microscopically) of a lobulated eminence. The adventitia was quite unaffected. There was no renal disease. The condition was wholly different from the peri-arteritis nodosa of Kussmaul and Maier, where the thickenings, which occurred as discrete nodular swellings on the smaller arteries, were due to inflammatory changes in the adventitia, accompanied with endothelial proliferation, the muscular tunic being displaced and thinned. In the lesion described by the speaker the thickening was diffuse, the vessel being enlarged somewhat as the nerves in the diffuse form of neuro-fibromatosis.

Papers were read by Dr. W. LANGDON BROWN on the Bundle of His from a case of Heart-block (with specimens and lantern slides); Dr. A. E. BOYCOTT on Sahli's Hæmoglobinometer; Dr. H. R. DEAN on Further Experiments on Complement-fixation and Precipitation; and Dr. J. HENDERSON SMITH on Some Experiments on Lysis.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.—Purpura in Acute Infective Diarrhœa in Infants.—Congenital Flexion of the Joints of the Fingers.

A MEETING of this section was held on Nov. 24th, Dr. G. A. SUTHERLAND, the President, being in the chair.

The following cases were shown:—

Dr. T. VINCENT DICKINSON: Infantilism.

Dr. REGINALD H. MILLER: (1) Chronic Interstitial Nephritis with Infantilism; and (2) Intracranial Tumour.

Dr. F. J. POYNTON: Psoriasis and Flexion of the Terminal Phalanx of the Thumb.

Dr. A. C. D. FIRTH: Congenital Absence of Patellæ with Deformity of the Nails in a mother and three children.

Dr. J. L. BUNCH: Hereditary Syphilitic Infant treated with Intravenous Injection of "606."

Dr. E. BELLINGHAM SMITH: Congenital Word Deafness and Other Defects.

Mr. HALDIN. DAVIS: Granuloma Annulare.

A specimen of Cerebral Aplasia with Hydrocephalus was shown by Dr. R. S. TREVOR and Dr. H. D. ROLLESTON.

Dr. ROLLESTON and Dr. B. J. DE W. MOLONY communicated a paper on Purpura in Acute Infective Diarrhœa in Infants. From an analysis of 100 cases of acute diarrhœa sufficiently severe to be admitted into the Victoria Hospital for Children it was found that purpura occurred in 11, all of which were fatal; the prognosis of these cases was therefore extremely grave. In 8 of the 11 cases the purpura was on the abdomen; possibly the extremely low blood pressure and the horizontal position of the patients explained why the purpura occurred on the trunk rather than on the limbs. The purpura occurred on an average on the thirty-fourth day of the diarrhœal disease and seven days before death; purpura was therefore a late and cachectic manifestation in diarrhœa of infants. The purpura was not caused by transfusion or by the use of serums.

Mr. D. C. L. FITZWILLIAMS read a paper on Congenital Flexion of the Proximal Inter-phalangeal Joints of the Fingers, after having shown four cases illustrating the condition. As a short and convenient name for the deformity

he suggested the term "hook-finger." He stated that the chief characteristics were that the first inter-phalangeal joints were flexed to a right angle, while the metacarpo-phalangeal and the terminal inter-phalangeal joints were hyper-extended and never flexed as was sometimes stated in the books. The little finger was the one most often affected, but if the condition was present in the others as well it was less marked in those that were farthest away from the little finger. The thumb was never involved. The deformity was a true congenital one and never acquired. It was probably due to maldevelopment of the anterior ligament of the joint; the hyperextension of the metacarpal joint showed that the fasciæ had nothing to do with it, though shortness of these structures was the cause usually assigned in the books. In nearly all cases the condition was bilateral, and was frequently associated with laxity of ligaments of the other joints of the body. In one case exhibited both knees could be dislocated with great ease. Other congenital abnormalities were not uncommon. If the condition was allowed to persist and more than one finger was affected, the use of the hand might be seriously interfered with. The treatment in the early cases was manipulation and massage, but in old-standing cases the ligament should be released from the front of the base of the middle phalanx by a fine-bladed tenotome passed into the joint from the side; in this way the tendons were not injured.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Nov. 27th, Dr. J. MITCHELL BRUCE being in the chair.

Dr. F. DE HAVILLAND HALL showed a case of Polycythæmia. The patient was a man aged 53. He had had rheumatism at the age of 15. He had been rejected on examination for entry into the Marines at the age of 18 for heart disease. In February, 1908, the present illness began with pain in the right shoulder, and he was admitted into Middlesex Hospital. In June, 1910, he was admitted into Westminster Hospital suffering from pain in the right side and shortness of breath—pleurisy. On admission into hospital on Sept. 16th, 1911, the patient was cyanosed, hands blue, fingers not clubbed, conjunctivæ injected; teeth were carious. The spleen was enlarged but not tender, and the liver was not enlarged. There were enlarged superficial veins over the abdomen, and distended and tortuous veins on the inner side of the right leg, slightly enlarged on the left leg. Nothing abnormal was found in the lungs and heart. The blood pressure varied between 90 and 115 mm. of mercury. Von Pirquet's test was positive. Examination of the blood on Sept. 18th showed: hæmoglobin 119 per cent., red blood corpuscles 10,980,000, colour index 54, white blood corpuscles 18,600, polymorphs 93 per cent. On Oct. 11th venesection to 4 ounces was done. The patient expressed himself as being much relieved by it. A second examination of the blood was made on Oct. 20th, and the polycythæmia was more pronounced than on the first occasion. The patient was seven weeks in hospital and gained 4 pounds in weight.

Dr. A. F. VOELCKER showed a case of Anæmia Pseudoleukæmia Infantum (von Jaksch) in which recovery had taken place.

Mr. DUNCAN C. L. FITZWILLIAMS showed a case of Persistent Forward Dislocation of the Head of the Radius in a patient who two years ago had an injury to his left elbow. The movements of extension and flexion were excellent. On extension the head of the radius could be felt dislocated forwards. The carrying angle was increased and lateral movements could be obtained. On flexing the arm something was felt to slip, and on full flexion the head of the radius was felt to the outer side of the shaft of the humerus well above the external condyle. There was no pain with the condition.

Mr. FITZWILLIAMS also showed a case of Compound Ganglion of the Palm of the Hand in a female patient. The condition had lasted for about 15 years. The ganglion extended from about 1½ inches above the anterior annular ligament of the wrist down to the middle of the palm. It extended along all the flexor tendons with the exception of that of the thumb and the little finger. A sensation as of melon-seed bodies was felt on driving the fluid to and fro under the anterior annular ligament. The collection had been tapped many times.

Dr. F. J. POYNTON reported a case of Loss of Power in the Hand of four years' duration in a female aged 43. There had been loss of power and loss of sensation in both hands for the last four years, worse on the left side. The symptoms were thought to have begun as a result of hard work four years ago. They had increased steadily. The patient could not hold anything in either hand. Pains (as if in the bones) commenced in the thumb and hollow of the left hand and passed up the radial side of the arm to settle in the supraclavicular fossa. There was similar (but less) pain on the right side. There were occipital headaches, and cramp-like pains in the sole of the right foot and in the right side of the stomach. General weakness and wasting were present. The patient had enlarged cervical glands on the right side when 18 years old. She was nervous and emotional, and responded readily to suggestion. The pupils were normal. There was no marked wasting of either arm or forearm. In the left hand the thenar eminence was wasted, as also the hypothenar eminence. There was slight wasting similarly on the right side. The interossei were poorly developed on both sides. The trunk muscles were normal. There was no wasting of either lower limb, and the patient used them freely. There was no tremor or ataxy. Sensation was normal over the trunk and lower limbs. There was considerable blunting of the tactile sense in the upper limbs (stroking touch) uniformly distributed over both forearms and hands below the elbows. Sensation to pain was normal or rather hypersensitive; heat and cold sense normal. Reflexes in the upper arms were present and equal on both sides. Abdominal reflexes were present. The plantar response was indefinite flexor. Sensory change was very variable. On Nov. 24th the stroking touch was felt readily all over both forearms and hands, and there was hyperæsthesia to pin-pricks. No alteration in intensity of tactile sense anywhere could be made out. The left hand sweated profusely, the right to a lesser degree. The patient complained of tenderness "in bones" when the forearms were squeezed. Both thumbs could be opposed and abducted quite well.

Mr. W. H. BATTLE and Mr. H. BAZETT showed a case of Tracheal Obstruction. The patient was a female aged 42. In 1907 the patient had pneumonia and pleurisy, and since that time she had suffered with shortness of breath and stridor, and she had noticed some swelling in her neck which varied from time to time. During the same time she had had a troublesome cough, especially in the morning. On admission, on June 19th, 1911, the patient was found to have an enlarged thyroid, the enlargement being especially on the left side, while there was no obvious enlargement of the isthmus. The enlargement of the gland appeared to be uniform and the lower margin of the gland could not be defined, but appeared to extend behind the sternum. No abnormal sounds were heard in the chest, but there was some dulness on percussion over the manubrium and some dilated veins were seen over the upper part of the chest. The larynx was examined and found to be normal. On June 30th Mr. Battle made a median incision in the neck and divided the isthmus of the thyroid, and separated the gland and its capsule from the trachea, which was compressed and scabbard-shaped. The left lobe of the thyroid was enlarged and was pushing the trachea over the right side of the neck, but the thyroid did not appear to extend down into the thorax. Since the operation the stridor, mainly inspiratory, had continued, and on examination with X rays, the trachea was seen projecting from both sides of the manubrium, but more on the left than on the right. At the present time the right lobe of the thyroid was the larger in the neck, there was dulness on percussion over the manubrium, and on examination of the chest the respiratory breath sound was somewhat prolonged at the apices, and occasional crepitations were heard.

Mr. BATTLE and Mr. BAZETT also recorded a case of Tumour of the Femur in a male aged 16. About one month ago the patient knocked his left knee while at work, and on the next day noticed a hard lump above the knee. He again knocked his knee a week later. The lump gradually increased in size until shortly after the second injury, since when it had appeared to become a little smaller. After the first injury there was very little ecchymosis, but after the second injury the skin round the tumour became a dark-blue

colour. On admission on Nov. 15th a smooth, hard, rounded mass could be felt on the inner side of the lower end of the left femur. The tumour appeared to be attached to the femur and not to any of the more superficial structures; it was not definitely pedunculated, but appeared to be somewhat constricted at its attachment to the bone. On X ray examination the tumour was seen to be composed of very delicate bone of somewhat peculiar appearance.

Mr. BATTLE and Mr. BAZETT also brought forward a case of Popliteal Aneurysm in a male, aged 61 years. About five months ago the patient first noticed a small swelling at the back of the left knee. He took no notice of it and drew no one's attention to it. On August 16th, 1911, while walking, the patient developed acute pain in his right foot, which became blue and cold, this condition spreading up the leg nearly to the level of the knee-joint. On admission on August 19th the limb was cold and blue, and skin sensations were lost. The heart was enlarged but otherwise appeared normal; the urine had a specific gravity of 1024 and contained a trace of albumin. The arteries were thickened. A diagnosis of senile gangrene of the right leg was made, and on August 22nd, when a line of demarcation was becoming evident, the limb was amputated in the lower third of the thigh by a mixed flap and circular method, and the patient was discharged on Sept. 20th. Since he had been getting about with only one leg he had had pain behind the right knee and his leg had become swollen. The swelling at the back of the knee had not increased in size. On readmission on Nov. 14th the patient was found to have a swelling at the back of the left knee of the size of a small egg. The swelling exhibited expansile pulsation, which could be controlled by compression of the femoral artery. There was considerable œdema of the left leg and foot below the level of the knee, but there was no obvious enlargement of veins. With rest in bed for a fortnight, the œdema had disappeared for the most part. Nothing further abnormal was discovered in the chest or in the examination of the urine.

Dr. CHARLES W. CHAPMAN showed a case of Double Aneurysm of the Thoracic Aorta. The patient, aged 53, came under observation as an out-patient. He complained of sharp pain on the left side of his chest, passing down the left arm to the fingers, provoked by quick movements, and shortness of breath on exertion. The symptoms had lasted for eight years, but had become worse the last three years. There was no palpitation. The family history was good and the patient did not remember having had any illness. He had drunk very moderately of beer, no spirits, and was a non-smoker. He denied having had syphilis. On examination the cardiac dulness was much increased in both directions, there was impaired reasonance over the whole sternum, and a special area of dulness on the right side of the sternum over the second and third costal cartilages and extending to the right parasternal line. Over the latter area was a systolic thrill, and on auscultation loud harsh to-and-fro murmurs were heard; there was also a systolic murmur at the apex. The radial arteries were unequal. Wassermann reaction was positive. Examination by the X rays showed a pulsating swelling on the right side of the ascending aorta where the dulness had been observed, while in addition a smaller but freely pulsating aneurysm was seen higher up on the left side of the sternum.

Dr. CHAPMAN also showed a case of Aneurysm of the First Part of the Aorta in a man, aged 32. He complained of pain in the right breast and shoulder which had existed for seven months. Valvular disease had previously been detected. The patient had been to India, but denied having contracted specific disease or having had any illness. The man was pale and generally out of health; he had a more or less circular area of dulness with pulsation extending from the right side of the sternum for nearly 3 inches to the right, a harsh systolic murmur over the same area, and well-marked diastolic shock. There was much tenderness on pressure or friction. The apex-beat was just above the sixth rib and nearly an inch to the left of the nipple line. The impulse was feeble; arteries little thickened. Beyond a few scattered crepitant râles at both pulmonic bases there was nothing to note in the other organs and the urine was normal. Wassermann reactions were taken and were positive on both occasions. The pain was much relieved under rest and the free exhibition of iodides, but the improvement was most marked when Plummer's pill was added to the prescription, both as regards pain and force of pulsation. The patient remained in hospital for some months.

Mr. EDRED M. CORNER showed cases illustrating results of Cellulitis of the Hand. Case 1 was a male, aged 34, whose right hand was affected. He had been in hospital eight months ago, when an operation was performed. The patient was doing his work (manual) well; the only disability from which he suffered was that his hand ached after hard work. Case 2 was a male, aged 46, and had the trouble in the left hand. He was in hospital two and a half years ago, when he had six operations. He did his work (manual), but the hand became stiff if it was cold, and it ached in cold weather and after work. Case 3 (right hand) was a male, aged 59, who was in hospital 16 months ago, when he had an operation. He did light work, but could not close his hand to grasp, and the hand easily ached. Case 4 (also right hand) was a male, aged 59, who was in hospital 18 months ago, when he had three operations. He had lost one finger. But beyond sensitiveness to cold the hand was as good as it was before it became affected with cellulitis. Case 5 was a male, aged 50, who was in hospital 16 months ago with the trouble in his right hand. He had two operations. The hand was contracted and much disabled, and he could not grasp. He had a nodule of inflamed palmar fascia such as was found in Dupuytren's contraction. The hand felt the cold very much. The sixth case was that of a male, aged 38, who also had the right hand affected. He was in hospital two and a half years ago, when he had three operations. He could not close his hand to grasp. The hand was cold and blue, and was very sensitive to cold and changes of weather. In the seventh case, that of a male, aged 30, the left hand was affected. He was in hospital six months ago, when he had an operation. He did his work (heavy), his hand giving him no trouble except that it ached in rainy weather. Case 8 was a male aged 39; right hand. He was in hospital nine months ago, when he had five operations. He did his work (manual), but his wrist was stiff and the wound still remained unhealed. Case 9 was a male aged 17, with right hand affected. He was in hospital nine months ago, when he had two operations. He did his work (manual), his hand only troubling him when riding (he had a stiff finger). The tenth case was a female, aged 45, who had the affection in the right hand. She was in hospital six months ago, when she had two operations. She was married and used to do housework. Now she could not do her work as she could not close her hand to grasp; moreover, she felt changes of weather and temperature acutely in the hand. The nails were cracking. Case 11 was that of a female, aged 65, whose right hand was affected. She was in hospital two years ago, when she had one operation. She had difficulty in doing her simple laundry work. She did not feel the cold, but the hand ached whilst at work and afterwards, preventing her sleeping at night. The pain was felt across the knuckles.

Dr. J. WALTER CARR brought forward a case of Infective Endocarditis; recovery. The patient was a woman, aged 26. She had rheumatic fever when 21, and had suffered from slight breathlessness and occasional giddiness since. She was confined in January, 1911, and had a good deal of headache and giddiness after. On Feb. 28th she suddenly developed right hemiplegia, without loss of consciousness, doubtless from embolism. She was admitted to the Royal Free Hospital on March 10th. The heart was slightly dilated and there was a systolic murmur at the apex. Staphylococcus pyogenes was found in the blood. For the next five weeks she became steadily worse, and the temperature was very irregular, varying between 98° and 104°. The heart became greatly dilated, dulness extending from one inch to the right of the sternum to over an inch outside the left nipple line. Pulmonary bases were much congested. The urine frequently contained blood and albumin, probably from renal embolism, and the right kidney was palpable and tender. Three injections were given of an autogenous vaccine, containing respectively 300, 400, and 500 millions of staphylococci. No apparent benefit followed, the patient continuing to lose ground. Anti-staphylococcic serum was next injected, six times in all, 10 c.c. twice and afterwards 15 c.c. After the last injection the temperature became normal and gradual

improvement followed. The patient left the hospital on June 30th. She was in good health and doing full, ordinary household work without any discomfort. Mitral regurgitation was still present and the heart was slightly enlarged. The hemiplegia had passed off, except for slight weakness of the right hand. The lungs were clear and the urine normal.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases and Specimens.—Influence of the Adrenal, Pineal, and Pituitary Glands upon Primary and Secondary Sex Characters.—Intestinal Concretions.

A PATHOLOGICAL meeting was held on Nov. 16th, Mr. G. P. NEWBOLT, Vice-President, being in the chair.

Dr. K. A. GROSSMANN showed Twin Embryos—four months.

Mr. R. W. MURRAY showed Intussusception in an adult.

Mr. F. T. PAUL: An Appendix from a girl, aged 11, completely filled with a concretion which extended half an inch into the cæcum; she never had definite appendicitis.

Mr. W. THELWALL THOMAS showed: (1) A Myeloid Tumour from the palm of the hand, unconnected with bone; (2) a simple Duct Papilloma of the Breast (there was a discharge from the nipple); (3) an Adenoma of the Palate; and (4) Four Calculi removed from the Bulbous and six from the Prostatic Urethra.

Mr. T. C. LITLER JONES showed Melanotic Sarcoma of the Liver, with secondary infection of bacillus aerogenes capsulatus; the eye was removed two years before for glaucoma.

Dr. R. J. M. BUCHANAN showed Traumatic Pontine Hæmorrhage from a prize-fighter.

Dr. ERNEST E. GLYNN showed Infective Endocarditis, with subarachnoid cerebral hæmorrhage.

Dr. J. H. WILLETT showed Carneous Mole, Channeled Polyp, and Ovarian Fibroma with twisted pedicle.

Dr. E. GLYNN read a note on the Influence of the Adrenal, Pineal, and Pituitary Glands upon Primary and Secondary Sex Characters. He referred especially to the occurrence of malignant adrenal hypernephromata in female children with precocious development and hirsuties, to bilateral adrenal hyperplasia in female pseudo-hermaphrodites, and to the occurrence of true sexual precocity in tumours of the pineal gland.—Dr. T. R. GLYNN referred to the developmental relationship between the adrenal cortex and sex glands.

Dr. O. T. WILLIAMS read a paper on Intestinal Concretions. He demonstrated three series of concretions from the gall-bladder, intestine, and appendix, and compared and contrasted their chemical constitution. He suggested that their occurrence was evidence of general disorder of calcium and fat metabolism, and that the concretions were excreted by the intestine and the appendages.—Dr. J. LLOYD ROBERTS referred to a case of ulcerative colitis, ultimately fatal from perforation, in which the only symptoms for long periods were the passage of large quantities of mucous casts.—Dr. M. H. F. IVENS, Dr. GLYNN, and Dr. W. BLAIR BELL also spoke.

Wound of the Thoracic Duct.—Sacrococcygeal Meningocele with Imperforate Anus.—Nerve Anastomosis in Infantile Paralysis.

A MEETING of this society was held on Nov. 23rd, Dr. T. R. BRADSHAW, the President, being in the chair.

Mr. PAUL read a note of a case of Wound of the Thoracic Duct due to deep dissection of the neck for malignant glands. Compression having failed, the duct was successfully ligatured on the fifth day. Having reviewed other methods of treatment, he concluded that ligature was the best and should be employed as soon as injury to the duct was recognised.—Dr. H. F. PHILLIPS HUNT, under whose care the patient was, said that during the period that chyle was flowing the condition was one of extreme lassitude and drowsiness. The patient described her feelings as if she were in a far-off dream, that voices sounded dim and far away, and that she had to exert considerable mental effort before being able to answer questions. The temperature ranged from 100° to 102° F., and fell to normal 48 hours after the flow of chyle had ceased. She required an unusual amount of anæsthetic.—Mr. THELWALL THOMAS mentioned a case of wound of the duct following removal of tuberculous glands. The same evening free oozing took place of a clear discharge, saturating the dressings. The next day there formed a large opalescent clot distending the neck. On examination no definite spot could be found from which the oozing came. The wound was firmly packed with gauze. The patient was given a diet of tea and beef-tea. Recovery was uneventful.—Mr. RUSHTON PARKER mentioned the case of a girl, aged 10, from whom he excised tuberculous glands in the left supra-clavicular region. At the subsequent dressing abundant clear watery fluid escaped. No symptoms whatever resulted. If it were suggested that this fluid came from the lymphatics he stated that in excising glands from the thigh he had knowingly cut the largest lymphatics, but had never seen the escape of clear fluid afterwards.

Dr. ERNEST W. LEWIS read a note on a case of Sacro-coccygeal Meningocele in an adult associated with Imperforate Anus. Dr. Lewis gave a detailed account of this case and discussed the causation, varieties, prognosis, and treatment of imperforate anus.—Mr. R. C. DUN'S experience was that Dr. Lewis's patient showed the common variety of imperforate anus met with in females. He had notes of 45 cases on which he had operated—31 males, 14 females. The deformity in 13 of the female cases was similar to that in the case under discussion. The mortality in this series of cases was 22 per cent.

Mr. MURRAY read a note on five cases of Infantile Paralysis in which he had performed Nerve Anastomosis. In every case it was judged that sufficient time had elapsed to permit of natural recovery. Electrical reactions were always taken under anæsthesia. The operations were performed four or five years ago and the results were most disappointing, for in no instance was there any improvement as the direct result of the anastomosis.—Dr. W. B. WARRINGTON mentioned that a detailed account of these cases had been published in THE LANCET of April 2nd, 1910. He alluded to Stoffel's criticism of that paper and said that this writer claimed that the individual fibres to the muscles kept a definite topographical position throughout the nerve trunk and that this position could be recognised from experience, and hence a more scientific operation undertaken.—Mr. DUN mentioned four cases of infantile paralysis in which he had performed nerve anastomosis without improvement.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Exhibition of Cases and Specimens.—Acute Inversion of Uterus.—Early Rising after Cœliotomy.

A MEETING of this society was held at Sheffield on Nov. 17th, Dr. J. B. HELLIER, the President, being in the chair.

Dr. J. E. GEMMELL (Liverpool) showed specimens of: (1) Carcinoma Corporis Uteri; (2) Carcinoma Corporis Uteri with Fibroid; and (3) Diffuse Adeno-fibroma Uteri. He described their macroscopic and microscopic appearances, and urged the desirability of performing hysterectomy for all cases of fibroid seen at the menopause.

Mr. A. W. CUFF (Sheffield) related cases of: (1) Ureteral Calculus removed per vaginam; and (2) Vermiform Appendix in a Femoral Hernia.

Dr. A. DONALD (Manchester) read notes of a case of Wertheim's operation for Cancer, which was followed by sloughing of the abdominal wall, possibly due to the pressure of the retractor used at the operation.

Mr. MILES H. PHILLIPS (Sheffield) reported three cases of Acute Inversion of the Uterus which he had seen in consultation shortly after their occurrence. In each case, as the patient was profoundly collapsed, no attempt was made at immediate reposition. There had been little or no post-partum hæmorrhage. The shock was treated by saline infusion to which pituitary extract and morphia were added. After intervals of two, five, and 20 hours respectively the patient had sufficiently rallied to warrant operation. Under anæsthesia the uterus was in each case replaced without any great difficulty. All three patients recovered. It was then argued that the presence of severe shock should contra-indicate the usual text-book instructions to attempt immediate reposition. The secondary shock

so caused is likely to turn the balance against the patient. Analysis of 184 cases, collected chiefly from English records, supports the contention. The total mortality was 43 (23·4 per cent.). Of 79 cases in which the uterus was immediately replaced, *in the presence of marked shock*, 24 (over 30 per cent.) died. In 23 cases, in which it is definitely stated that there was *no shock*, immediate replacement was followed by recovery in each instance. In 10 cases there is no note as to the presence or absence of shock (probably, therefore, it was not present in any marked degree); immediate replacement was successful in each of these cases. In 17 cases death occurred with the uterus unreduced, generally from shock, before the arrival of the medical practitioner, who recorded the case. In 45 cases the uterus was allowed to pass into the state of chronic inversion, which was treated later, with success in every instance. In 2 cases death was due to septic infection. Of the 43 deaths, 41 took place within a few hours. The figures also show that immediate replacement of the uterus is followed by fatal results in 21 per cent. of cases, whereas in the 47 cases allowed to become chronic only 2 died. The intermediate line of treatment, indicated above, was strongly advocated.

Dr. A. J. WALLACE (Liverpool) read a short note on the results of early rising from bed of patients who had undergone abdominal and vaginal cœliotomies. After mention of the reasons for the adoption of the practice the guiding rules were stated as follows: recovery from operation must be good; pulse-rate and temperature must be normal; all nausea and vomiting must have ceased; the abdominal wound must be healed or be healing by first intention—the incision having been so made that the resulting cicatrix was supported by muscular tissue (the Lennander or Pfannenstiel incision); patients were merely encouraged to leave their beds, compulsion being never employed. Of 400 patients who underwent major operations in hospital 283 left their beds as soon as they felt disposed to do so, the majority on the seventh and eighth days. The discharge from hospital was generally on the fifteenth or sixteenth day after operation. The cases included every variety of operation for gynæcological ailments. In the great majority of cases the general condition of the patients was distinctly better than had been the case with patients confined to bed for two or three weeks. A few unfavourable results had to be recorded—slight pyrexia without definite cause (two cases); redness and swelling around the wound (two cases); secondary hæmorrhage from perineal wound (one case); a patient aged 64 who got up on the sixth day developed bronchitis; post-operative thrombosis (three cases) in mild degree.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Fatal Case following Injection of "606."—Spinal Anæsthesia in Prostatectomy.

A MEETING of this section was held on Nov. 3rd, Mr. R. H. WOODS, the President, being in the chair.

Mr. H. MOORE reported a case of early General Paralysis of the Insane treated by "606," with a fatal result. The patient, aged 25, was given 0·5 gramme intravenously. A severe reaction followed, his temperature rising to 103° F. It was normal next morning, and he left the hospital on the fifth day. Wassermann's reaction, which had been negative before injection, was positive four days after. Six weeks later, his general condition being much improved, but Wassermann's reaction being still positive, he was again given 0·5 gramme. The reaction was very severe, his temperature rising to 105°, with much diarrhœa, vomiting, and general pain. The reflexes, which were all exaggerated before injection, disappeared. He was much better the following morning, but that afternoon he had a second rigor, with rise of temperature to 102°. His general condition became rapidly worse—he got ptosis of the left eyelid, bilateral paresis of the limbs, and difficulty of articulation, and died that night.—The PRESIDENT said that the administration of salvarsan had become firmly established. Notwithstanding Mr. Moore's case, he thought it a safe proceeding with proper technical precautions. In the case of vaccination the General Medical Council exacted an extraordinary length of time for its study, in the case of intravenous and other injections they did not exact any education at all. He often gave it in an ambulatory way, but until more was known about it, it was doubtful whether it ought to be given outside hospital.—Mr. ANDREW CHARLES suggested a cumulative effect.—Dr. T. G. MOORHEAD said he could hardly agree that the administration of salvarsan in an ambulatory manner was safe, the last injection given by him having been followed by severe symptoms almost identical with those in Mr. Moore's case. The patient was extremely cyanosed, the tongue swollen, and he was complaining of tingling in the legs; but he was perfectly well next morning.—Sir JOHN LENTAIGNE thought the administration of this drug should not be undertaken unless the patient was under control in hospital for at least three days. In the first four cases in which he had administered it the symptoms were most alarming. If the patients were thoroughly cleared out before injection it would be better. He had tried this and found a very great difference in the violence of the reaction, and the patients were free from constitutional disturbances afterwards. He would on no account treat a patient and allow him to walk home afterwards.—Mr. G. E. P. MELDON asked the exact cause of the patient's death. If death had been directly due to the salvarsan it was probable the patient would have died within the first few hours, but apparently he got over the early reaction and succumbed to a second or later reaction.—Mr. W. I. DE C. WHEELER said he thought Mr. Moore's case by no means the only Dublin patient who died after salvarsan. In the treatment of paralytic cases it was found to be so harmful that in lunatic asylums it had been abandoned. He had given up the intramuscular injection in favour of the intravenous method.—Mr. K. E. L. G. GUNN said one of his cases had caused him much anxiety. A youngish man with very bad syphilis, with whom the ordinary treatment had failed, after injection was fairly bad for some hours, but in about 20 hours afterwards he was found to be in a very serious state, and although he recovered he was very near death.—Mr. A. J. M. BLANEY asked, Was Mr. Moore justified in giving salvarsan in the case brought before them?—Mr. PEARSON said in his experience of ten cases it was rather the rule to get no reaction. In some cases the injection was followed by diarrhœa, but in no case was there a great rise in temperature.—The PRESIDENT spoke of his experience of over 40 cases where this drug was administered, and in all except the first he had given it intravenously by gravitation, using a boiled cotton-wool filter. In none of the cases was there anything like a severe reaction.—Mr. MOORE, replying, said that in two or three cases where the patient had a very slight reaction at first, in about 36 hours afterwards there was a severe reaction. Alcoholic patients should be carefully dealt with. He always prepared the patient as for a major operation. The drug should always be made fresh, and the saline solution should be made at the same time with boiling water and then allowed to cool. With regard to the question as to the cause of death in the case brought before the Academy he could not say what really was the cause.

Mr. R. A. STONEY in a paper on Spinal Anæsthesia in Prostatectomy said that one of the most important questions in connexion with prostatectomy was that of a suitable anæsthetic. Owing to the age, condition of the heart, lungs, vessels, and kidneys, these patients were often unsuitable subjects for an anæsthetic, even though much might be done to mitigate its evils by careful previous preparation of the patient and the reduction of the duration of the anæsthesia by rapidity of operating. Another point of great importance, to which sufficient attention was not usually paid, was hæmorrhage. These difficulties were best met by the use of spinal anæsthesia as exemplified by a case in which a 5 per cent. solution of novocaine, with a small percentage of adrenalin, was used. The patient, a man aged 75, had extensive chronic bronchitis and a weak, irregular pulse, pointing to fatty degeneration of the heart, and atheroma of the vessels. The prostate was removed without trouble to the operator or pain to the patient under spinal anæsthesia. There were no unpleasant after-effects. The hæmorrhage, both at the operation and afterwards, was remarkably slight, all tingeing of the urine with blood having ceased after 36 hours. The patient was propped up in bed immediately after the operation, and was sitting in a chair on the third day. He left hospital with the suprapubic wound closed, and passing his urine in a normal manner, one month after operation.—Sir CHARLES BALL said that some

years ago, when novocaine first came into use, he saw a considerable number of cases of spinal anæsthesia in Paris. In most of the cases the anæsthesia was not complete, and in many chloroform had to be administered before the operation was finished. He had also heard of several serious complications arising after operation with spinal anæsthesia, notably paraplegia. He considered ether safer than spinal anæsthesia.—Mr. GUNN had tried spinal anæsthesia in five cases of prostatectomy, and while in theory it might be admirable it had not worked successfully with him. Mr. Stoney had emphasised that spinal anæsthesia lessened the hæmorrhage following the operation. He was of opinion that the bladder regained its tone more quickly after light ether anæsthesia, and that this was a most important factor in the control of post-operative hæmorrhage. He was inclined to think that the general anæsthetic got too much blame. He was informed by those who used spinal anæsthesia in a large number of cases that chest complications were more numerous after it than after general anæsthesia.—Mr. PEARSON understood Mr. Stoney to say that spinal anæsthesia had no effect on the heart and lungs, but in his (Mr. Pearson's) opinion it had a very marked effect on the blood pressure. Nor did he agree with Mr. Stoney that adrenalin minimised the tendency to hæmorrhage.—Mr. STONEY, in reply, said that stovaine did not appear to be so satisfactory as novocaine. The latter was apparently the least toxic of all the drugs, especially when combined with adrenalin, and he thought that in this combination it had not the effect of reducing the blood pressure. He believed that the technique was probably the cause of a great many of the failures. Seeing that the recovery was fairly rapid, the effect of adrenalin in contracting the small vessels more than counteracted the loss of tone in the bladder during the first hour after operation.

SECTION OF MEDICINE.

A Triad of Clinical Records.—Gangrenous Dermatitis.

A MEETING of this section was held on Nov. 10th, Sir JOHN MOORE, the President, being in the chair.

Under the heading of "A Triad of Clinical Records," the PRESIDENT submitted the clinical notes of three cases which had recently come under his observation in practice. The first was that of a married woman, aged 34 years, with chronic perihepatitis and interstitial hepatitis, and the prominent symptoms of ascites, jaundice, and hæmatemesis. She first came under notice in April, 1909, with the signs and symptoms of purpura hæmorrhagica, and complained of a feeling of fulness in the abdomen, which was distended, and of constant drowsiness. On Feb. 14th last 440 ounces of bile-stained fluid were evacuated by paracentesis abdominis. In October, 1911, she went into the Meath Hospital for the third and last time. On Oct. 10th paracentesis abdominis was again performed, and 580 oz. of serous effusion were drawn off. The liver was examined next day; it was enlarged, and its surface was apparently nodular, like a hob-nail liver. After death, on Oct. 18th, the capsules of the liver and spleen were remarkably thickened, and their free surfaces were deeply pitted and indented. The second case was an example of the beneficial effect of thoracentesis in empyema. The patient, a lad of 18, contracted left pleuro-pneumonia, which ran an atypical and unsatisfactory course. Tubercle bacilli were frequently looked for, but never found in the expectoration. Suddenly a localised empyema on the left side seemed to give way into the pleura at large, and the patient became cyanosed and deadly ill. Dexiocardia was discovered one morning. A free opening was made into the left pleura, and large quantities of fœtid pus were evacuated without resection of a rib, the critical state of the patient forbidding such a procedure. The young man made an excellent, though protracted, recovery. In the third case, a rapidly growing mediastinal lympho-sarcoma in a man, aged 71, closely simulated thoracic aneurysm because of the symptoms and signs which it produced. The new growth involved the œsophagus, stomach, and liver, and spread into the neck, compressing the trachea and pushing the larynx towards the left side of the neck. The prominent symptoms were hoarseness and then aphonia, spasmodic cough, dysphagia, vomiting, or rather regurgitation of food, and hæmoptysis. There was an almost complete absence of pain. Microscopically the appearance suggested small round-celled carcinoma, but Dr. William Boxwell, who made the necropsy, was inclined to look upon the growth as a variety of lympho-sarcoma.—Mr. R. H. WOODS said he had seen the third of these cases in consultation. The patient had a peculiar stridor, which the trained ear could detect as being due to stenosis or to compression of the trachea. The pitch of such stridor varied with the situation of the narrowing.—Dr. W. G. SMITH expressed his surprise at Sir John Moore's attaching any importance to "cancerous cachexia." The speaker entirely refused to believe that cancer produces cachexia *per se*, and instanced many uterine and breast cancers of enormous size where no cachexia existed. Cachexia in cancer is due solely to the growths preventing nutrition.—Dr. J. M. FINNY, Dr. BOXWELL, and Dr. T. P. C. KIRKPATRICK also spoke.—Dr. J. LITTLE, from the chair, summed up the discussion, and mentioned that weight may be attached to the effects of leeching in intra-thoracic tumour. Leeches always afforded at least temporary relief in cases of aneurysm.

Dr. F. C. PURSER described a series of 15 cases of Gangrenous Dermatitis, most of them suffering from enteric fever, who had presented a condition fairly to be described as epidemic gangrenous dermatitis. In every case but two, where they were low on the back, the gangrenous areas were confined to the buttocks. One of the patients, a girl aged 6, died from diphtheria, but not of the dermatitis. A sixteenth case, occurring some three to four weeks after the others, was alluded to. It was that of a boy, aged 3½, who died from broncho-pneumonia, double empyema, and purulent pericarditis. In this case alone was the gangrene preceded by inflammation. A detailed account of all the cases will be published later.—Dr. FINNY recalled a case he had shown some years ago at the Academy, which began in impetigo. It had ended fatally. He laid great stress in the search for a cause on the lowered resistance of the patients.—Mr. O'C. J. DELAHOYDE and Dr. H. C. DRURY described cases they had seen, the one of gangrenous dermatitis complicating vaccinia, the other varicella.—Dr. J. A. MATSON and the PRESIDENT also spoke.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

A meeting of this society was held on Nov. 22nd, Dr. F. H. Jacob, the President, being in the chair, when the following cases and specimens were shown:—Mr. A. R. Anderson: Two Calculi removed from a sac in the posterior wall of the bladder by suprapubic operation. The sac walls were quite thin, and apparently consisted of mucous membrane and peritoneum. It was of just sufficient size to contain the stones. There was no prostatic enlargement. The interesting points were the rarity of the condition and the failure to detect the stones after repeated examinations with a sound. Mr. Anderson also showed a child with Sarcoma of the Right Lower Jaw.—Mr. W. M. Willis: Case of removal of the right half of the Thyroid Gland for recurrent attacks of dyspnœa due to the lower end of the thyroid becoming impacted between the sternum and the trachea. Operation was performed under local anæsthesia subsequent to the injection of omnopon and scopolamine.—The President: Case of Fibro-angioma of the Breast (shown last year), showing result of treatment by radium. A lump on the scalp and another in the thigh had also diminished in size, while one on the lip had disappeared; these had had no treatment. A microscopic section of the fibro-angioma was shown. This case has shown a decided improvement under the treatment.—The President also showed a case of Carcinoma of the Pylorus and a case of Cerebellar Tumour, with headache, nystagmus, optic neuritis, and staggering gait.—Mr. A. R. Tweedie: (1) Specimen from a case of Congenital Atresia of the Œsophagus and (2) specimen from a case of Chronic Laryngitis, with microscopical section. Also case of Intranasal Malignant Disease—probably Endothelioma. Removal of upper jaw, portion of the ethmoid and exposure of the sphenoidal sinus (preliminary ligation of external carotid and laryngotomy); microscopical section was also shown.—Dr. C. H. Cattle: A case of Raynaud's Disease in a man aged 58. The attacks began seven weeks ago with numbness and pain in the tip of the left index finger. These sensations gradually spread to all the finger-tips of both hands, which gradually became blue. The thumbs were not affected. The blueness varied in tint and was worse on exposure to cold.—Mr. Kenneth Black: Skiagrams—(1) A case of Dislocation of the Back without fracture; and (2) a case of Osteomalacia of the Tibia.—Mr. E. Bigg and Mr. Black: A case of Fracture

with Dislocation of the Back. The patient was struck in the middle of the back a slanting blow by 14 cwt. of stone. Following primary shock were noticed—first week, absence of left knee-jerk, afterwards recovered; third week and later, anæsthesia of front of left thigh, wasting of left thigh muscles, especially adductor longus and vastus internus. Pain in hip and right lumbar region, especially marked after exercise. These conditions persisted. A skiagram showed fracture and dislocation of the third lumbar vertebra; this vertebra was displaced laterally to the left, it was also rotated to the left, the spinal canal being the axis of rotation. The nerves had probably been trapped as they passed through the foramina and accounted for the trophic manifestations, &c.—Mr. Black and Dr. F. Rupert Snell showed a case of Fracture of the Back without dislocation, and a case of Otitis Media in a boy aged 2.—Mr. C. H. Allen showed a case of Lateral Anastomosis and subsequent resection of bowel for carcinoma of cæcum, and a case of Nephrectomy for Pyonephrosis due to Calculus.—Dr. W. T. Rowe showed a case of Leukæmia in a male aged 62.—Dr. Ryland showed an interesting case of Congenital Syphilis, and Dr. J. Smith a Cretin aged 21 years.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held at the Children's Hospital, Gartside-street, Manchester, on Nov. 21st, and the following cases were shown:—Dr. H. T. Ashby showed a case of Migraine in a child of 4, and an infant suffering from Splenic Anæmia.—Mr. E. S. Bishop and Dr. C. H. Melland showed a man of 23 on whom Partial Gastrectomy had been performed in September, 1911, for cancer of the pyloric end of the stomach, and showed the specimen. The patient had made an excellent recovery and had gained several pounds in weight since the operation.—Dr. J. G. Clegg showed several cases illustrating the value of Trephining of the Sclero-cornea for glaucomatous conditions of the eye.—Dr. N. C. Haring showed cases illustrating the Paraffin Treatment of Atrophic Rhinitis. In one case the paraffin had wandered on to the surface of the nose and had to be surgically removed.—Dr. C. C. Heywood showed a case of Congenital Ataxia in a girl of 6. The condition had markedly improved with massage and general tonics.—Dr. H. R. Hutton showed a girl with Unusually Distributed Paralysis.—Dr. R. W. Marsden showed a case of Phthisis Pulmonalis with a cyst on the true vocal cord, and a case of Congenital Syphilis with complete occlusion of the nasal pharynx and rhinitis caseosa.—Mr. H. H. Rayner showed a boy of 13 with a Dental Cyst arising in connexion with the left upper molars. He also showed skiagrams of the Hip-joints of a child who had been treated for six months by fixation for congenital dislocation of the hip-joints. One joint is in correct position and is strong and useful. The other, not being satisfactorily reduced, has again been put up in plaster.—Dr. J. Wharton showed a case from whom the left eye had been removed for Sarcoma of the Choroid, and showed the specimen. He also showed a case after Capsulectomy for Closed Pupil, a case after the Trephine Operation for Glaucoma, and one with a Dislocated Lens.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held in the Faculty Hall, Glasgow, on Oct. 25th.—The President (Dr. A. W. Russell) opened the session with a paper on Cancer of the Uterus: Some Practical Aspects of its Diagnosis and Treatment. He referred to the frequency of malignant disease and belief that it was on the increase, and pointed out that the uterus is the organ most frequently affected. Cancer of the cervix was more frequent, more insidious, and more difficult of early diagnosis than that of the body, and he urged immediate examination in all cases where there was the slightest irregularity of hæmorrhage, or any change in the quantity of the discharges, especially if accompanied with impairment of the general health. He also emphasised the necessity of diagnostic curettage. In discussing the treatment he said that patients were greatly benefited by operations which fell short of the extensive modern operation, such as simple vaginal and abdominal hysterectomy, or even curettage of the necrotic cervix followed by the use of the cautery, or applications such as acetone and formalin. In conclusion, Dr. Russell summarised his impressions of the value of various radical operations, and said that the less extensive (especially Schauta's) seemed to give greater comfort than could be secured by the more extensive operation.—Dr. W. D. Macfarlane, jun., read notes of Three Cases of Malignant Disease of the Uterus treated by Vaginal Hysterectomy. Two were epitheliomata of the cervix of several months' duration, and the third was malignant disease of the body and cervix internally. All three patients were alive and free from recurrence—4, 3½, and 2½ years after operation. During 1910 and 1911, out of 35 cases of cancer of the uterus he had seen, 22 were inoperable; 10 hysterectomies had been performed with 4 recurrences. Of the 22 inoperable cases 7 had died. Operability depended entirely on the point of view of the operator. He selected his cases, and in advanced disease used curette and cautery and regular application of pure acetone through a Ferguson's speculum. He advocated the radical operation (Wertheim's) in early cases, but in advanced cases, with marked involvement of the parametrium and glands, he contented himself with a simple abdominal hysterectomy.—In the discussion which followed Professor J. Munro Kerr said that his practice was to perform the more extensive (Wertheim's) operation. He found that about 70 per cent. of cases were operable and the results were satisfactory.—Mr. D. Duff maintained that the problem to be faced is that of extirpating, not only the tumour, but also the lymphatic area.—Dr. Louise McIlroy was of opinion that the success of incomplete operations was due to the fact that some cancers were of the slow-spreading type.—Dr. D. Shannon advocated Wertheim's operation as the one which held out most hope of cure.—Fresh specimens were shown by Dr Russell, Professor Munro Kerr, Dr. J. M. Stark, Dr. Macfarlane Dr. G. Balfour Marshall, Dr. Shannon, and Dr. Munro Campbell.

Reviews and Notices of Books.

Spirochætes: a Review of Recent Work with Some Original Observations. By W. C. BOSANQUET, M.D. Oxon. With one coloured plate and figures in the text. London and Philadelphia: W. B. Saunders Company. 1911. Pp. 152. Price 12*s.* net.

IN view of the present rapid and voluminous output of scientific work, which shows no signs of diminution, any observer who is content to devote himself to taking stock of knowledge already ascertained is doing an immense service. The work implied by this course is not showy, but it possesses the more solid value of appealing to a much larger audience. Few of us who are engaged in research in different biological fields can afford the time to examine into what our neighbours are doing in their several ways. We have quite enough to keep abreast of our own particular line of investigation. But there is generally time to read through a compendium, if sufficiently short, of labours achieved in other fields; and to those authors who thus facilitate the growth of general knowledge in the scientific world, such as Dr. Bosanquet, we are greatly indebted. Even a pure compilation is welcome; but the volume now before us is far from being definable in such terms, unless indeed every work of a comprehensive nature, and thus necessitating much reference to the work of others, is to be looked upon as a compilation. But there are two kinds of compilations. In the baser sort we have an account of a subject written by a person who is not known in connexion with that subject and whose absence of authority may be accompanied with an absence of the critical faculty due to personal equipment. The proper type of a work of this nature is like that before us, where the author has devoted time to the subject matter and has embodied in his *résumé* facts known to him at first hand.

The subject upon which Dr. Bosanquet writes is one of as great interest as is any subject to-day. The organisms known roughly as spirochætæ not only have a purely biological interest of their own, but are associated with many diseases the etiology and cure of which are a matter of moment. But in spite of what is already known about

these organisms—and the author gives a bibliography "by no means exhaustive," which nevertheless occupies 20 pages—their systematic position in the organic world is not at all definitely settled. It is, in fact, uncertain whether they are protozoa or more nearly allied to the schizomycetes (bacteria). In favour of the former view is the fact that they cannot be caused to multiply in "cultures," like most bacteria. Here, however, we cannot speak with final decision, for there are bacteria which lack this characteristic of their group. The question of structure is also one which has many exponents not in entire agreement with each other. A certain amount of doubt would seem, according to Dr. Bosanquet, to complicate some of the more important aspects of these creatures, such as, for example, the actual existence of the spiral vibratile membrane. It may be remarked, however, that in regard to this point and to other salient points of anatomical structure two recent communications in the *Quarterly Journal of Microscopical Science*, published too late to be of service to Dr. Bosanquet, confirm the animal view of the nature of spirochætæ, and appear to settle some disputed points.

While there is this difficulty about the larger forms of spirochætæ it is clear that the doubt must be much greater when we come to study the smaller forms, such as the parasites of syphilis and yaws. What is known, however, would appear to tend towards a uniformity between the larger and smaller spirochætæ. In view of the great importance which these organisms have gained of late years, particularly since their discovery by Schaudinn in syphilis, it is remarkable to note and remember that the first species of the group or genus which was discovered was a purely free-living form, named by Ehrenberg spirochæta plicatilis. This is, moreover, not the only free-living form known to science. For the hot springs of Dax yielded to Dr. Cantacuzene so lately as 1910 a species which he named S. daxensis and which is also one of the larger forms. It is, of course, possible that no specific differences really divide this form from Ehrenberg's original spirochæta. Indeed, as the author of the present volume admits, the question of species *versus* forms in this little-known group is another of those matters which are by no means settled. Inasmuch as Dr. Bosanquet enumerates over 50 organisms of this genus to which specific names have been applied, it is probable that future researches will necessitate some reduction. But it is plain that the time for a "catalogue raisonné" has not yet arrived.

In the meantime, Dr. Bosanquet sets forth those forms which have been separated, and at least presents us in an easily assimilable form with the main structural and classificatory facts known respecting this most important assemblage of organisms. He is to be congratulated on having compressed so useful a *résumé* into so few pages. The price of the book is rather high.

The Prevention of Infectious Diseases. By ALVAH H. DOTY, M.D., Health Officer of the Port of New York. London and New York: D. Appleton and Co. Pp. 281. Price 10*s.* 6*d.* net.

IN his preface the author tells us that he has aimed to deal with prevention of infectious diseases from a practical standpoint, to present the latest knowledge relative to their transmission, and "so far as possible to prove the fallacy of certain theories regarding this subject which have long been accepted and which aid in the extension rather than in the prevention of these diseases." Although the book has a comprehensive title it is chiefly concerned with the prevention of infectious diseases brought by ships, and in this country will be mainly in demand by medical officers of our port sanitary authorities. It may be said at once that many of the fallacious theories against which Dr. Doty argues—for example, that the occurrence of infectious disease among the passengers or crew calls for rigorous disinfection of cargo—have long been abandoned, if, indeed, they ever were entertained, in the sanitary practice of British ports, and that some of the preventive measures which are advocated—such as the provision of an adequate isolation hospital at every port—have so long been thought essential to our home administration that it is surprising to find it necessary to press for them, on the ground of "latest knowledge," in the United States.

While adducing many facts to show that in most epidemic diseases infection by fomites, though it exists, is ordinarily a very minor matter, Dr. Doty lays great stress on carrier and ambulant cases and the importance of detecting and isolating them. His views on this matter will meet with general acceptance, although the practicability of some of the suggestions made—for example, the routine daily examination of the throat of every school child—is open to question. When dealing with the practical work of port sanitation Dr. Doty has much sound advice to give. He insists, and rightly, that on vessels coming from ports which are technically infected the preventive measures necessary in the case of the first-class passengers or the principal officers of the ship are of a different order from those required where the steerage passengers or crew are concerned. The distinction should not, however, be carried too far. Dr. Doty tells us that "from one of the vessels arriving at New York after a voyage of 14 days from Naples were removed to quarantine six steerage passengers who had applied for treatment for minor affections during the voyage. None of these had had intestinal trouble, and all were apparently well on arrival, but were transferred as a matter of further inspection. After this group had been at quarantine for two days some were given two grains of calomel at bed-time and the next day a full dose of saline cathartic. The following day one of this number was in a condition of collapse and died within 24 hours. The autopsy did not reveal the cause of death, but the bacteriological examination of the intestinal contents furnished prompt evidence of cholera, which was subsequently confirmed by an exhaustive bacteriological examination. The brisk cathartic was undoubtedly the agent which called forth the activity of the organism." Steerage passengers may be inclined to ask whether the protection of the United States from cholera carriers cannot be effected by milder methods.

Much stress is laid on the importance of preventive measures, especially those against cholera and plague, being taken at the port of departure rather than at the port of arrival, and also on the necessity of conscientious and methodical work by ships' surgeons during the voyage. Such questions as these will no doubt be considered at the International Sanitary Conference, which is now sitting, and we may expect that some of the views which Dr. Doty holds will be developed in future international agreements. The recommendations for plague prevention on the whole coincide with British methods. The author considers that, subject to proper inspection, there is no reason for any detention of passengers or crew, or measures of rat destruction, if there is no sickness on arrival and the vessel has been at least eight days in transit from the infected port. He recommends caution in accepting the view that plague transmission is solely a matter of the plague-infected rat and associated fleas. All attempts to destroy rats on suspicion of their being plague-infected should be thorough if they are to be of any use. The escape of rats during unloading of cargo must be prevented, and complete destruction of rats in the empty vessel—preferably

by sulphur dioxide—must be secured, all dead rats being removed. The final chapter of the book gives a useful account of different mosquitoes associated with disease, including some personal observations by the author on the breeding places of Culex solicitans, the stripe-legged mosquito, which is said to hibernate in the egg, not as the winged insect. The eggs are laid in the soft ground of the swamp land of the Atlantic coast, and apparently the only practical method of their extermination is general land drainage.

Diseases of the Nose and Throat, comprising Affections of the Trachea and Œsophagus. By STCLAIR THOMSON, M.D. Lond., F.R.C.P. Lond., F.R.C.S. Eng., Physician for Diseases of the Throat and Professor of Laryngology in King's College Hospital. With Illustrations. London: Cassell and Co., Limited. 1911. Pp. 791. Price 25*s.*

Dr. StClair Thomson has enriched the literature relating to the diseases of the nose and the throat by embodying in a text-book the conclusions and results of his own experience. That experience, covering some score of years of special practice, is enhanced by a long period of experience gained in general practice. This latter experience, as Dr. Thomson very truly remarks in the preface to his work, has not only saved him from taking too narrow and too mechanical a view of the diseases of the air-passages, but has also helped him to realise their increasing importance in everyday work, and has enabled him to supply such information and assistance as a practitioner is likely to require.

The volume contains close upon 800 pages of closely printed matter. It is divided into 11 parts. The first part is introductory and includes a chapter on the Special Conditions and Dangers of Operations. It is a chapter that should be read, not only by senior students, but also by practitioners before undertaking operations upon the nose and throat. In discussing the "after-results" and the "insufficient or excessive removal of tissue" Dr. Thomson corroborates some of the remarks made recently by ourselves in an annotation on adenoids and tonsils (THE LANCET, Nov. 4th, 1911, p. 1284). The first five parts of the volume deal with diseases of the nose, of the accessory sinuses, of the naso-pharynx, and of the pharynx and tonsils, and form a *résumé* of accepted knowledge reinforced by the lessons of long practice. Part VI. is devoted to diseases of the larynx. The diseases of the trachea and the œsophagus, in view of the progress made in the direct examination of these regions, naturally receive separate consideration. The chronic infective diseases of the upper air-passages are dealt with together. The remaining three parts are devoted respectively to acute specific fevers in relation to the nose and throat, to the nose and throat in some general affections, and to some operations. Dr. Thomson, whilst keeping in mind that many operative measures should be entrusted to the hands of the man of special experience, still has thought it well to describe them with some fulness, indicating those that fall within a more general scope, and pointing out others that are fraught with particular danger or require exceptional skill. A complete account of the anatomy and physiology of the regions studied has not been attempted, but the space has been given up to the clinical and pathological bearings. The book is illustrated with 18 plates, many of which are coloured, and 294 figures in the text. At the end of the volume will be found a large number of useful formulæ.

The author tells us in his preface that in writing the book he has striven to keep two things constantly in mind: one, that it should serve as a guide to senior students; and the other, that it should prove a volume of ready reference to those engaged in the exercise of their profession. By the senior student the volume will be found to be more than sufficient for his immediate purposes, and by the practitioner, with the aid of the excellent index prepared by Mr. Archibald Clarke, the volume will be found to be one of ready reference. In it the practitioner will find a comprehensive study of the whole subject that will help him to determine what is amiss with his patient, what he himself can do for the patient, and what is the most he can expect from the assistance of the specialist.

Practical Cystoscopy and the Diagnosis of Surgical Diseases of the Kidney and Urinary Bladder. By PAUL M. PILCHER, A.M., M.D., Consulting Surgeon to the Eastern Long Island Hospital; late Surgeon to the German, Leney, and Samaritan Hospitals of Brooklyn, &c. With 233 illustrations, 29 of them being in colours. London and Philadelphia: W. B. Saunders Company. 1911. Pp. 398. Price 24*s.* net.

Cystoscopy as Adjuvant in Surgery, with an Atlas of Cystoscopic Views and Concomitant Text for Physicians and Students. By Staff-Surgeon Dr. O. RUMPEL, Lecturer in Surgery at the University of Berlin. Only authorised English translation by P. W. SHEDD, M.D. New York. With 85 illustrations in colour on 36 plates and 22 textual figures. London: Rebman, Limited; New York: Rebman Company. Pp. 131. Price 42*s.* net.

THE value of the cystoscope in the accurate diagnosis of diseases of the bladder and kidneys is definitely shown by the number of works that have been recently published describing the process of using the cystoscope and detailing the conditions observed. Dr. Pilcher's work is probably the largest and most complete book on the subject which has appeared, and it deals systematically with all parts of the subject. It commences with an account of the indications for cystoscopy, and some cases are quoted showing its value. Then follows a description of the various types of cystoscopes, with a discussion of their relative merits, the author expressing his preference for the Otis examining cystoscope. The mode of preparation of the patient and of conducting a cystoscopic examination are then described. With regard to anæsthesia, Dr. Pilcher holds that in the great majority of cases no anæsthetic is necessary; and when one is required he considers that a local anæsthetic is sufficient. A useful chapter is that devoted to a description of what is seen in the bladder, and the variations which may occur in health are described, and then those which occur in disease. The methods of investigating the functional activity of the kidneys are discussed, and the author prefers the indigo-carmine test, as ureteral catheterisation need not be practised for its efficient working. The next section deals with the diseases of the kidneys as revealed by the cystoscope, and a chapter on the therapeutic uses of the instrument follows. The book contains a large number of excellent illustrations, and many of these are coloured.

The use of Staff-Surgeon Rumpel's atlas will be confined to a comparatively small section of surgeons, and yet its value is very high in the diagnosis of morbid conditions of the bladder and kidneys. The use of the cystoscope is not at all difficult, as to some extent is made apparent in Dr. Pilcher's work just noticed, but much experience is needed to interpret correctly the cystoscopic appearance, and a good atlas such as this will greatly assist the inexperienced. The text of this volume will doubtless prove of use, but the most valuable part is certainly the large series of coloured illustrations. These have been carefully drawn and excellently reproduced. The author describes and discusses the methods of estimating the renal function; he considers that the phloridzin test has, despite its reliability, the disadvantage of requiring a certain delicacy in execution which impairs its value. He looks upon bi-ureteral catheterisation as the most thorough and reliable method of comparing the function of the two kidneys, and in his

opinion no method of determining renal function surpasses cryoscopy in the accuracy of its results.

Sémiologie Réelle des Sections Totales des Nerfs Mixtes Périphériques. By HENRI CLAUDE and STEPHEN CHAUVET. Paris: A. Maloine. 1911. Pp. 95. Price 4 francs.

THIS short monograph is devoted to a consideration of the symptomatology of complete transverse lesions of peripheral nerves, viewed solely from the standpoint of clinical examination. It contains little that is new. The authors remark in their preface that with the exception of the researches of Head, Rivers, and Sherren,[1] and the work of Babinski and Tournay, the clinical aspect of lesions of mixed peripheral nerves has hitherto been neglected; and they give in this brochure the results of their own examination of various cases. In some respects their methods of examination appear to be rather inadequate, notably as regards localisation, the compass test, sense of position, and the temperature sense. On the other hand, they bring forward data in regard to vaso-motor and osseous changes subsequent to complete transverse lesions of mixed nerves, and this part of the monograph will repay perusal.

Die Therapie der Magen- und Darmerkrankungen. Von Sanitätsrat Dr. CARL WEGELE. Fourth revised edition. With 11 illustrations. Jena: Gustav Fischer. 1911. Pp. 458. Price, paper, 7.50 marks; bound, 8.50 marks.

DISORDERS of the stomach and intestines of all degrees of severity are so common and are responsible for so much discomfort and ill-health that a practical work on their treatment is likely to serve a very useful purpose. The appearance of a fourth edition of Dr. Carl Wegele's book suggests that its utility has received recognition, and after a careful examination of its contents we can affirm that it deals in an exhaustive and instructive manner with the treatment of these conditions. The author has evidently a wide and up-to-date knowledge of the literature of the subject, to which numerous references are made on nearly every page, and he has obviously in addition a thorough practical experience, so that his recommendations have usually a personal basis and are given with all necessary details. Prescriptions are printed in full, and any procedures advised are described at length.

The book is divided into two sections. The first deals with the general treatment of digestive disorders; the second with the special treatment of individual conditions. In the first section considerations of diet are carefully examined. General directions are given in regard to the various factors influencing the digestibility of foods, and then the individual articles of diet are categorically considered, their heat value and nutritive qualities being especially dealt with. The various physical methods of treatment, including lavage, massage, the various forms of enemata, electrical and bath procedures are then carefully reviewed, with their indications and contra-indications. A long chapter is devoted to the modes of action and uses of the various medicinal substances employed in the treatment of gastro-intestinal conditions. This chapter, which is based upon an exhaustive study of the literature, is one of the most interesting and useful features of the book, since it contains information not usually to be found in text-books, but only in monographs. Another chapter deals with the indications for operative interference in diseases of the alimentary tract, and gives numerous references to the statistics of the more important operations in appraising their value.

In the second section the individual diseases and disorders of the stomach and intestines are classified, and their treatment is fully considered. The classification is simple and comprehensive, while the directions in regard to treatment are exhaustive. At the same time Dr. Wegele is careful to indicate his own preference in regard to the various methods described. In each case carefully selected diets are given. The description of the treatment of gastric ulcer is worthy of mention as an admirable review of the various methods at present employed. Other conditions of which the accounts given are noteworthy are gastric atony and its consequences, the various disorders of gastric secretion, neuroses of the stomach and intestines, chronic constipation, intestinal auto-intoxication, and appendicitis. The arguments for early operation in the last-mentioned condition are set out, and the general indications for surgical treatment are also reviewed.

Dr. Wegele's book is an important addition to the literature of digestive diseases, and a valuable work of reference. It is thoroughly modern, and contains more references to English and American monographs and papers than is usual in German text-books. In this connexion it is interesting to notice that Dr. Wegele remarks upon the striking frequency of duodenal ulcer in England and America, as judged by the statistics of the surgeons of those countries. The book is of convenient size, well printed, and easy of reference. It contains an index of authorities as well as one of subjects.

Racial Decay: A Compilation of Evidence from World Sources. By OCTAVIUS CHARLES BEALE. London: A. C. Fifield; Sydney: Angus and Robertson, Limited. 1911. Pp. 439. Price 5*s.* net.

Mr. Beale may be known to our readers as the Royal Commissioner appointed under the Australian Government to inquire into quack medicines. He was appointed in 1906, and this inquiry was the outcome of a previous inquiry in 1903 in New South Wales regarding the decline in the birth-rate and infant mortality. The present volume, although not official as was the former book, is an extended investigation of Mr. Beale's work begun as a Royal Commissioner, and deals with one of the most important problems of these times—namely, racial decay and the causes which are leading thereto.

The work is arranged in what may be called a tabular form—i.e., extracts from various books, pamphlets, statistical publications, and Government reports are given, with a running commentary by Mr. Beale. Division I., which is called the "Genesis of the Carcinoma," treats of Malthus's works and the expansion thereof by ill-educated reformers. The "carcinoma" is the wastage of child life, either prenatal, as by abortion or prevention of conception, or postnatal, as by the appalling mortality at early ages of child workers in factories, such as used to occur in Manchester some 60 years ago. Division I. therefore also deals with the Ten Hours Bill of 1847 and the bitter opposition of the factory owners' representatives.

The remainder of the work deals with depopulation in various countries, France being taken first, because in that country the evidence of depopulation is most marked. But the plague is widespread in other countries, too notably in our own, and the gist of Mr. Beale's book is that the practices of the prevention of conception, or when this fails, of procuring abortion, are affecting for the worse nearly all the great European Powers. Medical men are aware that racial mischief is being done, and our readers cannot fail to remember the series of articles upon Quacks and Abortion published in these columns in 1898 and 1899. In dealing with the pathological consequences of the practices above referred to, is grim reading. Mr. Beale and the authorities whom he quotes possibly protest too much in attributing such an appalling train of diseases and symptoms to the practice

of prevention. Dr. Bergeret's remarks as quoted by Mr. Beale read somewhat like the advertisements of self-abuse quacks.

The evil is widespread, the United States, and to a very serious extent Australia and New Zealand, are affected. One very notable fact is that the decline in the birth-rate is most marked among the upper classes—that is to say, among those whose circumstances are such that if they had children such children would stand a better chance in the race of life. This fact is very significant. It is nothing new; the same situation arose in the Roman Empire and was exposed in fiery denunciation by Juvenal:—

> Sed jacet aurato vix ulla puerpera lecto.
> Tantum artes hujus, tantum medicamina possunt,
> Quae steriles facit, atque homines in ventre necandos
> Conducit. (Sat. vi. 593 et seq.)

Social Reform is the cry of the present day, but the Governments of all countries take but little notice of what is perhaps the most prominent evil of the times. The trade in abortefacients, real or pretended, and in preventives is naked and unashamed, while the press in many cases lends aid in enlarging the market. It is true that a people cannot be made moral by Act of Parliament, but Parliament could at least see that incentives to immorality are not allowed the liberty of public advertisement.

Leitfaden der Akustik für Ohrenärzte. By Dr. M. TH. EDELMANN, Prof. h.c. der Kgl. Techn. Hochschule, München. With 80 illustrations and a portrait. Berlin: S. Karger. 1911. Pp. 118. Price 4 marks.

Professor Edelmann opens his thesis with a description, freely illustrated, of the various forms of vibration, proceeding to demonstrate by diagram many of these points. He next proceeds by investigation and demonstration to elucidate the principles of the strength and the height of tones, and the intervals between two tones, this being accompanied by a table showing the numerical vibrations of various notes. He then illustrates and discusses the effect of two tones or notes produced simultaneously, and shows the effects of their interfering with each other.

Tuning-forks next come under review. Afterwards the overtones of the tuning-forks which possess them and the effect of tuning-forks without overtones are discussed. A full description follows of Bezold's tuning-forks, and the whistles or pipes for the improvement of which Professor Edelmann has already become so well known. Then is given information about sound-plates and their employment as a means of comparison with tuning-forks, a short note on König's tubes and Schültze's monochord, and a description of the continuous tone series with the resonators. He also deals with sirens and all other forms of sound-producers. On p. 98 the author discusses the early acoustic investigations, and concludes with a description of a large model of the hearing apparatus demonstrating the mechanism of hearing.

This production of an erudite man is of great value, and we trust that it will find a translator, so that material of such importance shall not be confined to those able to read German sufficiently to enable them to derive full benefit from its perusal. It is not too much to say that nowhere else is there a better description of the acoustics as interesting the aural surgeon.

The portrait referred to in the title is a portrait of the late Professor Bezold, to whom the book is dedicated.

Health and Disease. By W. LESLIE MACKENZIE, M.A., M.D. Aberd., Medical Member of the Local Government Board for Scotland. London: Williams and Norgate. 1911. Pp. 244. Price 1*s.* net.

THIS volume, which Dr. Leslie Mackenzie has contributed to the attractive little series of shilling books in the "Home University Library of Modern Knowledge," comprises 16 short essays on various topics, such as What is health? death-rates and their interpretation; how antitoxins are produced and prepared; and a discussion of the tubercular diathesis; disease and destitution. He concludes by discussing insurance methods of preventing sickness and the evolution of the health movement. The essays will, we are sure, be read with pleasure and profit by a considerable public. Though the subjects are somewhat disjointed there runs throughout the book a strong note of faith in the improvement of the race by attention to individual and to public health, as well as the author's sense of the greatness of the duties which the medical profession is called on to fulfil both in preventing and curing disease. Dr. Mackenzie's method is essentially that of the preacher, and most of his medical readers will have their own reservations to make on the dogmas which he confidently expounds and on the "heresies"—such as belief in hereditary disposition to disease—which he regards as anathema. Some, if so unhappily and modestly constituted, may even find that the author's exaltation of the medicine of to-day, and his prophecies of its achievements to-morrow, leave them a little uncomfortable; they could wish they had been reading the writings of a layman about their profession rather than the views which a distinguished member of their profession presents in a volume which we feel confident will appeal strongly to laymen. The lay reader will find it difficult to resist being carried away by Dr. Mackenzie's zeal, but in doing so may be considerably disquieted at the possible issues of development on such lines as the author would seem to forecast. But both classes of critics will no doubt be the better for a shaking, and all who have not become cynical past redemption will find encouragement and enjoyment in Dr. Mackenzie's sermons.

LIBRARY TABLE.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XXIX. Edited by J. ALFRED SCOTT, M.A., M.D. Dub., F.R.C.S. Irel., General Secretary, Professor of Physiology, Royal College of Surgeons in Ireland. Dublin: John Falconer; London: Baillière, Tindall, and Cox; Edinburgh: James Boyd; Bristol: John Wright and Co. 1911.—Besides the lists of officers, fellows, members, and associates, the rules, the annual report, and the treasurer's report, this volume contains the papers that have been read before the Academy in its respective sections of Medicine, Surgery, Obstetrics, Pathology, State Medicine, and Anatomy and Physiology. A considerable proportion of these have already appeared in our columns, either in full or as reported in the Academy's proceedings. They will prove of interest in their collected form.

School Life. Edited by T. N. KELYNACK, M.D. Vict., M.R.C.P. Lond. London: Charles H. Kelly. 1911. Pp. 160. Price, limp cloth, 1*s.* net; cloth boards, 1*s.* 6*d.* net.—This is the third of the series of National Health Manuals, the object of which is to provide in concise language and compact form essential facts, and to indicate in simple words the underlying principles upon which the preservation of health and the prevention of disease are based. The chapters in this book are by different writers, and each writer has been granted a free hand in dealing with his subject. They are as follows: School Life, by the Editor; Characteristics of School Children, by Mr. A. S. Arkle; the Hygiene of the School, by Dr. Charles Porter; Medical Inspection of the School Child, by Mr. J. C. Bridge; the School Child Worker, by Dr. D. M. Taylor; the Physical Education of the School Child, by Dr. F. Barrie Lambert; the Personal Hygiene of the School Girl, by Dr. Myra Mackenzie; the Personal Hygiene of the School Boy, by Dr. J. O. Symes; Dental Condition in School Children, by Mr. C. Edward Wallis; Mentally Defective Children, by Dr.

C. P. Lapage; Physically Defective Children, by Dr. H. H. Rayner; the School Child and Citizenship, by Dr. A. D. Edwards. There is for each chapter an appendix containing a bibliography. The book covers all aspects of the subject, and will be of use to school teachers, inspectors, parents, and to medical men and others especially interested in the school problem.

Quackery (Quack Remedies and Quack Practice) and Medical Law Reform: A Plea for a Royal Commission. By HENRY SEWILL. London: P. S. King and Son. 1911. Pp. 32. Price 6*d.* net.—This pamphlet has been printed in order that it may be widely distributed to open the eyes of the public to the nefarious doings of quack medicine mongers. The author shows in the preface by specific cases the difficulty of obtaining aid from the lay press. The work is a reprint from *Vanity Fair* of articles on "Secret" Remedies, Quackery and the Ethics of Journalism, Quackery, Quackery for Women, and Medical Law Reform and Quackery. It is a good one for its purpose in all respects but one—that sixpence is a good deal to give for a pamphlet for general presentation; and although it is stated that in quantities of a dozen and upwards it may be obtained at reduced rates on application to the publishers, the rates will have to be very materially reduced before any large number will be purchased for general distribution.

JOURNALS AND MAGAZINES.

Quarterly Journal of Experimental Physiology. Edited by E. A. SCHÄFER, F. GOTCH, W. D. HALLIBURTON, C. S. SHERRINGTON, E. H. STARLING, and A. D. WALLER. Vol. IV., No. 3, Oct. 24th, 1911. London: Charles Griffin and Co. Price 6*s.*—In this number will be found the following articles:—1. R. A. Chisolm: On the Size and Growth of the Blood in Tame Rats. Although the title of R. A. Chisolm's paper looks a little odd, its author's object was to determine the total amount of hæmoglobin, the number of red cells, and the blood volume of normal rats preliminary to an inquiry into the influence of transplanted malignant tumours on the constitution of the blood. The number of red cells is 9,000,000 per cubic millimetre. The other details will be found in the summary. 2. W. Mulder: Analysis of the Rotation-Reflex in the Frog. The name of W. Mulder is indelibly associated with Utrecht. The rotation-reflex referred to is that shown by a frog when placed on a horizontal turning disc with its head towards the disc edge. The head makes a reflex movement which is directed against the sense of motion of the disc, and is due to stimulation of the labyrinth by the circular acceleration. The author finds that the speed of the reflex is directly proportional to the amount of the stimulus, but the relation is not logarithmic, as is the case with sensations. 3. Jasper Halpenny and John A. Gunn: Note on Extirpation of Thyroid Gland in Monkeys. The note on the thyroid derives its interest from the experiments having been made in monkeys, as the authors thought it advisable, as a preliminary to other work on the thyroids, to repeat the experiment of simple extirpation in monkeys. It is to be noted that some of the experiments were done in Manitoba during the depth of winter, when the temperature during the night must frequently have fallen very low. 4. H. M. Vernon and H. R. Stolz: The Influence of Forced Breathing and of Oxygen on Athletic Performance. One of the authors of the fourth article (H. R. Stolz)—is a trained athlete, and the results of running a measured distance (387 yards) 20 times under different conditions are given in a number of tables. The authors arrive at the conclusion that deep breathing or oxygen breathing cannot augment the running powers of a well-trained and unfatigued man for distances of a quarter of a mile or less. 5. Sutherland Simpson: Improved Technique in the use of Schäfer's Frog-Heart Plethysmograph. This paper is of interest only to physiologists. 6. Sutherland Simpson and Andrew Hunter: The Possible Vicarious Relationship between the Pituitary and Thyroid Glands. The paper deals with the authors' observations on sheep and lambs. Removal of the thyroid does not lead to the appearance of iodine in the pituitary, and it would seem that in thyroid insufficiency the pituitary does not vicariously take on the function of the thyroid. 7. T. Graham Brown: Studies in the Physiology of the Nervous System—VIII., Neural Balance and Reflex Reversal, with a Note on Progression in the Decerebrate Guinea-pig. T. Graham Brown's eighth contribution to his Studies in the Physiology of the Nervous System deals with a highly technical physiological subject, the reversal of reflex action. 8. L. Bull: On the Simultaneous Record of the Phono- and Electro-cardiogram. L. Bull's paper is one of a highly technical character, and will interest physiologists. 9. R. A. Krause: On the Urine of Women under Normal Conditions, with Special Reference to the Presence of Creatin. R. A. Krause finds that creatin is present in the urine of women immediately after menstruation; it may or may not be present during the intermenstrual period. It is present in the urine of women during pregnancy. Observations on a bitch during the œstrous and anœstrous periods confirm the existence of a correlation between creatinuria and the female sexual cycle.

The Dublin Journal of Medical Science.—In the November issue is published a paper by Dr. J. Boyd Barrett on Some Surgical Symptoms in Children, in which he deals specially with the phenomena accompanying hypertrophic stenosis of the pylorus and infection of the urinary tract. He notes that thread-worms in the appendix may give rise to a condition simulating appendicitis. Dr. S. F. A. Charles discusses chorea and its treatment, strongly recommending trional for the latter purpose.

The Birmingham Medical Review.—The treatment of aneurysm is discussed by Dr. T. Stacey Wilson in the November number of this magazine. He has had favourable results from careful application of the "old-fashioned and ordinary" method of treatment—rest and full doses of iodide of potassium, and believes that the mode of action of the remedy is by increasing the resisting power of the wall of the sac. Dr. K. Douglas Wilkinson records a case of heart-block in a young woman, aged 24 years, and discusses the pathology of the condition.

ERRATUM.—In our review of the new edition of "Diseases of the Lungs," by Sir R. Douglas Powell and Dr. P. Horton-Smith Hartley, an error has occurred in stating that the two plates illustrating Curschmann's spirals appeared in the previous edition of this book. Both the figures on this plate, as well as the one facing it in the text and the plate showing casts in plastic bronchitis, are from drawings specially prepared for this edition.

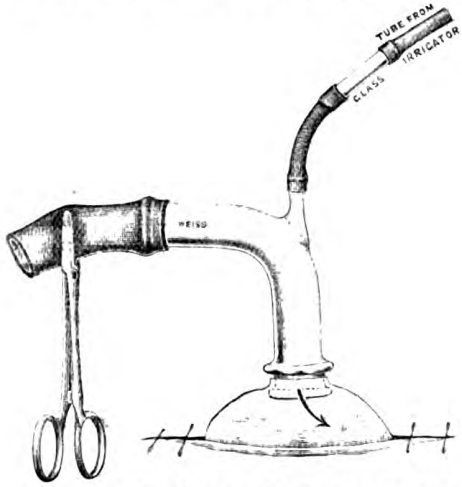
New Inventions.

AN IMPROVED COLOTOMY TUBE.

THE paramount importance of evacuating the septic and highly toxic contents of the bowel with the least possible delay in cases of acute obstruction has long been recognised. Unfortunately, this is not always an easy matter, and after fixing the ordinary colotomy tube of Paul's pattern into the gut attempts to empty the bowel are confined to the giving of aperients by the mouth, and more recently the administration of eserine subcutaneously to stimulate peristalsis. As, however, vomiting may continue for some hours or even days after the operation aperients are frequently of little use. The

most effective and quickest method of emptying the bowel is to wash out the contents by means of an enema; this, however, cannot be done with the colotomy tube at present in use. On several occasions I have tried to do this by making a small hole in the large rubber escape tube used to carry off the bowel contents and introducing fluids while the tube is clamped below the hole. This has proved unsatisfactory, as leakage occurs subsequently through the hole and the tube is rendered useless in future.

Some months ago Messrs. Weiss and Son made to my pattern a colotomy tube (see illustration) which avoids these drawbacks and allows the bowel to be flushed without inconvenience. The tube differs from the one in general use in the fact that a small short arm is inset into the convexity of



the curve, so that it has the same direction as the limb of the tube which is inserted into the bowel. When in use a small piece of drainage tube about six inches long is fitted on to the short arm. After the tube is fastened into the bowel the end of the drainage tube will project above the dressings, and must be secured to prevent the escape of bowel contents; this may be done with a pair of clip forceps or a safety pin attached to the binder or the tube may be tied in a simple knot. After the first gush of fæcal material has passed the interior of the bowel can be washed out by means of a douche can or an enema syringe, the fluid being led through the small rubber tube into the interior of the colotomy tube. The large escape tube is flushed out and then clamped, after which the fluid enters the bowel. In this way enemata can be given at short intervals without disturbing or soiling the dressings. The ordinary enemata can be employed, but if an irritant such as turpentine is used only half the usual strength should be given on account of the inflamed state of the bowel.

Another great advantage is that after the bowel is cleared, which can be done usually in about six hours, fluids such as warm saline can be given in the same manner as is employed in septic peritonitis. It is rapidly absorbed and is useful in replacing the amount of fluid lost by the previous vomiting. If the vomiting has been present for some days another element antagonistic to the patient has to be reckoned with, namely, actual starvation, as nothing taken by the mouth has been retained in the stomach; for this reason it is a good plan to add to the saline sufficient glucose to make a 2 per cent solution. This can be absorbed directly into the blood and used as a food.

I have used these tubes on more than a dozen cases and find them a great advance on the old ones, which serve merely as an outlet for the bowel contents. The tubes are made in four sizes, ranging in diameter from half an inch to an inch and a quarter.

DUNCAN C. L. FITZWILLIAMS, Ch.M. Edin.,
Grosvenor-street, W. F.R.C.S. Eng. and Edin.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS.—The annual dinner of this association will be held at the Trocadero Restaurant, London, on Friday next, Dec. 8th, at 7.30 P.M. Communications should be addressed to the secretary, 16, John Dalton-street, Manchester.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on Nov. 23rd, with Sir FRANCIS CHAMPNEYS in the chair.

The following letter was considered from the clerk of the Privy Council as to the power of the local supervising authority to make a rule prohibiting a midwife from laying out a dead body:—

Privy Council Office, 19th October, 1911.

To the Secretary, Central Midwives Board.

SIR,—Referring to your letter of the 13th instant enclosing a copy of a letter from the town clerk of St. Helens as to the power of the local supervising authority to make a rule prohibiting a midwife from laying out a dead body, I have to point out, for the information of the Central Midwives Board, that it is not suggested that the local supervising authority has any authority under the Midwives Act, 1902, to make such a rule, but that Rule E, 17 (b) of the Board's rules, as finally drawn, was intended to save any right possessed by the councils of counties or county boroughs under their general statutory powers to make a rule on the subject, it being better that there should be a general rule in the matter, rather than that it should be left to the discretion of the authority in particular cases.

I am, Sir, your obedient servant,
(Signed) ALMERIC FITZROY,
The Clerk of the Council.

The Board directed that a copy of the letter from the clerk of the Council be forwarded to the town clerk of St. Helens.

A letter was considered from the superintendent of the Gloucester District Nurses' Home, inquiring as to whether a midwife should undertake a case when she believes it would be better for the patient to engage a medical man, and as to her duty to notify a stillbirth when engaged as a maternity nurse under a medical man. The Board decided that the reply should be: (*a*) That the question of whether a midwife should undertake a case or not is outside the rules, and must be decided by the exercise of the ordinary judgment of a prudent midwife. (*b*) That a midwife acting as a maternity nurse under the direction of a qualified medical practitioner is not bound to notify a stillbirth under Rule E, 21.

A letter was considered from Dr. W. E. Fothergill, of Manchester, one of the Board's examiners, as to lengthening and raising the standard of training, and a letter was considered from Mr. E. Sergeant, county medical officer for Lancashire, to the same effect. The Board decided that the letters of Dr. Fothergill and Mr. Sergeant be noted for consideration at the next revision of the rules.

A letter was considered from Dr. J. M. Cowie, medical officer of health of Burton-on-Trent, inquiring as to the course to be adopted with regard to midwives who can neither read nor write, or who are incapable of learning to take or record pulse and temperature. The Board directed that it be pointed out to Dr. Cowie that it lies with the local supervising authority to take action in the first instance against midwives who are unable to comply with the rules of the Board, and that the Board would deal with any midwife against whom the authority had found a *primâ-facie* case of malpractice, negligence, or misconduct.

A letter was read from the superintendent of the Cornwall County Nursing Association, inquiring whether a midwife may attend maternity cases and nurse cases of enteric fever at the same time. The Board decided that the superintendent of the Cornwall County Nursing Association should be referred to Rule E, 5, which runs as follows:

Whenever a midwife has been in attendance upon a patient suffering from puerperal fevers, or from any other illness supposed to be infectious, she must disinfect herself and all her instruments and other appliances, to the satisfaction of the local supervising authority, and must have her clothing thoroughly disinfected before going to another labour. Unless otherwise directed by the local supervising authority, all washable clothing should be boiled, and other clothing should be sent to be disinfected by the local sanitary authority.

A letter was considered from the clerk of the Aberdare urban district council forwarding a copy of a resolution passed by the council expressing the opinion that a period of 24 hours is too short a quarantine for a midwife who has been attending on virulent cases of puerperal fever. The Board directed that the attention of the clerk of the Aberdare urban district council be called to the terms of Rule F, 2, which prescribes the procedure in cases where it is found necessary to suspend a midwife for a longer period than 24 hours.

A letter from Dr. Comyns Berkeley, obstetric physician, Middlesex Hospital, on behalf of the weekly board of the hospital, with regard to a complaint made by a certified midwife of the inadequacy of the training given at the hospital, was considered, and the Board decided that all further action should be left in the hands of the chairman.

THE LANCET.

LONDON: SATURDAY, DECEMBER 2, 1911.

The National Insurance Bill.

THE position of the medical profession under the National Insurance Bill, now entering upon the report stage, remains an exceedingly anxious one. We publish elsewhere in this issue of THE LANCET accounts of important meetings of medical men held in Scotland and Ireland, as well as a *résumé* of the proceedings at the special meeting of Representatives of the British Medical Association which took place on Thursday and Friday of last week. From the evidence fully supplied by the debates and resulting resolutions at these meetings it stands out clearly that the profession as a whole mistrust the measure deeply, and at this late hour in the proceedings the fact can but strike us all as ominous. The meeting of Representatives of the British Medical Association, not without real opposition to some of the views eventually adopted, registered resolutions implying a decision to work under the Bill if the six cardinal points were granted. The view of the Representatives has been embodied in a memorandum and forwarded to the Chancellor of the Exchequer, who, in response to further representations of the Association, has put down certain amendments, of which a summary will be found in our Parliamentary report. In Scotland the temper of professional opinion is even more adverse to the measure, while Ireland desires, on the whole, to be brought into line with England, Scotland, and Wales by an extension of the medical benefits under the Bill to that country upon the same lines as those demanded by the profession elsewhere. We publish this week no individual opinions upon the Bill, for although some of our numerous correspondents have brought forward interesting points of criticism, these are for the most part dealt with in favourable or unfavourable sense by the resolutions of large meetings. That is to say, that in these many but separate communications the same message of deep anxiety can be traced. The solidarity of the medical profession remains thus what it has always been—viz., a general distrust of a scheme, however nobly intended and however useful to the material interests of medicine in some directions—which proposes to revolutionise the whole professional life of a large number of medical men without any proper time having been given to the comprehension of the details of that life, of its real hardships, its fine compensations, or its great ideals.

At the session of the General Medical Council which was opened on Tuesday last, Sir DONALD MACALISTER delivered a Presidential address which will be read in our columns with anxious attention. The General Medical Council, as is well known, without being committed to any final expression of opinion on the National Insurance Bill as a piece of legislation, has viewed with deep apprehension the possible effect upon medical education of a radical disturbance of the conditions of practice which may lead to a profound alteration of medical life. The fear of the General Medical Council is that if the conditions of practice under the measure should prove highly distasteful to a large number of practitioners, the result will be an increase in that shrinkage of candidates for entrance to the medical profession which has already given the Council anxious thought. The Council, especially during the last decade, has worked with unremitting zeal at the arduous task of raising the medical education of this country to a high level, and of keeping it at that level. The difficulties arising out of an overcrowded educational curriculum, which to some extent are directly related to the maintenance of a high standard, are now being boldly faced, but the more the many questions involved are closely looked into, the more clear it becomes that modern preparation for the life of a medical practitioner must be a very strenuous matter for both teacher and taught. A long time and much money will have to be spent by the student of the future in the acquisition of a familiarity with the general groundwork of our inclusive science sufficiently intimate to warrant the General Medical Council in placing him upon the statutory roll of the profession. The young man on learning this, and on learning also that the conditions under which he will be expected to pursue his avocation do not correspond with so strict and expensive a guarding of the portal, will not enter the ranks of medicine. We ask, then, what course is to be pursued? To suggest in these days that the body entrusted with the management of the professional education of our medical students should deliberately lower its due scientific standard is unthinkable. To carry on the business of insuring the health of the community with an inadequate supply of practitioners is equally hard to imagine. The Insurance Commissioners may find that they have here a veritable problem.

The names of the Insurance Commissioners will probably not serve to allay the legitimate misgivings of the medical profession. If the profession decides to attempt to carry out the duties that are proposed to be laid upon it, it will be of the utmost importance that the Commissioners should form a very strong, experienced, and sympathetic body. The medical men will require protection all along the line, for while they have apparently been invited to join the scheme first and adjust their quarrel with it later, their representation on the local authoritative bodies, where the discussions are sure to occur, is extremely small, though we understand that the Chancellor of the Exchequer proposes to remedy this default in some degree. The Government, finance, trade, and labour, and the interests of approved societies are represented by Mr. J. D. STUART SIM, Mr. JOHN BRADBURY, Mr. D. J. SHACKLETON, Miss MONA WILSON, and Mr. LISTER STEAD. The chairman, Sir ROBERT MORANT, by far the strongest Commissioner, may be implicitly trusted to see fair-play and be fairly assumed to be conversant with, and sympathetic towards, professional ideals. The name of the medical Commissioner has not been announced as we go to press. A heavy responsibility will devolve upon him, for the suggested further amendments to the Bill cannot, alas, be said to remove all professional opposition.

The Anatomy of Spinal Puncture.

ALTHOUGH the technique of spinal puncture for introducing analgesic drugs has been carefully studied in this country the literature dealing with the anatomy of the parts involved affords few recent additions to our knowledge. The importance of an exact knowledge of the anatomy of the subarachnoid space and of the precise limits of the conus medullaris can hardly be over-rated. Early in the last century KEY and RETZIUS made some careful studies with regard to the former, and QUINCKE, GERSTENBERG, and HEIN, as well as PROPPING, have extended our knowledge. MAJENDIE'S experimental work upon the movements of the cerebro-spinal fluid is too well known to need comment, but when we find that much discrepancy of opinion persists both as to the site of election for puncture as well as to the causation of dangers immediate and post-operative, we are compelled to believe that the subject is still imperfectly understood. Dr. WILLIAM C. LUSK (in the *Annals of Surgery* for October) has published a statement of the results at which he has arrived after a careful series of dissections of the whole region involved. He has located the exact position at which the spinal cord terminates, and describes minutely the arrangement of the arachnoid membrane, the position of nerves and veins, as well as the conus itself, as regards their possible injury by the puncturing needle. The dissections of the arachnoid membrane convince him that any puncture undertaken between the conus and the cervical region must be attended with the greatest risk of penetrating the cord. In many dissections there were adhesions of the arachnoid membrane to the cord throughout more or less of its length, and Dr. LUSK concludes from this that "if cerebro-spinal fluid can be constantly drawn as a result of mesial puncture at or above the level of the conus, in many instances the substance of the cord must be traversed by the needle and the fluid taken from the anterior portion of the subarachnoid space." Puncture in the dorso-lumbar interspace in a certain proportion of cases results in damage to the cord, as some dissections revealed the fact that the arachnoid is not infrequently adherent to the posterior surface of the conus or cord.

REHN has shown experimentally that injury when associated with injection of such drugs as stovaine or tropacocaine leads to immediate death with medullary symptoms. The cases of death quoted by Dr. LUSK are of peculiar interest in this connexion, and deaths otherwise inexplicable become clear in their causation if considered in the light of his work. Puncture below the level of the conus involves an accurate acquaintance with the disposition of the nerve roots of the cauda equina. Although, as the dissections show, the distribution of the nerve roots in the arachnoid sac varies, yet their arrangement in relation to one another appears fairly uniform. It is pointed out that while most of the nerve roots fall away to the sides, the lowest sacral nerve roots occupy a mesial position, and so are rendered more liable to trauma. The not infrequent paralysis of the bladder and sphincters consecutive to lumbar puncture finds an explanation in this fact. Dr. LUSK deals carefully with the question of the sacral leverage, so important when the position of the patient at the time of puncture is considered, since in forward tilting of the pelvis, which exists in extreme lumbar flexion, the mesially placed sacral nerves will become taut and present posteriorly. Hence the pelvis must be prevented from any forward tilt, as the needle impinging upon a taut nerve root will impale it, while it will push a slack tissue aside without injury to it. The characters and arrangement of the cauda equina in these dissections are grouped into five varieties, and it is shown that even an escape of the cerebro-spinal fluid after puncture cannot in all cases be accepted as a proof that the point of the needle is not engaged in some nerve structure. The site of maximum safety for performing the lumbar puncture seems from the facts advanced to be the interval between the fourth and fifth lumbar vertebræ made mesially, while the lumbo-sacral space, we are told, is probably equally safe, but only second in order of desirability. Dr. LUSK elaborates the rules for the technique of the puncture, basing his conclusions upon his anatomical findings. He believes that a blunted needle is safer than a sharp one, and in most cases entrance a little to the side of the middle line avoids the tougher superficial structures and allows greater precision of touch than in the case of the central puncture. There can be little doubt that the arguments adduced and the admirable reproductions of photographs of the dissections will enable the workers in this field of surgery to understand with greater clearness the etiology of many of the dangerous and painful sequelæ which have been recorded as following the lumbar puncture. With this increased accuracy of their pathology it is not too much to expect that the present somewhat serious list of deaths and post-operative troubles may become materially curtailed.

The Cancer Cell.

THE problem of the origin of cancer has been attacked from time to time by numberless observers, and the solutions which have been put forward have been many. The manifestations of cancer are striking. From a small, hardly palpable beginning arises a mass of tissue which at last may assume such a size as to form no small proportion of the whole body in which it has arisen. For a while it may do little damage, but sooner or later, in most cases at least, there comes a time when by its mere bulk and its interference with the activity of some vital organ it makes clear its harmful influence, and at last, after months or years, it leads to the death of the body in which it has dwelt. The latest of the many attempts at the solution of the problem was made last month at the Royal College of Surgeons of England by Sir HENRY BUTLIN in two lectures, the latter of which we publish in the present issue of THE LANCET. We are sure that our readers will peruse these communications with the greatest interest, as the contribution to our prime surgical difficulty of one who has shown himself alike a profound thinker and a practical man.

The main phenomena of cancer are beyond dispute, but these phenomena are many as well as striking—their multiplicity is indicated by what we have said above—and therefore it is by no means easy to suggest a theory which will

explain them all. The theory which attributes the appearance of a malignant growth to the presence of a remnant of embryonic tissue was ingenious, but even if it served to explain somewhat the origin of the tumour it was incapable of giving a satisfactory explanation of the appearance of metastases. The idea that an external injury was responsible failed utterly in view of the fact that the vast majorities of injuries are not followed by any such tumour, though there can be little doubt, from the constant association of certain special injuries with malignant disease, that it is possible for a local injury to exert some predisposing influence. Every theory fails somewhere in the proof, and it may be truly said that at the present time no fully satisfactory explanation of the manifestations of cancer has been given. In the Bradshaw lecture at the Royal College of Surgeons of England delivered in November, 1905, Sir HENRY BUTLIN first broached his theory that the cancer cell is an independent organism, like many a protozoon; that it lives a life which is wholly independent and proper to itself, and that it lives in the body of the animal affected with the cancer, deriving its nourishment from its host and yet doing nothing to repay the host for the sustenance of which it robs him. In his recent lectures he has expanded the same idea as a result of the thought which he has devoted to the matter in the intervening period, and comes to the conclusion that the cancer cell is not merely like a parasite, but is a parasite, which has been formed from the very tissues of its host. In appearance the cancer cell remains so like the cells in which it first appears that there can be no doubt that it is indeed derived from a cell of the normal tissues. Yet how different are its functions now. At one time its sole aim was to serve the host of which it was a part, and for that it was ready to undergo the changes which are normal to such a living cell: but now it has suffered a subtle change; it is still in the likeness of a normal cell, yet it has ceased to take any care for the body, of which it had been long a part; its only aim is to grow and to reproduce itself, and it carries out these objects at the expense of the body to which it belonged. Sir HENRY BUTLIN would regard the cancer cell as an independent animal which is parasitic, and in every way manifests its parasitism, and he has called it the "unicellula cancri," being inclined to place it among the protozoa. No such brief summary will suffice to explain the author's views, and we urge our readers to follow the theory expounded in the luminous phrases and with the happy illustrations which characterise all that Sir HENRY BUTLIN writes. In the face of the exposition of that theory by one so highly gifted and so justified by a lifetime of experience, we must suspend our judgment if we do not feel ready to agree, while acknowledging the skill which has been employed to explain the mysteries.

That a cell of the body other than a cell derived from the organs of generation can take upon itself to live a life independent of the rest of the body, in it but not of it, is hard to believe, and that this should happen from such a cause as an injury or irritation cannot but surprise us still more. But is such an independent existence of a somatic cell incredible? An excitant might have the power to overcome the natural activities of a cell, to enfranchise it from the bondage which all somatic cells owe to their body. We cannot deny the possibility of such a change, though we may feel unable to suggest any method by which it could be brought about. Some, indeed, of the holders of the parasitic theory believe that when the parasite has entered into the cell it lives in the cell and stimulates it to inordinate reproductive activity, that it multiplies within the cell and divides with it, and they consider that this evil influence exerted by the parasite on the cell into which it has entered will suffice to explain the breach of allegiance which certainly takes place. In cancer so marked is this lack of control that many are inclined to hold that it is due to a cutting off of the influence of the nervous system, although such an explanation is rendered very unsatisfactory while we know of innumerable cases in which there has been an absolute loss of control of the nervous system and yet no malignant growth has appeared. That loss of resisting power takes place in some way is clear, while during the last few years evidence has been accumulating that the body can offer successful resistance against cancer. For that cases of cancer may rarely, very rarely indeed, recover spontaneously cannot now be doubted. But while we now know something of the mechanism with which the attacks of the disease-causing germs are repulsed by the opsonins, the phagocytes, and the many other influences which exist for the protection of the body, as yet we know nothing as to the efforts by which the body endeavours to withstand the attacks of malignant disease. But we welcome all evidence that they exist, for with the advance of our knowledge we should be able to strengthen these protective influences and enhance the resistance of the body.

Annotations.

"Ne quid nimis."

THE ELEVENTH REPORT OF THE SLEEPING SICKNESS COMMISSION.

NOT only those who have concern with sleeping sickness, but also those who have the progress and economic development of our Central African possessions at heart, will read with deep interest the recently published Eleventh Report of the Sleeping Sickness Commission[1] which was sent out to Uganda in 1908 under the direction of the Royal Society, and at the suggestion of the late Marquis of Ripon, then Secretary of State for the Colonies, to continue the investigations begun in 1903. This Commission, the third that has been despatched to Africa, had for its leader Colonel Sir David Bruce, C.B., F.R.S., of the Army Medical Staff, the other members being Captain A. E. Hamerton, D.S.O., and Captain H. R. Bateman, R.A.M.C., along with Captain F. P. Mackie, I.M.S. Lady Bruce also accompanied the Commission, and besides rendering other valuable assistance contributed a number of very beautiful coloured and other drawings of the various trypanosomes dealt with in the text of the report. The Commission left England in September, 1908, and the volume now issued deals with its work from that time up to end of July, 1910. Some of the papers included in the report have already been published in the Proceedings of the Royal Society, and upon certain of these we have already commented in the columns

[1] Reports of the Sleeping Sickness Commission of the Royal Society No. xi., London, 1911. Published by H.M. Stationery Office.

of THE LANCET. In an interesting series of "Further Researches on the Development of Trypanosoma Gambiense in Glossina Palpalis" the conclusion is arrived at that in the course of the development of this trypanosome the proboscis of the fly does not become involved, though this occurs with other species such as T. vivax, which also is found in G. palpalis. Experiments proved that after an infective feed the trypanosomes of sleeping sickness disappear from the alimentary canal of the great majority of the glossinæ, but in a small percentage of the flies this initial disappearance is followed by a renewed development in about 28 days, and the tsetse flies in which this renewed or late infectivity occurs can remain infective for at least 96 days, and quite possibly for the remainder of their existence. An invasion of the salivary glands takes place at the same time that the renewed infectivity appears, and it is important to observe that, in the opinion of the Commission, without this invasion of the salivary glands the bites of the flies cannot prove infective. The type of the trypanosomes found in the salivary glands of the glossinæ which become infective is similar to the short, stumpy forms found in the blood of vertebrates. It is believed that this reversion to the blood-type is an essential feature of the infective process. Mechanical transmission of the infection by the fly immediately after an infective feed plays a much smaller part, if any, than has hitherto been supposed. One of the most difficult problems which confronted the Commission was to account for the continuance of the infection in the flies caught on the depopulated shores of the Victoria Nyanza, the whole of the native inhabitants having been removed two or more years previously. It was strongly suspected that some animals were acting as reservoirs of the virus. It was ultimately demonstrated that cattle may in nature carry T. gambiense in their blood, and that certain kinds of antelope are at least potential carriers of the sleeping-sickness parasite, though no evidence was obtained that this occurs in nature. Such animals as the Uganda pig, the crocodile, and Uganda fowls were subjected to experiment, but there was no proof that any of them acted as the host of T. gambiense. Other mammals, birds, and reptiles found on the lake-shore and its vicinity were also examined, and though in the blood of some of them trypanosomes of various sorts were found, there was nothing to show that any of them, excepting a single monkey, harboured the particular parasite of sleeping sickness. The question as to whether there was an ultra-microscopical phase in the development of T. gambiense was also inquired into, but the Commissioners came to the conclusion that it was unlikely that there was any such phase of the trypanosome during the period of its development in the body of the tsetse fly. It was also shown that there could be no hereditary transmission of T. gambiense in G. palpalis. The Commission investigated as far as was possible the diseases of domestic animals in Uganda, and attempts were made to discover the insect carriers of the infection of some of these maladies, and to investigate diseases caused by piroplasms, and also native ailments other than sleeping sickness. In this connexion it is worthy of mention that it was demonstrated that the illness prevalent among the natives in some places, and known locally as "muhinyo," was no other than Mediterranean fever, and that it was spread in Uganda as elsewhere through the agency of infected goat's milk. The distribution of biting flies and ticks, as also the incidence of cattle diseases in Uganda, were mapped out as far as was practicable. This valuable report gives the interesting details of a vast number of experiments carried out at the headquarters of the Commission at Mpumu, about six miles from the Victoria Nyanza. But notwithstanding all that has been done there remain a number of problems in connexion with sleeping sickness still unsolved. With a view of completing the work the Commission has quite recently returned again to Africa. Some changes in its membership have occurred; the places of Captain Bateman and Captain Mackie have been filled by Professor R. Newstead, of the Liverpool School of Tropical Medicine, a recognised authority on medical entomology, and Captain F. Harvey, R.A.M.C. We understand that Lady Bruce once more accompanies the Commission, which is proceeding in the first instance to Nyassaland in order to ascertain if the species of the tsetse fly and the particular trypanosome found there in the recently reported sleeping sickness cases are the same as those which are responsible for causing the disease in Uganda. The question of wild game as possible reservoirs of the virus will also be further investigated.

RECENT RESULTS IN ANTI-PLAGUE INOCULATION.

ALTHOUGH the efficacy of inoculation as a plague preventive is thoroughly recognised and acknowledged by those who have had personal experience, there still exists in some quarters a perhaps not unnatural reluctance to accept this measure as, on the whole, the most effective and essential in presence of an outbreak. It is not superfluous therefore to bring together well-authenticated statistics of the relative incidence of the disease on groups of inoculated and uninoculated persons living under identical conditions. This has been done by Colonel W. B. Bannerman, I.M.S., in his report for 1910 on the working of the Bombay Bacteriological Laboratory, an institution which supplies anti-plague vaccine for the whole of India. During the year the output of this vaccine was 625,690 doses, a substantial increase as compared with 1909, showing that confidence in its use is slowly but steadily increasing. The largest supplies were furnished in the Punjab, Madras, the United Provinces, and the Native States. An important item of evidence as to its prophylactic power is the fact that the whole of the laboratory staff, numbering 116, have remained absolutely immune, though in constant and daily contact with plague-infected rats and fleas. Colonel Bannerman suggests that the unpopularity of inoculation amongst the native classes generally may be due to one, or both, of two verbal misunderstandings: one of these arises from the fact that, in the vernacular, the verb "to inoculate" is translated as "to inject plague" or "to inject plague juice"; the other is the use of the word "sterile" as applied to the prophylactic fluid, meaning, of course, that it contains no living organisms, but understood by the native to imply that its injection will cause sterility or impotence. It is perhaps unfortunate that these terms have become so current in popular phraseology, and the misconceptions as to their meaning on the part of the quite uneducated and ignorant masses of the population are not to be wondered at. Explanation of the real nature of the remedy and of the benefits that may be expected from its use, together with accounts of the success it has already had, that is, education of the people by competent instructors, and in an interesting and attractive manner, as by lectures and lantern demonstrations, should be carried out in all parts of the country. Moreover, this should be done, as Colonel Bannerman states with emphasis, with the cöoperation and hearty support of the chief officers of the civil government, that is, the Collectors of Districts: "The success, or failure, of inoculation in a district depends on personal influence, and the officials of most influence are the Collector and the District Surgeon." We heartily endorse Colonel Bannerman's recommendation. The active personal support of the local governing authority, the senior civil

officer of the district or station, is required. When the British *Raj*, as represented by the Commissioner or Collector, shows that it really wants something done, and intends to have it done, then the leaders of native opinion are likely to get it done. The personal influence and enthusiasm of the civil surgeon are also important factors. Fifteen instances are furnished to prove the efficacy of inoculation, as carried out during the past year. It is stated that they have been selected from many examples received from all parts of India in response to a request for information from the authorities to whom supplies of vaccine had been sent. It would perhaps have been more satisfactory if *all* the statistics could have been collected, instead of a selection; but we imagine that many of them were not sufficiently precise or accurate to be capable of furnishing a trustworthy general induction.

	Population.		Percentage attacks.	
	Inoculated.	Not inoculated.	Inoculated.	Not inoculated.
Dharampur	1,027	2,500	2·30	8·00
Kolhapur	4,118	50,255	0·12	2·25
Sadra	689	600	0·014	4·16
Gujranwala	2,595	19,628	1·58	5·16
Amritsar	5,846	44,243	1·53	5·60
Fyzabad	711	64,371	0·28	1·90
Neemuch	3,350	6,000	1·16	6·36
Do, Skinner's Horse	1,177	9	0·93	100·00
Jaipur	856	131,235	0·23	3·70
Nagpur	3,708	105,587	1·19	7·37
Yeotmal	3,119	7,426	0·86	5·40
Harihar	2,138	1,783	4 30	15·80
Palghat (Malabar)...	10,794	33,383	0·02	0·50
Calicut	2,416	72,565	*Nil.*	0·03
Palni	13,825	3,343	0·64	5·30

A set of examples such as these, collected from a very wide area, and referring, taken altogether, to a considerable number of persons under very different conditions, clearly shows the large measure of protection afforded by inoculation. They also show that there is great variation in the attack rate in different populations—e.g., amongst uninoculated, at Calicut only 0·03 per cent., that is, 22 persons, all of whom died; at Harihar as many as 15·8 per cent., that is, 283 persons, of whom 203 died. Amongst inoculated, 0·02 per cent. at Palghat, that is, 2 persons, of whom 1 died; 4·30 per cent. at Harihar, that is, 92 persons, of whom 18 died. The advantage, however, is always very greatly in favour of the inoculated. The report also records some experiments as to the supposed spread of plague through the medium of wild ducks, which had been suggested as a possible explanation of an outbreak at an oasis in Seistan, 600 miles away from any known plague-infected area. It was found that the rat flea would not take to ducks, either wild or tame, thus disposing of this hypothesis.

METHOD OF INTRODUCING A NEEDLE FOR INTRAVENOUS INJECTION.

INTRAVENOUS injection has now become a common, not to say a fashionable, form of medication, but the operation is sometimes difficult, and the fluid may be injected beside, instead of into, the vein. In the *Journal of the American Medical Association* of July 29th Dr. J. J. Watson has described an ingenious method by which he has seldom failed to enter the vein on the first attempt. If the vein is small or the patient is fat, a ligature is applied above the elbow. A medium-sized sewing-needle is passed through the skin and upper quadrant of the vein and anchors the vein to the skin. The artery forceps or needle-holder used to insert the needle is taken off and clamped on the point side of the needle about a quarter of an inch from the vein. The forceps is gently lifted with the left hand, thus elevating the upper wall of the vein with the skin. With the right hand the injection needle is introduced into the vein almost parallel with its axis. There will be no bleeding if a piece of sterile gauze is pressed over the vein and held there for half a minute as the needle is withdrawn. The three small punctures are covered with collodion. Dr. Watson states that the ease with which this procedure can be executed is surprising. The method may also be used for blood-letting.

RECENT ANTHROPOLOGICAL WORK IN EGYPT AND NUBIA.

WE have from time to time made note of the ever-accumulating volume of literature which is being produced as the result of the labours of various workers in Egypt and Nubia. The Egyptian Government Survey of Nubia has given a great impetus to investigation, for the vast amount of material which it has yielded has furnished a basis for the researches of many specialists, and for many years to come it may well continue to do so. During the season of field work from 1910 to 1911 an interesting portion of the Nile Valley between Dakka and Korosko was examined, and the expedition finished its season's work by excavating Cemetery No. 151, which lay to the south of Wadi Sebua. The fact that 151 cemeteries of all periods have been examined gives some idea of the enormous collection of material, anthropological and archæological, that has been accumulated during the last three years. The human remains obtained in the last season's work have not yet been reported on, for no anthropologist accompanied the expedition in the field; but judging from Mr. C. M. Firth's account [1] of the burials and interred objects an extraordinary interest will be attached to the result of Professor Elliot Smith's examination of the skeletons. One thing that would seem to be apparent from Mr. Firth's report is that as the survey has pushed south along the Nile Valley it has passed beyond the limits of the early and middle Predynastic burials, none of which were met with above Dakka. On the other hand, the early Dynastic period is abundantly represented, and as its burials are traced southwards those indications that were noted in the work of the previous seasons become more clear, and a definite non-Egyptian or local Nubian culture is apparent. This purely Nubian culture in these most southern Dynastic burials manifests itself most clearly in the pottery, which is a finely elaborated development of the simple, yet beautiful, red glazed Predynastic ware. In Egypt proper this full development was never reached, for the use of alabaster obtained such a vogue that the most brilliant evolution of the potter's art was arrested, and only found its full expression among these isolated southern people uninfluenced by the Egyptian fashion for stone ware. It is obvious from this seventh bulletin of the survey that the objects of culture have given a very definite shape to the ideas of the archæologist concerning the peopling of this tract of country, and we may well expect that when the work of the anthropologist is done a very great addition will be made to our knowledge of this early page of the human story. Another recent publication is that of Dr. Marc Armand Ruffer dealing with the representations of pathological types as they are displayed in the wall paintings, carvings, and statuettes of Egyptian workmanship.[2] The fidelity to detail shown by the ancient Egyptian artist

[1] The Archæological Survey of Nubia. Bulletin No. 7. Cairo, 1911.
[2] On Dwarfs and Other Deformed Persons in Ancient Egypt, Bulletin de la Société Archéologique d'Alexandrie, No. 13, 1911.

is well known, and Dr. Ruffer is probably correct in regarding such representations—at any rate, those executed before the advent of Græco-Roman influences—as accurately depicting the distorted proportions of some actual human being. The human desire to indulge in grotesques or a certain inferiority of draughtsmanship on the part of the artist must always be reckoned with, but these elements would seem to be excluded in all the examples chosen to illustrate this work. It is known that the notables of ancient Egypt possessed that curious desire—manifested throughout all history—to have attached to their retinues examples of those human unfortunates who happen to be conspicuously dwarfed or curiously deformed. The dwarf, the hunchback, and the court jester are near relations; the nanus, the pumilus, the morio, and even our own Punch, are all of their family; and what would seem almost more curious than the love of the wealthy to possess them is the willingness of the artist to depict their misshapen forms. Raphael, Titian, Mantegna, Veronese, Valasquez, Carpaccio, and others have lent their art to the portraiture of the dwarf and the hunchback; and some 5000 years ago the artists of ancient Egypt were attracted by the same theme. Dr. Ruffer has classified the dwarfs and deformities represented in the art of these old workers, and has done good service in showing the error of the oft-repeated assertion that these little people were normal members of one of the dwarf tribes of Africa. Achondroplasia, Pott's disease, and talipes are easily diagnosed from many accurate representations dating back at least 4000 years; rickets appears to be manifested in the subjects of some wall drawings, and other malformations, though well depicted, are of somewhat uncertain origin. It is interesting to note that the examination of the actual remains of the people has yielded results that very well accord with the author's conclusions. The Queen of Punt, that mysterious woman whose queer distorted figure has puzzled so many people, still remains a pathological as well as an ethnological riddle, for Dr. Ruffer, though he has determined that she had a daughter of the same type, has not succeeded in diagnosing her condition.

THE TREATMENT OF THE VACCINATION SITE WITH PICRIC ACID SOLUTION.

ANY improvement in the method of treating vaccination scratches and the consequent inflammatory processes will be heartily welcomed by those who have had much experience of vaccination. Although the numbers of untoward results are nowadays comparatively small, the acute inflammatory conditions that sometimes supervene are always annoying and often extremely painful to the patient and worrying to the medical man. In THE LANCET of Nov. 18th (p. 1397) Professor J. F. Schamberg and Dr. J. A. Kolmer, of the Philadelphia Hospital for Contagious Diseases, show that by using a 4 per cent. alcoholic solution of picric acid painted upon the vaccinated area 48 hours after the insertion of the lymph the degree of local inflammatory reaction is lessened, as is also the amount of constitutional disturbance. These observers believe that the improved conditions are the result of the germicidal action of this solution, as they find that the micro-organisms in the skin, or a large proportion of them, are killed off when the solution is applied. There seems, however, to be an additional advantage in the fact that the epithelial cells are hardened or toughened by the action of the picric acid. A kind of natural aseptic dressing is thus formed and kept in perfect condition without any bandaging or constriction of any kind, so that there is no interference with either the lymph- or blood-vascular circulations. Professor Schamberg and Dr. Kolmer are very careful to put this method forward simply as tentative and preliminary, and suggest that others interested in vaccination should repeat their experiments and see whether they obtain equally good results.

A PROTEST AGAINST THE INDISCRIMINATE USE OF THE ORGANIC COMPOUNDS OF SILVER IN OPHTHALMIC PRACTICE.

IN the *Johns Hopkins Hospital Bulletin* for November Professor Samuel Theobald has protested against the indiscriminate use of the organic compounds of silver in ophthalmic practice. Whether as the result of their greater penetrative power or of the freedom with which they are used, protargol and argyrol are responsible, he thinks, for many cases of conjunctival argyria. Before these compounds were introduced argyria was practically never seen except in old cases of trachoma. It has now become a common practice to use the organic compounds of silver in both acute and chronic catarrhal conjunctivitis. This Professor Theobald regards as unnecessary and indefensible, as a collyrium containing half a grain of sulphate of zinc and 10 grains of boric acid to the ounce is cleanly and is more surely and promptly efficacious than the silver compounds.

THE PREVENTION OF BERI-BERI AND MALARIA.

Dr. Max Moszkowski, of Berlin, who undertook an expedition, which lasted eight months, from May, 1910, to January, 1911, to explore the Mamberamo river in Dutch New Guinea, was very successful in preventing both malaria and beri-beri, and gave to the Berlin Medical Society an account of his methods which appears in the *Archiv für Schiffs- und Tropen-Hygiene* for October. The Mamberamo river had, he tells us, a most unenviable reputation. Every previous expedition had been ruined by malaria or beri-beri, so much so that the local steamboat company had forbidden its captains to enter the river at all. Dr. Moszkowski was waiting at Singapore, expecting to join a Dutch military expedition to the river, some hundreds strong, when he got a telegram directing him to go there, but telling him that the expedition had had to be given up on account of a great outbreak of illness. On the day it officially ended there were 42 per cent. on the sick list, and all three Europeans had been attacked by beri-beri, from which several natives died. He had to start quickly, and what preparations should he make? He knew of Braddon's work on cured rice, but cured rice was expensive, and besides it does not keep well. He read Schaumann's long report on phosphorus starvation and beri-beri, and realised that if he fed his men on the rice of commerce, polished rice, they would in about three months develop beri-beri unless he gave the men "polishings" too. But polishings could not be got in the time, and besides the natives do not like them. He knew that Hulshoff Pol, of Buitenzorg, recommended the addition of katjang-idjoe beans (Phaseolus radiatus), but he dared not trust to these alone, as the just-abandoned expedition had been supplied with them, and had yet been decimated by beri-beri. In this difficulty he bethought himself that beri-beri was really a disease of civilisation, not attacking the untutored native who grows, and husks, his rice for himself, but appearing only when coolies are gathered together in numbers on plantations, and get their rice brought to them from mills. He had himself lived on rice in the back country of Sumatra without getting beri-beri, so he decided to take with him paddy, unhusked rice, and carry a rice mortar or two, and have the rice husked daily in the native way. This trebled his baggage and greatly increased the work of the expedition; indeed, it was a method only possible for a small party like his (two Europeans, three Papuans, and five Malays). They had very arduous work; their boats were capsized, they suffered

great privations, yet came through both dry and wet seasons without a single case of beri-beri—a great credit to his forethought and judgment. He tells us that the katjang-idjoe bean has a most unpleasant flavour, and that the natives will always avoid eating it if they can. When he had it for them he issued ½ lb. daily to each man, and himself saw that they ate it. It takes long to cook, so he boiled it for 20 minutes before he put the rice (1½ lb. per man) into the pot with it, boiled the whole down to a sort of porridge, and served this out. Thus treated, the unpleasant flavour disappears, and not only are the rice and bean eaten, but the extractives and salts are not lost, as happens when the beans are boiled and the water thrown away. Even polished rice may be safely used if cooked in this way, we are told. Dr. Moszkowski had a further triumph, for he gave each man 7½ gr. of quinine every fifth and sixth day, and though he says they at times met veritable swarms of anopheles he had hardly a case of malarial infection, and he escaped altogether himself. The history of this expedition is most satisfactory and written with considerable literary skill, and the author is to be congratulated on the success he attained, in spite of all his hardships, in overcoming the two great sanitary dangers of that region, beri-beri and malaria. But in future we are to expect that, thanks to the work of Mr. E. A. Cooper and Dr. Casimir Funk (THE LANCET, Nov. 4th, p. 1266), the leader of an expedition will be able to take all the special substance required to keep beri-beri away from his men in a one-ounce bottle in his pocket. Of such are the triumphs of medicine.

THE FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE.

AS was announced in THE LANCET of May 27th, the second Biennial Congress of this Association will be held at Hong-Kong from Jan. 20th to 27th, 1912, under the presidency of Dr. J. Mitford Atkinson. The papers will be classified so as to give, if possible, a day to each of the following groups: I. Protozoology, Helminthology. II. Cholera, Plague, Leprosy, Tuberculosis. III. Tropical Fevers, including Malaria, Beri-beri, Dysentery. IV. Surgery, Obstetrics, Infantile Diseases. V. Climate, Hygiene, Sanitation. Medical men in the Far East willing to introduce subjects for discussion should communicate at once with the secretary, Dr. Francis Clark, Hong-Kong Papers may be read in English, French, or German, but a brief abstract in English should be sent in. Papers have already been promised by Dr. J. Mitford Atkinson (Hong-Kong), presidential address on the Progress of Tropical Medicine during the Past 25 Years; Dr. J. C. Dalmahoy Allen (Hong-Kong), on Blood Pressure; Major Weston P. Chamberlain (U.S. Army), on Prevention of Beri-beri among Philippine (Native) Scouts by the Use of Under-milled Rice; and Captain E. B. Vedder (U.S. Army) on (1) the Substance in Rice Polishings which Prevents Polyneuritis Gallinarum and Beri-beri; (2) an Experimental Study of the Action of Ipecacuanha on Amœbæ; Dr. C. Noel Davis (Shanghai), Dr. H. Fraser (Kuala Lumpor), and Dr. Victor G. Heiser (Philippine Islands), papers on Beri-beri; Dr. Richard P. Strong (Philippine Islands), on (1) Immunisation against Pneumonic Plague; and (2) the Etiology of Beri-beri; Dr. Lawrence G. Fink (Burma), on Blackwater Fever in Burma; Dr. Paul C. Freer (Philippine Islands), on Results of the Past Two Years' Work on the Study of Tropical Sunlight; Staff-Surgeon Dr. Fürth (Kiautschou) on Neuere Untersuchungen über Flecktyphus; Dr. George A. Finlayson (Straits Settlement), on Malaria as a Factor in the Etiology of Biliary Calculi; Dr. G. Montagu Harston (Hong-Kong), on (1) The Care of Children in the Tropics, and (2) The Care of the Eyesight in the Tropics; Dr. C. Montague Heanley (Hong-Kong), on the Laboratory Diagnosis of Syphilis; Dr. Gregory P. Jordan (Hong-Kong), on Carbon Dioxide Snow, its Use in Private Practice in the Tropics; Dr. K. Justi (Hong-Kong), on the Diagnosis of Malarial Fever in the Absence of the Parasites from the Peripheral Blood; Dr. O. Müller (Hong-Kong) on the Surgical Treatment of Dysentery; Sir Allan Perry, M.D. (Ceylon), on Indian Native Coolie Immigration; Dr. J. M. Swan (Canton), on Some Rare Conditions which have been met with in the Treatment of Vesical Calculi in South China; Dr. Gordon Thompson (Pakhoi), on Surgical Work in South China; Fleet Surgeon Dr. Uthemann (Kiautschou) on, (1) Stadtanlage und Sanitäre Einrichtungen in Tsingtau; (2) Die Notwendigkeit der Quarantänebestimmungen an den Küstenplätzen Ostasiens nach Möglichkeit in Übereinstimmung zu bringen; Dr. G. Duncan Whyte (Swatow) on Tuberculosis in South China; Mr. J. P. A. Wilson (Johore), Professor Cheng Hao (Canton Army Medical School), Major S. P. James, I.M.S., and Dr. J. A. F. de Moraes Palha (Macau) on subjects not yet announced. The Governor, Sir Frederick J. D. Lugard, will open the congress with an address of welcome on Jan. 20th. A social programme is being arranged. The subscription is 10*s.* 6*d.* ($6 Hong-Kong currency).

VALVULAR LESIONS OF THE HEART PRODUCED BY EXTERNAL INJURIES.[1]

IN 1905 Dr. Ranelletti had an opportunity of examining a carpenter whose health had been completely broken in consequence of an accident in which, while he lay on the ground, a wooden door fell on him from a height of about six feet. The door struck him in the præcordial region, the immediate effects being severe retrosternal pain, partial loss of consciousness, and agonising oppression in the chest. Dr. Ranelletti, at his first visit to the patient, about six weeks after the accident, found evidence of insufficiency of the aortic valves, together with incipient hypertrophy of the heart; another examination made four years afterwards showed that the aortic insufficiency had been followed by aortic stenosis. Recognising the great interest of such a condition, not only from the professional point of view but also in connexion with the compensation of injured workmen, he has now collected in book form the clinical and pathological details of 100 recorded cases more or less analogous to the above, the resulting lesions being either immediate rupture of the valves or else the production of some form of endocarditis. The chapters on etiology, diagnosis, pathological anatomy, and medico-legal considerations are well deserving of perusal, though, or because, they suggest a vista of legal procedure.

THE SECOND INTERNATIONAL CONGRESS OF ENTOMOLOGY.

THE intimate connexion between entomology and disease has been realised only of recent years in a scientific manner. Though vaguely presaged by much older philosophy the doctrine of insects as disease-carriers is of yesterday in practical therapeutics. Yet in a brief time much valuable work has been done in tracing the relationship of the mosquito to malaria and yellow fever, of the tsetse fly to trypanosomiasis, of the cattle tick to Texas fever, for example, and it is easy to see that medical successes will not stop at these points. The appointment by Government in 1909 of an Entomological Research Committee to make further investigations into the relation existing between insects and disease in tropical Africa removed from Great Britain the reproach of

[1] Le Lesioni valvolari del Cuore di Origine traumatica. By Dr. A. Ranelletti. Rome: Armando Di Fabro. Pp. 181, with three illustrations. Price 3 lire.

lagging behind in this great field of scientific investigation. Even prior to that the Sleeping Sickness Bureau and the Wellcome Research Laboratory at Khartoum had made great use of the services of the special experts attached thereto, while we may particularly mention the monograph of Mr. F. V. Theobald on Mosquitoes, and the valuable work of Mr. E. E. Austen on "African Blood-sucking Flies." The coöperation of the entomologist with the medical scientist has before it a wide field for investigation. We have recently received from the general secretary of the International Congress of Entomology, Mr. Malcolm Burr, D.Sc., an intimation that the Second International Congress of Entomology will be held at Oxford from August 5th to 10th, 1912, of which further particulars will shortly be announced. The executive committee invites early provisional notice of intention to oin the Congress, that provision for the necessary accommodation may be made, especially in regard to finding lodgings in the town or rooms in one or more of the Colleges (the last for men only) at a moderate charge. Communications and inquiries should be addressed to the General Secretary of the Executive Committee, care of the Entomological Society of London, 11, Chandos-street, Cavendish-square, London, W. The proceedings of the first Congress are nearly ready, and will doubtless provide excellent reading. The subject matter of this Congress must necessarily prove interesting to the medical profession.

THE INCREASE OF NERVOUS INSTABILITY.[1]

THERE can be little doubt that one accompaniment of any rise in the general level of culture and civilisation in a race is an increase in the number of individuals who either suffer from nervous and mental disease or are liable so to suffer. No one who is at all concerned for the welfare of mankind can view such facts with equanimity. Recent statistics would go to show that out of every two to three hundred inhabitants of Germany one is mentally affected, and in other countries also the ratio of insane to healthy seems to be on the increase. The matter is one which concerns not merely the specialist, but also the general practitioner, for the latter has opportunities often denied to the former on coming in contact with neuropathic and psychopathic patients before their disease is fully established; further, from his knowledge of families and familial tendencies he is often in a position to advise and to direct at an early period in a child's life-history. Dr. Zingerle has written an interesting little book in which he pleads reasonably and forcibly for a better understanding on the part of the general practitioner of his opportunities and responsibilities in the matter of prophylaxis. At almost every stage in the individual's life the practitioner, whether he be accoucheur, school physician, army doctor, or factory doctor, may be called on to advise and to treat patients who, if properly handled, can still be retained as useful members of society, and it is eminently desirable he should have a practical knowledge of modern psychiatrical principles of treatment and their application. Dr. Zingerle enters into the homely details of every-day cases, points out the problems that present themselves and the best way of dealing with them, and argues strongly that less would be heard nowadays of the degeneration of the race if more attention were paid to these matters. Both in the chapters on prophylaxis and in those devoted to a consideration of treatment when once mental symptoms are observed, the practitioner will find much that is suggestive and practicable, and he will admire the sound common-sense that pervades the book.

[1] Die Psychiatrischen Aufgaben des Praktischen Arztes. By Dr. H. Zingerle, Professor in the University of Graz. Jena: Gustav Fischer. 1911. Pp. 56. Price 1.50 marks.

INTERNATIONAL OBSTETRICAL AND GYNÆCOLOGICAL CONGRESS.

THIS Congress will be held at Berlin on Sept. 10th–12th, 1912. A National Organisation Committee for Great Britain and Ireland has been formed for the purposes of the Congress by representatives from the Royal Society of Medicine (Obstetrical and Gynæcological Section), North of England Obstetrical and Gynæcological Society, Edinburgh Obstetrical Society, Glasgow Obstetrical and Gynæcological Society, and the Royal Academy of Medicine of Ireland. The Central Organisation Committee in Berlin has decided to have a formal discussion at the first session of the Congress on Sept. 10th, on "The Surgical Treatment of the Peritoneum." The duties of the National Organisation Committee of Great Britain and Ireland are (1) to nominate delegates to the Congress for the United Kingdom, the number of official delegates being expressly limited by the Central Organisation Committee to three; and (2) to select a "*rapporteur*" (not necessarily one of the three delegates), who will personally open the discussion on the "Surgical Treatment of the Peritoneum" as this country's representative, and give the views held here on the subject. At a meeting of the National Committee, held in London on Nov. 20th last, it was resolved to ask any Fellow or member of any of the above-named societies who are proposing to attend the Congress at Berlin, and who would be willing to serve as delegates, if nominated by the National Committee, to send in their names to one of the secretaries of the National Organisation Committee: Mr. J. H. Targett, 19, Upper Wimpole-street, London, W., or Dr. Walter Tate, 32, Queen Anne-street, London, W., on or before Dec. 11th, 1911.

A MEETING of the Section for the Study of Disease in Children of the Royal Society of Medicine will be held at 11, Chandos-street, W., on Friday, Dec. 15th, at 4.30 P.M., for a discussion on the Treatment of Tuberculous Joint Disease in Children. Mr. A. H. Tubby, in opening, will deal with the Relative Advantages of Operative Measures. Sir Anthony Bowlby will follow with the Results Obtainable without Operation and Dr. Butler Harris will deal with the Rôle of Vaccine Therapy. Fellows of the Society or Members of the Section desirous of taking part in the discussion are requested to communicate with Dr. T. R. Whipham (honorary secretary), 58, Park-street, W.

Sir Thomas Boor Crosby has intimated that he will preside over a meeting at the Mansion House in connexion with the London School of Tropical Medicine on Wednesday, Feb. 28th, 1912. He has also consented to preside at the annual meeting of the British Medical Benevolent Association to be held at the Mansion House on March 13th at 4 P.M. The new Lord Mayor of London has not been long in identifying himself with the medical work of the metropolis.

Sir Henry Butlin asks us to inform the Fellows and Members of the Royal College of Surgeons of England that he is very grateful to them for their kind message of sympathy.

Dr. William Collingridge, who has been medical officer of health of the City of London for the past ten years, has announced to the Corporation his desire to resign this post, as he is no longer physically equal to his duties.

THE Sultan of Turkey has presented to Dr. David Sandler a gold cigarette case with initial set in brilliants and rubies in appreciation of the amicable spirit shown in Dr. Sandler's publications in the English press.

THE CHEMISTRY, PHYSIOLOGY, AND ÆSTHETICS OF A CUP OF TEA.

CAFFEINE TANNATE AS THE CHIEF CONSTITUENT OF TEA INFUSION.

THE view that caffeine exists in an infusion of tea in the form of a definite compound with tannin is sustained by further experiments. In a previous article upon the subject[1] it was shown that when an infusion of tea (which always exhibits an alkaline reaction) was acidified with any acid a flaky buff-coloured precipitate settled out, especially in the cold, which proved to contain chiefly caffeine tannate. Further, the proportion of caffeine to tannin in this precipitate was found to be 1 of the former to 3 of the latter, and the suggestion was that the compound consisted of 1 molecule of caffeine $C_8H_{10}N_4O_2$, with a molecular weight of 194, associated with 1 molecule of quercitannic acid $C_{27}H_{26}O_{15}$ with a molecular weight of 602. In the previous article the formula was wrongly given as $C_{20}H_{20}O_9$. The ratio of caffeine to tannin in such a compound would be 1 : 3·1. The following is an example of the analysis of this precipitate from a good Indian tea :—

Caffeine	20·93 per cent.
Tannin	62·80 ,, ,,
Resinous and oily matters (by difference)...	16·27 ,, ,,
Total	100·00 ,, ,,

The precipitate amounted to 9·84 per cent. of the tea used in the infusion. A further experiment gave the following results :—

Caffeine	20·89 per cent.
Tannin	62·66 ,, ,,
Resinous and oily matters (by difference) ...	16·45 ,, ,,
Total	100·00 ,, ,,

It follows that the precipitate obtained on making an infusion of tea acid consists principally of caffeine and tannin in the ratio approximately of 1 of the former to 3 of the latter. The presumption is that caffeine tannate is the chief body thrown out of solution by the addition of acid.

When, however, this precipitate is removed by filtration and the filtrate is saturated with ammonium sulphate a further separation of buff-coloured flakes takes place. On analysis these flakes show the following composition :—

Caffeine	24·13 per cent.
Tannin	75·80 ,, ,,

$$\frac{\text{Tannin}}{\text{Caffeine}} = 3{\cdot}14$$

The ammonium sulphate precipitate amounted to 4 per cent. of the tea used in the infusion (5 grammes in 400 cubic centimetres of just boiling water allowed to stand five minutes before pouring off). Calculation shows that this particular tea yielded a total of caffeine tannate of 12·26 per cent. Of this total 8·26 was thrown out by mere addition of acid and 4·00 per cent. by subsequent saturation of the filtered acid infusion with ammonium sulphate. There is no point in separating caffeine tannate first by acidifying and next by saturating with ammonium sulphate. The whole can be thrown down at once by adding ammonium sulphate after acidifying the tea infusion with dilute sulphuric acid. When this precipitate is air-dried and sunk in a mixture of 1 of alcohol and 2 of benzene the caffeine tannate is separated from the excess of ammonium sulphate crystals and resins and obtained in a comparatively pure state. The solution of caffeine tannate in benzene-alcohol mixture readily yields its tannin to lead oxide (litharge), the caffeine being set free. To give an example, a certain tea (Indian) yielded a total precipitate by ammonium sulphate amounting to 11·60 per cent. when dissolved in benzene-alcohol mixture and evaporated to dryness and weighed. The following was the process. A definite volume of the alcohol-benzene solution of the caffeine tannate was evaporated over a weighed quantity of lead oxide. The dry residue was then made into a thick paste with water and extracted with chloroform, which was poured off and evaporated in a platinum basin. The residue from the chloroform represents the caffeine contained in the caffeine tannate. The wet lead oxide paste was then dried to constant weight and the increase of weight shown over the original amount of lead oxide weighed out was regarded to be due to tannin. In this way a residue of 11·60 per cent. obtained by evaporating the alcohol-benzene mixture to dryness gave on treatment in the way just described :—

Caffeine	2·80 per cent.
Tannin	8·80 ,, ,,
Total (caffeine tannate) ...	11·60 ,, ,,

With another tea the total caffeine tannate extracted from the ammonium sulphate precipitate by benzene-alcohol mixture was 12·80 per cent., and the constituents found by lead oxide separation were :—

Caffeine	3·20 per cent.
Tannin	9·60 ,, ,,
Total (caffeine tannate) ...	12·80 ,, ,,

These experiments thus appear to establish that, complex as the composition of an infusion of tea may be, it at least yields a definite substance in the shape of caffeine tannate, the composition of which is constantly shown to be one part of caffeine with three parts of tannin.

THE PREPARATION AND COMPOSITION OF CAFFEINE TANNATE.

Caffeine tannate is a very interesting substance apart from its occurrence in tea infusion. It may readily be prepared by mixing aqueous solutions respectively of tannin and caffeine in the cold, when a milky fluid, sometimes with flakes forming according to the strengths of the solutions, is obtained. If a few drops of carbonate of soda solution be added to the mixture a clear pale yellow solution results. If next a slight excess of dilute sulphuric acid be added caffeine tannate separates in flakes which admit of washing to remove free caffeine or tannin as the case may be. These flakes may be dissolved in alcohol-benzene mixture (1 to 2). On evaporating the solution to dryness a crisp crust of caffeine tannate is obtained. If this residue is taken up again in benzene-alcohol and evaporated over a weighed quantity of lead oxide the two constituents are separated. On evaporating the benzene-alcohol and moistening the mass with water to a paste chloroform may be added which will extract the whole of the caffeine ; the lead residue on drying to constant weight will give the amount of tannin as an increased weight on the lead oxide employed. To give an illustration. A benzene-alcohol solution of the precipitate obtained by adding acid to a solution of caffeine and tannin in weak carbonate of soda was evaporated to dryness. The weight was 0·1 gramme. The residue was re-dissolved in benzene-alcohol and the solution so obtained was evaporated to dryness in a platinum basin containing 3·210 grammes of lead oxide (litharge). The dried mass, after moistening, was extracted with chloroform. The residue (caffeine) from the chloroform, clean and white, weighed 0·025 gramme. The lead oxide, after being exhausted with chloroform, was then dried at 120° C. to constant weight. The weight proved to be 3·287 grammes, which represents a gain due to tannin of 3·287 – 3·210, or 0·077 gramme. The 0·100 gramme of caffeine tannate was thus split into 0·025 gramme of caffeine and 0·077 of tannin, figures which account for the whole of the original substance taken, and which give the product 3·08 when the proportion of tannin is divided by the proportion of caffeine. Caffeine tannate is readily soluble in boiling hot water, but as the solution cools it turns milky. It is, however, permanently soluble in water containing a little alcohol. If caffeine tannate be heated with a little water for some time it assumes the form of an oil.

It was next decided to add an excess of caffeine in solution to a known amount of tannin in solution. If tannin selects a definite amount of caffeine to form a compound it is evident that by estimating the remaining free caffeine in the mixed solution the amount that has combined with the tannin can be ascertained. Thus, 0·3 gramme of caffeine in solution was added to 0·3 gramme of tannin in solution, a few drops of carbonate of soda solution were added to make the mixture quite clear, and then dilute sulphuric acid was added in slight excess. Caffeine tannate readily separated in flakes from which a clear fluid could easily be poured off. The clear fluid was then repeatedly extracted with

[1] THE LANCET, Jan. 7th, 1911, p. 46.

chloroform and the chloroform extractions were evaporated. The data and results were as follows:—

Caffeine taken	0·3 gramme.
Tannin ,, ...	0·3 ,,
Calculated caffeine in excess, assuming that 1 of caffeine combines with 3 of tannin ...	0·2 ,,
Caffeine in excess found	0·189 ,,

It is difficult to extract caffeine completely from a bulky aqueous solution, but the result shows an approximation to a combination of 1 of caffeine with 3 of tannin having been formed.

Next the precipitate obtained (caffeine tannate) was split up by lead oxide as previously described:—

Caffeine tannate taken weighed	0·284 gramme.
Tannin found	0·214 ,,
Caffeine ,, ...	0·075 ,,
Total	0·289 ,,

The evidence is here again strong in favour of the existence of a definite compound of caffeine and tannin, consisting of one of the former and three of the latter.

The reverse experiment was next tried—that is, an excess of tannin in solution was added to a known amount of caffeine in solution:—

Tannin taken	0·30 gramme.
Caffeine ,, ...	0·03 ,,
Calculated excess of tannin	= 0·21 ,,

The mixed solutions were saturated with ammonium sulphate and thrown upon a filter. The filtrate was exhausted with ethyl acetate and the extraction evaporated to dryness (we noted before that free tannin is soluble in saturated ammonium sulphate, but that caffeine tannate is insoluble). The ethyl acetate gave 0·205 gramme free tannin against 0·21 calculated. The caffeine tannate formed was again split up by means of lead oxide, and there were obtained 0·10 gramme tannin and 0·03 caffeine, a total of 0·13 gramme caffeine tannate formed against a calculated 0·12 gramme.

CAFFEINE TANNATE PHYSIOLOGICALLY CONSIDERED.

We suggest that these findings are important from a physiological point of view, because it is highly probable that caffeine in a state of stable chemical union with tannin must differ very materially in regard to therapeutic action from the alkaloid in a free or uncombined condition, especially having regard to the fact that tannin serves to some extent as an antidote to most alkaloids since it forms with them insoluble compounds. Similarly tannin when combined with caffeine is a totally different thing from tannin in the free state. The astringent properties of tannin, for example, disappear when it is combined definitely with caffeine. It follows that tannin in combination with caffeine will not tan. A solution of pure caffeine tannate does not act upon gelatin or proteins, so that when tannin is combined with caffeine its incompatibility with these dietetic substances ceases, and its objectionable retarding action upon digestion accordingly must be modified. If these conclusions are correct it becomes of the utmost importance to determine whether in the enormously popular beverage tea, caffeine or tannin exists in the free state or mutually combined.

We have already shown that to a large extent the teas which are regarded as of high quality by the merchant prove to yield infusions containing caffeine and tannin in the ratio of 1 to 3, and the strong inference is that such infusions contain neither free tannin nor caffeine, but neutral caffeine tannate. The merchant's view of quality would thus appear to accord quite happily with physiological considerations. He is guided, of course, chiefly by the flavour of the infusion, as well as by colour and odour and general appearances. Both tannin and caffeine in the free state have characteristic tastes: the former is astringent and sour, the latter is bitter. A slight excess of caffeine in tea infusion is probably less objectionable than an excess of tannin, since the disagreeable qualities of tannin are more marked. An ideal infusion is one which contains both caffeine and tannin in 1 to 3 proportion—i.e., caffeine tannate—neither constituent being in excess. This ideal is occasionally reached, but, generally speaking, most good teas contain caffeine in slight excess. Caffeine tannate, however, does not possess the qualities of its constituents; it has a peculiar flavour which is smooth and bland, not unlike a very delicate or lightly infused tea. It must be carefully borne in mind that in making these deductions we are not considering the chemistry of the leaf, but of its infusion made by pouring 400 c.c. of just boiled water upon 5 grammes of tea and decanting after 5 minutes—a plan suggested by the tea-taster's method of assaying tea.

THE EFFECT OF "STEWING" SOME TEAS.

The desirable equilibrium may be disturbed by vicious treatment even of a good tea. If an Indian tea be boiled long enough or stewed on the hob a point is reached when tannin appears over and above the amount which can combine with the caffeine to form neutral caffeine tannate. Such an infusion presents the objectionable characters of tannin. When this infusion is saturated with ammonium sulphate the caffeine tannate as such is thrown out. If this is filtered off the excess of tannin will be found in the filtrate, from which it can be extracted by ethyl acetate. Thus the five minutes' infusion of an Indian tea showed a total tannin content of 9·24 per cent. and caffeine 3·70 per cent. On infusing the same tea for one hour the tannin amounted to 16·12 per cent. and the caffeine 4·40 per cent. In the five minutes' infusion, therefore, caffeine was in slight excess (0·38 per cent.) of the tannin, but in the one hour's infusion the tannin is in excess of the caffeine by 2·92 per cent. In other words, 4·40 of caffeine if combined as tannate would mean in the combination 13·2 of tannin, when as a matter of fact the total tannin found was 16·12 per cent.

The experience of making wholesome tea seems to have decided upon a limited time for making the infusion. This limit, in fact, appears to us to insist upon the infusion consisting as far as possible of caffeine tannate and upon the exclusion of an important quantity of free tannin or caffeine present. But even a five minutes' infusion of some teas may not approach this standard. Indeed, in view of our work upon the subject we are able to suggest a classification for teas as follows:—

Good teas are those which on a five minutes' infusion yield only caffeine in the form of caffeine tannate to the infusion, neither caffeine nor tannin being in excess; and bad teas are those which yield on infusion for five minutes a tea containing in addition to caffeine tannate either caffeine or tannin, but especially tannin, in excess.

It is obvious from this classification that a good tea may be made a bad tea, but a bad tea cannot be made a good tea, except possibly by very skilful blending. Excessive infusion will spoil a good tea, but a short infusion of a bad tea may be as objectionable as an excessive infusion of a good tea. On physiological grounds, therefore, the buyer of high-quality teas runs less risk of digestive disturbance provided he makes the tea properly.

These points are interesting in connexion with the light types of tea grown in China. The short infusions of these teas commonly contain an excess of caffeine, which probably accounts for their bitterness. They are less rich than Indian teas, a fact which should make the use of Indian teas more economical, but the best types of them never show the presence of free tannin. A five minutes' infusion of a certain China tea showed a total amount of tannin of 4·60 per cent. and caffeine 2·80 per cent. On the basis of the 1 to 3 relationship of caffeine to tannin in caffeine tannate it is evident that in this tea there is an excess of caffeine—viz., 1·27 per cent.—for the amount of caffeine that can combine with 4·60 of tannin is 1·53, making a total of 6·13 per cent. of tannate. As a matter of fact, the amount of caffeine thrown out as tannate when the infusion was saturated with ammonium sulphate was 6·48, which requires 1·62 of caffeine and 4·86 of tannin. In the five minutes' infusion, therefore, there was 1·27 per cent. of caffeine in excess. On infusing the same tea for an hour, however, the tannin then amounted to 7·14 per cent. and the caffeine to 3·20 per cent. Caffeine is still in excess, for the amount combined as tannate is 2·38 per cent., giving a difference of 3·2 − 2·38 = 0·82 per cent. Some China teas, therefore, are incapable of yielding free tannin, and these are invariably high-priced teas.

ANALYSES OF INFUSIONS OF VARIOUS TEAS.

In the following table will be found a series of analyses of infusions made with Indian, Ceylon, and China teas respectively. The percentage results are based upon 5 grammes of tea used in the experiment, to which were

added 400 c.c. of just boiling water, the infusion being poured off after five minutes. The qualities of the teas from the merchant's point of view are indicated by the brokers' prices which are attached. It will be noted that, as a rule, the high-priced teas yield infusions containing a balance of tannin and caffeine, and in general a larger amount of these constituents. The use of a high quality tea is therefore not only salutary but economical also. A very fine example of Indian tea is No. 7. The infusion contained as much as 4 per cent. of caffeine and 9·50 per cent. of tannin. There was only 0·1 per cent. of tannin uncombined with caffeine and 0·90 per cent. of caffeine uncombined with tannin. The price of this tea was 1*s.* 10½*d.* per lb. On the other hand, Indian tea at about half the price—11½*d.*—gave 8·73 per cent. of tannin and 3·20 per cent. of caffeine, and there was 1·53 per cent. of tannin not combined with caffeine, and the liquor was accordingly harsh and astringent, although the time of infusion was only five minutes. The same applies to the Ceylon teas; a tea quoted at 1*s.* 4*d.* per lb. yielded no tannin over and above what is combined as tannate, while one tea quoted at 10½*d.* gave 2·02 tannin in excess. The tea at 1*s.* 4*d.* again yielded 3·60 per cent. of caffeine, while the tea at 10½*d.* gave 2·96. Ceylon teas, as a rule, show a more regularly balanced composition as regards the ratio of tannin to caffeine (3 to 1), a finding which would seem to show that Ceylon teas are all that can be asked for from a physiological point of view.

Analyses of Infusions of Various Teas.

Description.	Caffeine tannate determined.	Tannin combined with caffeine.*	Caffeine combined with tannin.*	Total tannin determined.	Total caffeine determined.	Caffeine not combined with tannin.	Tannin not combined with caffeine.	Brokers' price per pound.
								s. d.
Indian.	8·54	6·41	2·13	6·80	2·56	0·43	0·39	7½
,,	8·88	6·66	2·22	5·88	2·22	—	—	8
,,	10·32	7·74	2·58	7·39	2·88	0·30	—	8½
,,	11·48	8·61	2·87	8·41	3·52	0·65	—	8½
,,	13·28	9·96	3·32	9·24	3·70	0·38	—	10½
,,	9·60	7·20	2·40	8·73	3·20	0·80	1·53	11½
,,	12·50	9·40	3·10	9·50	4·00	0·90	0·10	1 10½
,,	13·36	10·02	3·34	10·92	4·32	0·98	0·90	1 10½
Ceylon.	8·88	6·66	2·22	6·30	2·80	0·58	—	8½
,,	9·12	6·84	2·28	7·14	3·04	0·76	0·30	10½
,,	10·40	7·80	2·60	9·82	2·96	0·36	2·02	10½
,,	11·76	8·82	2·94	8·82	2·96	0·02	—	10½
,,	13·28	9·96	3·32	9·66	4·00	0·68	—	1 1
,,	12·00	9·00	3·00	8·40	3·60	0·60	—	1 4
China.	5·36	4·02	1·34	3·02	1·92	0·58	—	6½
,,	5·60	4·20	1·40	4·87	2·72	1·32	0·67	8
,,	7·60	5·70	1·90	5·04	2·72	0·82	—	9½
,,	6·32	4·74	1·58	3·96	2·72	1·14	—	1 1
,,	6·48	4·86	1·62	4·60	2·80	1·18	—	1 5

* Calculated.

When we come to China teas there is again seen to be some relation between price and the percentage of caffeine. A cheap China tea, for example (6½*d.* per lb.), gives 1·92 per cent. of caffeine, while one at 1*s.* 5*d.* per lb. yields 2·80 per cent. China teas, again, rarely yield an excess of tannin, but nearly always an amount of caffeine in excess of tannin, and caffeine appears to occur in China tea with some constituent other than tannin.

BLENDS AND THE BEHAVIOUR OF TEA WITH DIFFERENT WATERS.

So far we have been dealing with individual teas, but we now come to a consideration of blends. The aim of the blender is of course to produce a palatable tea and, more than that, to mix individual teas so that the whole shall be adapted to the peculiar requirements of different public water supplies. In doing this, does he unconsciously produce a mixed tea in which, whatever the drawbacks of the individual teas may be, a balance of caffeine and tannin somewhere near the ratio of 1 to 3 is effected? It is well known to tea experts that a tea which produces a pleasant palatable infusion with London water may easily be uninteresting or even possibly bad when made with, say, a very soft peaty water in Dublin or with the soft-water supplies of Plymouth, Aberdeen, Swansea, and elsewhere. The consumer has the same experience. He will have made up his mind after considerable trial that a certain tea in his judgment is best, at any rate at home. So convinced is he that the tea is a good one that when he happens to travel he will take care to have the same tea with him only to find out that outside his own district at home the tea becomes indifferent. In other words, he has found a tea which associates perfectly with the home supply of water, but which proves to go badly with waters of different quality. Hence the taster will always be careful to select a tea suited to a particular place, and it is invariably his plan to be sure of this by testing the tea with the actual water supplied to the neighbourhood for which the tea is required. It is difficult to see here what guides him in this matter except it be flavour. The probability is that rich teas are more suitable for soft acid waters than for chalky waters. We know, at any rate, that an acid water will tend to neutralise the alkaline salts in tea which keep tannate of caffeine in solution; it would tend to throw caffeine and tannin in the form of tannate out of solution, and so weaken the infusion, whereas chalky water would have the opposite tendency and draw closely upon the available tannin and caffeine which are present in the form of tannate. This is a mere suggestion which may find little support in practice, but so far as we have examined blends deemed to be suitable for certain water the choice appears to be in the direction we have indicated. Thus in a blend intended for consumption in Dublin, where the water is soft and acid from the peat, the total caffeine tannate amounted to 13·20 per cent., the caffeine and tannin being approximately in the 1 to 3 proportion, whereas a tea supplied to districts in Scotland where the water is soft but not acid the total caffeine tannate amounted to 8 per cent., and a tea for Wales, where the water is again soft but not so acid as Dublin water, the caffeine tannate amounted to 10·40 per cent., while the blends supplied for chalky waters showed amounts of caffeine tannate varying from 10·4 to 11·60 per cent.

In all cases it is interesting to observe that the blends showed a near approximation to the ratio of 1 to 3 of caffeine and tannin as in caffeine tannate, and whatever the individual requirements of different districts may be, the taster seems to know when and how a combination of teas will give a satisfactory result. The varying alkalinity of teas may probably be a factor in the case. What exactly lies behind the choice of a tea to suit the requirements of different districts is a theme which is difficult to pursue on merely chemical grounds, for in addition to the varying chemical characteristics of different water supplies, there are colonies of people who collectively like a strong pungent liquor, while there are others who prefer their tea to be light and delicate in character.

The subject is by no means exhausted, but we submit that the foregoing investigation has thrown some new light upon the real character of tea infusion, especially in regard to correlating æsthetic with physiological considerations. We have not concerned ourselves at all with the chemistry of the leaf, but with the chemistry of the cup of tea, and in our inquiry we have been assisted by devising new methods of examination. We hope that other investigators will be induced to approach the subject from this standpoint and append a short description of the analytical methods employed.

METHODS OF ANALYSIS.

The estimation of caffeine tannate.—In all cases the infusion was prepared by taking 5 grammes of tea and pouring upon the leaves just boiling water to 400 c.c. and leaving the infusion to stand five minutes. It was then filtered. For the estimation of caffeine tannate 200 c.c. of infusion was just acidified with dilute sulphuric acid and then saturated with ammonium sulphate and kept cold. The fluid was then filtered and the filtrate kept for the extraction with ethyl acetate of any excess of tannin that might be present, or of caffeine by means of chloroform. [It may be noted that a very rapid method of ascertaining whether tea infusion contains an excess of

tannin consists in saturating the infusion with ammonium sulphate and filtering. The filtrate will contain any tannin present in excess of caffeine tannate which can be extracted by shaking with ethyl acetate separately and evaporating to dryness.] The precipitate in the filter was allowed to dry as much as possible in a current of air. The filter and its contents were then exhausted with a mixture containing 1 part of alcohol and 2 parts of benzene. The extracts were added together and made up to a definite volume (100 c.c.). A known measure of this (25 c.c.) was evaporated upon a weighed amount of lead oxide (approximately 3 grammes), keeping the mixture thoroughly stirred. The dry mass was then made into a paste with water and extracted several times with chloroform. The chloroform, evaporated carefully to dryness, gives the caffeine in the caffeine tannate. The lead residue was then carefully dried at 120° C. and weighed to constant weight. The increase in weight gives the tannin extracted by the lead oxide. Another portion of the benzene-alcohol solution (25 c.c.) is evaporated to dryness to give the total caffeine tannate.

The estimation of total tannin.—We found that good and consistent results were obtained by taking 20 c.c. of the fresh infusion, adding slight excess of bicarbonate of soda and running in N/10 iodine solution until some petroleum ether shaken after each addition with the mixture showed a slight excess of iodine present by the well-known violet colour. The factor for tannin was each c.c. of N/10 iodine used multiplied by 0·0021.

Estimation of the total caffeine.—This was estimated by first slightly acidulating the infusion with dilute sulphuric acid, then boiling with an excess of lead oxide. After half an hour or so a clear pale yellow fluid resulted which filters perfectly, and can then be several times extracted with chloroform, which on evaporation yields caffeine.

PUBLIC HEALTH IN INDIA.

BY the courtesy of the several authorities concerned we have been favoured with copies of the annual official reports on the various departments of public health administration in the Indian Empire; and according to our custom we present our readers with a brief review of the principal topics dealt with. The reports deal with the calendar year 1910, except those referring to hospitals and dispensaries, which refer to the three years 1908–10. To a certain extent such reports must be belated, but their lessons are frequently none the less valuable.

I. SANITARY ADMINISTRATION.

United Provinces of Agra and Oudh.

The vital statistics are, as usual, calculated on the population according to the Census of 1901—viz., 47,691,782, and the ratios, therefore, are probably far from accurate; but no other method is practicable. The birth-rate was 41 and the death-rate 38·67 per 1000, the former being well above the quinquennial average (38·68) and the latter well below it (43·32). The death-rate was, however, higher than in any other province in India except the Central Provinces, and was slightly higher than in 1909. The infantile mortality (227·3) was lower than in any year of the decennium except 1904, when it was the same. This infantile mortality-rate (the death-rate of children under one year, calculated on the births of the year) is a good guide to the general sanitary conditions that exist, and in 1910 special attention was directed to its causes; of these, malaria was found to be the chief, acting both directly on the infant, and indirectly through the mother; after this came insanitary surroundings, ignorance as to feeding, &c., and accidents or diseases connected with parturition. Prophylactic issues of quinine, special attention to sanitation in certain districts, and the distribution of leaflets giving simple instructions as to the feeding and care of infants were the remedial measures adopted.

Cholera was present during the year and visited all the districts, the death-rate reaching 2·15 per 1000.

Plague also increased considerably, causing a mortality of 3·31 per 1000; two districts, Ballia and Azamgarh, were especially affected, and many were entirely free; a scientific inquiry into this special selection of areas has been started by the Plague Research Commission. The fever death-rate, 27·07 per 1000, was less than the quinquennial average (31·02); the highest mortality was in Bulandshahr (35·39) and other districts in the Rohilkhand division; Garhwal (in the hills) with 17·78, and Ballia (18·16) had the lowest figures. Committees have been appointed in the respective divisions to inquire into the reasons for the extreme variation in the incidence of malaria. Meanwhile the use of quinine has been popularised by making use of new agencies for its distribution, and by doubling the commission on its sale. At Naini Tal there again recurred a prevalence of enteric fever. There were 37 cases in all, of which seven were imported; of the remainder, 26 were pupils at St. Joseph's College. The source of infection was definitely traced to the school latrines. In the year preceding there had been a slight outbreak at this school, traced to a carrier employed in the cookhouse. It is now stated that the latrines were situated in close proximity to the kitchen and dining-hall, and that they have been demolished. The authorities must feel much regret that this step was not taken at least a year previously. We note, however, that out of 206 samples of drinking water at this station examined bacteriologically, as many as 84 were reported to be "unsatisfactory." Advances continue to be made in sanitary works throughout the province. It is encouraging to learn that the Benares septic tank and filters are giving good results and that the Fiddian sprinklers are working well. Flushing of drains is now carried out in many of the large cities with excellent effect.

Major J. C. Robertson, the officiating Sanitary Commissioner, refers to the United Provinces Exhibition that was opened at Allahabad in December last. One court was devoted to medical and sanitary science. The exhibits were chosen and arranged so as to be, as far as possible, both interesting and instructive to the general public. The chief prevalent diseases were illustrated by models, diagrams, &c., leaflets were issued, and demonstrations given daily; also sanitary appliances were exhibited. This new departure is likely to be of very great benefit; the mass of the people will much more readily appreciate things seen than things talked about. We look forward to seeing a repetition in other parts of the country.

Punjab.

The statistics relate to the population as recorded at the census of 1901—viz., 20,108,690. The provisional figures of the 1911 census show a decrease of 1·8 per cent. In some districts it is much greater, in Ludhiana amounting to 23 per cent.; in Lyallpur, on the other hand, there has been an increase of 45 per cent. In this district and some others in the neighbourhood the increase has been due to immigration, while in the districts with diminished numbers the decrease has been chiefly due to malaria and plague. The birth-rate is returned as 42·7 per 1000 and the death-rate as 33·28; these figures are satisfactory compared with the quinquennial averages of 41·1 and 45·64. The birth-rate is, indeed, higher than in any other area except the Central Provinces, where it was 55·42. The rise in the birth-rate is a natural sequence of the healthy conditions of 1908–09, and represents the recovery of the people from the malaria and scarcity of the preceding years. The figures are, however, to be corrected by the Census which has taken place during the present year; in certain cases, such as the two just mentioned, this altogether alters the ratios.

The death-rate was 33·28, very much below the quinquennial mean (45·64), this being principally due to an improvement in plague and fever. More than half of this death-rate (17·10) was nevertheless due to fevers, and the plague mortality (6·74) shows a large increase over the two years immediately preceding. Cholera was less prevalent than in the quinquennium, though more so than in 1909; it appeared in the neighbourhood of Simla, but one case only was admitted in Simla itself, and no outbreak resulted. The small-pox death-rate (0·15) was lower than in any year since registration of deaths was introduced. Plague recurred with considerable severity after two years' intermission; it was most prevalent in the Delhi division and in the centre of the Punjab. The principal measures taken to control the disease have been inoculation, evacuation, and rat destruction. As

to the first, Major S. Browning Smith, chief plague officer, reports that it is gradually making headway; evacuation, on the other hand, is unpopular. Rat destruction, in the opinion of the provincial committee, is impracticable on a large scale and should be confined to places where plague persists during the quiescent period; some statistics are given, however, which appear to tell strongly in favour of trapping, but further experience is required. Fever caused a lower death-rate (17·10) than in any year since 1883.

The Delhi suburban drainage-works have made considerable progress, and an extension of the Simla water-supply is in the incubation stage—that is, the estimate of the cost of the scheme prepared in 1904 and approved by Government of India—is "under preparation." Work has been started on the Delhi water-supply extension required for the Durbar.

North-West Frontier.

In this province, with a population (1901) of 1,908,184, the birth-rate was 38·1 and the death-rate 26·9 per 1000. The death-rate is lower than in any other province in India. Colonel W. R. Edwards thinks that probably the deaths are not so accurately recorded as in the other provinces. Cholera broke out in all the districts, Peshawar suffering heavily, where the cool well water, presumably impure, is preferred to the purer, but warm, tap water. The wells were treated with permanganate of potash, which appears to have had a good effect. Colonel Edwards is averse to energetic measures in dealing with cholera, if in opposition to the wishes of the people, when he thinks they are worse than useless; the only thing that can be done is to offer advice and send out cholera pills and stimulating mixtures. With all respect to Colonel Edwards's undoubted experience, we must remark that this is not the policy that commends itself to most sanitarians; the Hardwar fair is a standing example of what may be done by energetic measures when used with discretion. Incineration of refuse is being attempted at Dera Ismail Khan and Peshawar; there are many objections to the method, however carefully carried out. Colonel Edwards's opinion is that the present filth grounds close to the city are a dangerous nuisance, and that the filth should be removed to a distance of about two miles, where land would be available for its useful disposal. This is very sound advice on the general question, and we do not know of any local circumstances at Peshawar to prevent its adoption.

Central Provinces.

The population of these provinces, including Berar, at the Census of 1901, amounted to 11,970,201; the provisional Census figures of the present year show considerable increase. The birth-rate was 55·42 per 1000, being higher than the quinquennial mean (52·33); it was also the highest recorded in the past three decades, and far higher than any other in India, for which as a whole the last five year rate was 38·64 per 1000. The death-rate was 44·88, also an excess over the quinquennial mean of 38·56, and a much higher rate than in any other province. This was accounted for by an infantile mortality rate of 276 per 1000, and by the fact that 56 per cent. of the total deaths occurred in children under 5 years old. Tetanus and capillary bronchitis were responsible for much, but not all of this; training of midwives is already in operation, and the Sanitary Commissioner confesses that "it is impossible to suggest any measures which would check this enormous death-rate in the near future." Fevers have been more prevalent during the year, and a special malaria officer has been appointed to study the conditions that prevail. With regard to plague, which broke out in the previous year, there was some extension of the area affected; the death-rate was 2·42 per 1000. The usual measures were adopted: evacuation, rat destruction, and disinfection. Some remarkable results are given by Captain Morrison, the special plague officer, as to the efficacy of inoculation. Out of 113 persons living in 27 houses in 11 villages 68 were inoculated, of whom none died; 45 were not inoculated, and of these 42 died. During the year separation of the sanitary from the medical department took place. The sanitary report is presented by Captain T. G. N. Stokes, I.M.S.

Burma.

The population of Burma in 1901 was 8,543,753. Calculated on this basis the birth-rate was 36·04 and the death-rate 28·13 per 1000 in 1910, the former being slightly higher and the latter slightly lower than the average. The birth-rate is lower than in any other province except Madras (33·6), but the Burma statistics are admittedly not to be depended on. The infantile mortality (under one year) was 233·24 per 1000 births. The causes of this were investigated at Mandalay, where 60 per cent. of the deaths were found to be from preventable causes, such as tetanus, bronchitis, pneumonia, premature birth, and malnutrition. At Bassein a similar inquiry was made, and 85 per cent. were found to be due to diseases of the alimentary tract, wasting diseases, and marasmus—i.e., improper feeding. At Maymyo the number of deaths at one year was actually 63 out of 104 births—i.e., 594 per 1000; no explanation is afforded. Five other towns had an infantile mortality above 400 per 1000. This terrible waste of life appears to be on the increase year by year, but it must be admitted that the registration of births is defective. The total death-rate was 28·13, the principal causes being fevers (9·37), dysentery and diarrhœal diseases (1·05), and plague (0·91). The fever death-rate was slightly above the average, and was highest in Thyetmyo (19·06). It is pointed out, however, that the heading "fever" merely means the total number of deaths minus a certain number returned under the few remaining headings given in the form. Plague prevailed in nearly all districts throughout Burma, but was not severe, the highest mortality being 0·42 per 1000 in the district of Amherst, Tenasserim. Active measures were taken throughout the province by disinfection, evacuation, inoculation, and rat destruction. Experience showed that evacuation and inoculation were successful. Trapping of rats answered in small, but not in large, towns; rat driving was found to be expensive, and only of use as a temporary expedient; other measures found to be successful were reduction of the rat harbourage and food-supply. Beri-beri has been inquired into during the past year. It prevails amongst the lighthouse keepers and crews of lightships. In 1909 there were 70 cases, in 1910 only 37. From May 1st, 1911, arrangements have been made for the supply of cured rice only, the results of which change will be watched with interest. Observations on the same disease are also being carried out at certain schools in Bassein, which will be reported later.

(To be continued.)

THE next holiday course of the Berlin Dozenten-Vereinigung will be held from March 4th to March 30th, 1912. The prospectus of the course may be obtained gratis on application to Herr Melzer, Ziegelstrasse, 10/11 (Langenbeck Haus), Berlin.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.—The annual festival dinner of the Victoria Park Hospital was held on Nov. 22nd, at the Hotel Métropole, under the chairmanship of Mr. Andrew Motion, who for many years has been a prominent supporter of the hospital. A large company was present, and the evening was a great success. The chairman was supported, among other friends of the institution, by Sir G. W. Truscott, Sir Edward Coates, M.P., Sir Henry Burdett, Sir M. Bhownagree, Mr. C. G. Marsham, the Mayor of Bethnal Green, and by Dr. E. Clifford Beale, Dr. T. Glover Lyon, and other members of the medical and surgical staff. There were also present a large number of representatives of the various working-men's associations which take an active interest in the work of the hospital and collect money for its support. The chairman, in proposing the toast of "The City of London Hospital for Diseases of the Chest," announced that the sum of £3000 which was urgently needed had been subscribed during the evening. He said that the working men of the district were the backbone of the institution, and that their support was one of its principal assets. His appeal for more subscriptions to the hospitals to save them from nationalisation aroused great enthusiasm. The secretary, Mr. G. Watts, then read the list of recent subscriptions, which amounted to more than £3115, and included £890 from working men. Sir Edward Coates proposed the health of the medical staff in an eloquent speech, and Dr. Glover Lyon replied. The chairman's health was proposed in warm terms by Mr. Herbert Robertson.

THE NEW BOTANICAL LABORATORIES OF THE UNIVERSITY OF MANCHESTER.

THE new botanical laboratories of the University of Manchester were opened on Nov. 3rd by Dr. D. H. Scott, Director of the Jodrell Laboratory at Kew, who was a friend and fellow worker of the late Professor Williamson, whose work on fossil plants from the coal measures placed him in the foremost rank of fossil botanists. The bequest of the late Professor Barker for the foundation of a chair of cryptogamic botany, in addition to the steady growth of the botanical department as a whole, made it necessary for the council to provide suitable accommodation for this subject. At a cost of £12,000 a new block has been erected on the University site, with a north frontage for microscopic work. The building has four main floors and two mezzanines and is a square block 40 ft. by 40 ft. There is a special room for palæobotany on the ground floor. On the same floor is a laboratory for 30 junior students connected directly with the large elementary laboratory which accommodates 40 more students. There is on the first floor a research laboratory, with 40 ft. of north light for microscopic work and places for the workers. The second floor is devoted to cryptogamic botany under Professor W. H. Lang, as well as to investigations in connexion with plant diseases. On the third floor is the laboratory for plant physiology. On the top of the building are greenhouses and other arrangements for the study of plant life. This new block is entirely devoted to laboratory accommodation and does not contain any lecture rooms or museum galleries. On the Behrens estate, some little distance from the University, there are experimental grounds and greenhouses for economic botany. Over the main entrance is a Latin inscription which is an extract from the *Benedicite* of the Prayer Book: "O all ye green things of the earth, praise ye the Lord"—a motto suggested by the architect, Mr. Paul Waterhouse.

Dr. Scott in his address at the opening of the laboratories called attention to the fact that during the 60 years that had passed since the foundation of Owens College there had been only two professors of botany, the first being Professor Williamson and the second Professor F. E. Weiss, the present holder of the chair. Dr. Scott spoke of the many-sided character of Professor Williamson—as a medical practitioner, a botanist, a vigorous and successful lecturer both in the class-room and on public platforms, as an aurist, and above all as a great scientific investigator, especially in a domain which he made his own—viz., fossil botany—and thus brought home to scientific people the importance of those fossil remains which showed structure. Dr. Scott said that besides training medical and science students, the department would offer facilities for students from an agricultural college, and no doubt would do its best to throw light on agricultural problems. All the resources of science would be needed to make agriculture remunerative, not to the big farmer alone, but, what was as important, to those who had the actual work to do with their own hands. We are able to present our readers with two views of the new laboratories.

FIG. 1.



New Botanical Laboratories, University of Manchester.

INFANTILE MORTALITY IN ISLINGTON.

Meteorological Conditions.

THE almost unprecedented persistence of fine weather and high temperature during the present Coronation year, that contributed so much to the success of festivities of all kinds and the enjoyment of all classes, has had, as was to be expected, another aspect in the serious increase of infantile mortality in London. Laertes tells us that "the canker galls the infants of the spring," but it is the infants of the summer that die off most quickly. From the last week in June until the middle of September the shade temperature, as recorded in THE LANCET office, reached 70° F. or more on every day but three; temperatures in the "eighties" were very frequently recorded, and five times in July and August the shade maximum exceeded 90°. In the previous year a shade maximum of 70° to 77° was only reached about 20 times from the middle of July to the end of September. The effect of the great elevation of temperature has naturally been seen in a rise of the diarrhœal death-rate in children under two years old during the third quarter of the year; the deaths in London from this cause, which numbered 58, 239, and 342 in the months of July, August, and September, 1910, rose to 276, 2666, and 1369 in the same three months of the present year; these last figures correspond to an (annual) infectious disease death-rate of 1·3, 6·6, and 4·4 per 1000 for these three months severally, the diarrhœal deaths constituting by far the largest proportion of the total deaths from infectious diseases. The boroughs that have been most affected have been Poplar and Bethnal Green, which had infectious disease death-rates of 11·9 and 11·8 respectively in August.

Report of Medical Officer of Health.

Mr. A. E. Harris, whose report for the year 1910 as medical officer of health of Islington we dealt with in our issue of Nov. 18th, p. 1423, has addressed a special report to his health committee on this matter, which we trust will be taken seriously into consideration by the whole council. He points out that actually more than one-fifth of the infants born in the borough within the year have died—viz., 407 out of 1989—the chief causes being diarrhœa, dysentery, and enteritis, generally of the epidemic form. In the sub-districts of Lower Holloway and Barnsbury the infantile mortality rate was as high as 268 and 297 per 1000 respectively. If the breeder of horses, cattle, or sheep were to lose 20 per cent. of his foals, calves, or lambs, a commission of inquiry would be instituted by the Board of Agriculture to examine into the causes of such a disaster, and when these had been found the application of a remedy would be insisted on. With regard to the deaths of infants, advice is tendered by the Local Government Board, but, as Mr. Harris says, no authority insists that it should be taken.

As to the causation, this is pretty generally known. A special inquiry was made as to the feeding of the 201 infants who died under one year. Only 19 were breast-fed; that is, 182, or 90 per cent., were hand-fed, a circumstance which throws a ghastly light on the cause of the mortality. Now, investigations that have been made in several towns—e.g., Derby—show that, speaking generally, from 60 to 80 per cent. of the infants born are breast-fed, so that it is only from 20 to 40 per cent. of the mothers that require to be induced to suckle their children; in Islington Mr. Harris estimates that the proportion is not more than 30 per cent.; these are the people to be got hold of and instructed. He believes that they are mostly in good health and capable of

FIG. 2.



Laboratory for Plant Physiology, third floor, University of Manchester.

nursing their infants; from inquiries made it appeared that of the mothers of the infants that perished, 63 per cent. were in robust health and 14 per cent. moderately strong, so that 77 per cent. might have nursed their infants, if they had wished, unless obliged to go out to work; only 45, however, of the 201 mothers had any occupation away from their own houses.

The excessive infant mortality this year has been in marked contrast with the healthiness of the third quarter of last year, when the rate in Islington was only 67 per 1000 births. This was on account of the very moderate temperature, the comparative freedom from dust, and the absence of flies that marked the summer of 1910. In 1911 the conditions have been very different; the mean temperature was 5·1° and the highest daily temperature 7·9° above the decennial mean; the rainfall was 3·42 inches below the mean, and the registered sunshine 284 hours in excess. This last element, however, in the meteorological conditions Mr. Harris calls "the saving factor of the quarter," as it doubtless destroyed much bacterial life. To complain of unprecedented heat in a report which also contains praise of excessive sunshine is, of course, only an apparent contradiction, for while sunshine has heat for one of its results, it has other effects, and the germicidal quality must be sought in these, not in the heat.

The Remedy Proposed.

The remedy advocated by the medical officer, by which this excessive infant mortality may be checked, is the employment of health visitors; there is now a large body of testimony as to the value of their work from several points of view. Mr. Harris earnestly recommends that at least three should be appointed to deal with infant sickness and to assist in other directions on points of personal hygiene. We regret to learn that the health committee of the borough council has not taken its medical officer's advice, though it was so far impressed by the statistics furnished, and the facts laid before it, as to instruct him to prepare a memorandum on the dangers of artificial infant feeding and on the extreme importance of breast feeding, this memorandum to be forwarded to the mother of every newly born child. This is better than nothing, but we do not consider it as in any way a satisfactory substitute for the first-hand instruction and personal influence of the health officer.

BRITISH MEDICAL ASSOCIATION:

SPECIAL MEETING OF REPRESENTATIVES.

A SPECIAL meeting of the Representative Body of the British Medical Association was held on Thursday, Nov. 23rd, and Friday, Nov. 24th, in London at the Connaught Rooms, to consider the report of the Council on the National Insurance Bill as amended in Committee of the House of Commons, and to discuss the future action of the Association during the last stages of the Bill and thereafter.

The meeting of the Representative Body was not open to the press, and we are much indebted to the executive of the Association for courteous permission to publish the following account of what took place at this important meeting from the pen of one of our editorial staff to whom admission was granted.

The representatives sat from 10 A.M. until 8 P.M. on Thursday, and from 9.30 A.M. until 5 P.M. on Friday, and every point received the closest attention of all present. It was generally recognised that the decisions arrived at during this meeting would have the most far-reaching consequence to the medical profession, and the gravity of the position was obviously plain to an assembly imbued with a sense of the importance of the occasion and conversant with the details of the measure under discussion.

PROCEEDINGS IN COMMITTEE.

Shortly after the disposal of the more formal items on the agenda paper on Thursday morning the meeting resolved itself into committee, and the deputy chairman of representative meetings, Dr. R. C. Buist, was called to the chair in order that the chairman, Dr. E. J. Maclean, might be free to speak and to move official resolutions. Dr. Buist proved himself to be an admirable chairman in circumstances requiring a high degree of tact, discernment, and knowledge.

It was well known beforehand that a number of representatives, particularly those from the northern counties, had been instructed by their divisions to advocate the rejection of the Bill in its present form by the medical profession, and to advise the immediate cessation of all further negotiations by the Council of the Association. This attitude was reflected in many speeches and proposed amendments. But the general sense of the meeting—largely guided by temperate counsels from the leaders of the Association—was against premature and violent action. It was pointed out that everything was to be lost and nothing to be gained by utilising the "strike weapon" at the present moment, whilst the Bill is still under consideration by Parliament, and before the profession has tried its utmost to shape it into a satisfactory form.

Although there was this wide difference of opinion upon the action that should be taken by the Association, it was quite obvious that all the representatives were agreed that the Bill in its present form was entirely unsatisfactory to the medical profession. From the beginning of the meeting discussion centred itself around the difficult question of immediate action: whether the profession should refuse service under the Bill forthwith, or whether the Association should continue its efforts to amend the Bill up to the last moment.

The business on Thursday included the reception of the Council's report to the divisions upon the position of the profession under the amended Bill. The report of the action taken by the Council since the annual representative meeting in July at Birmingham was also considered, and important correspondence with the Chancellor of the Exchequer arising out of this report was read.

CORRESPONDENCE WITH THE CHANCELLOR.

In reply to representations of the Association that the recent increase in size of the Local Insurance Committees, without provision for any corresponding increase in the number of medical members of such committees, was prejudicial to a friendly reception of the National Insurance Bill by the medical profession, the Chancellor stated that under the Bill the Commissioners have full power to nominate a larger number of medical men where circumstances render it expedient. He further stated that in the case of the large committees it was intended to exceed the number which the Bill at present obliged the Commissioners to appoint. The Chancellor considered that the Bill provided for medical representation on the Auxiliary Committees, and stated that the powers given would be used.

The Chancellor promised to amend the Bill in such a way as to facilitate the supply by medical men of medicines and appliances.

It having been represented to the Chancellor that combinations might be made under the Bill whereby medical men might be employed at a lower rate than that locally paid by an Insurance Committee to practitioners on the local panel, the Chancellor considered that the temptation for making such combinations did not exist under the Bill, inasmuch as any saving effected out of the apportioned moneys would be credited to the Insurance Committees and not to such combinations.

To a submission from the Association that provision should be made for compensation to medical practitioners who may be proved to incur loss in the value of their practices through the operation of the Bill the Chancellor made no reply.

Mr. Lloyd George said that he would propose an amendment to secure that in each case at least one Insurance Commissioner for Scotland, Ireland, and Wales should be a medical man, as is provided in the case of the English Commissioners.

In the leading article on the National Insurance Bill in the last issue of THE LANCET it was assumed that the proceedings of the Representative Meeting would be arduous, protracted, and important. This forecast was fully justified. It was based as much upon the direct indications which had reached us of the feelings and intentions of the various sections of the profession as upon our knowledge of the Council's report and of the recommendations which it proposed to lay before the Representative Body. For the greater part of both Thursday and Friday the Representative Meeting remained in committee. The committee stage concluded on Friday at luncheon-time, and the Representative Meeting then resumed and adopted in quick succession various important resolutions which had been passed by the members in committee.

THE RESOLUTIONS ADOPTED.

These resolutions, among other points, reaffirmed the Association's insistence upon the six cardinal principles of

its declared policy being adopted; pressed for the deletion of the Harmsworth amendment; declared that the actuarial estimate of 6s. per head was inadequate; urged that at least one-tenth of the members of Insurance Committees should be medical practitioners, and that there should be corresponding medical representation upon auxiliary committees; pressed for the appointment of medical men as Insurance Commissioners for Scotland, Ireland, and Wales, for the restoration of medical benefits in the case of Ireland under the same conditions as in England, and for adequate provision for institutional treatment for insured persons. The Representative Body also approved the action of the Council in asserting the right of medical practitioners to provide drugs and medical appliances to insured persons, but not at an inclusive fee.

The declaration of insistence upon the six cardinal points, proposed by the Council and approved and extended by the meeting, must be quoted in full:—

That the Representative Body declare the determination of the Association to insist upon the arrangements made with medical practitioners for giving attendance and treatment to insured persons being consistent with the six cardinal principles formulated and approved by the Representative Meeting of June 1st, 1911, and confirmed by the Representative Meeting, Birmingham, in July, 1911; and that a copy of this resolution be sent forthwith to the Chancellor of the Exchequer and the press, and to each Member of Parliament, through both the head office and the honorary secretaries of divisions; and that steps be taken to ensure that the Chancellor of the Exchequer be informed of the declaration in the House of Commons itself.

It was unanimously agreed on Thursday that this recommendation of the Council (as amended) should be placed first amongst the resolutions passed by the Representative Body.

The final "Declaration with Regard to Future Action as to the Cardinal Principles" must also be quoted in full:—

That in the event of the Insurance Bill becoming law the British Medical Association use every possible means to ensure that no medical practitioner undertake the medical attendance and treatment of insured persons under arrangements that are not absolutely in accordance with the six cardinal principles of the policy of the Association.

In support of this latter momentous resolution the Chairman of Representatives, Dr. Maclean, made an impressive speech, which amounted to a defence of the council's action and an appeal for fair play. He urged the Association to trust in its own strength and in its leaders, and he denied indignantly that there had been any compromise between the Council and the Government. He suggested that it would be disastrous for the profession at the present stage to wash its hands of the Bill and cease to press for amendments. In his belief the resolution was intended to focus the strong determination of the Association to realise its fixed policy, whether by means of present representations made to the Government or in the future by standing out in part or in whole from working under the Bill. The Chairman of Council, Dr. J. A. Macdonald, followed with a short and vigorous justification of the action taken by the leaders of the Association. He deprecated the suspicions which had lately been manifested in various quarters, and he put it to the meeting that in the difficult and unprecedented circumstances arising under the Bill he and his colleagues had not been taken unawares. More than a year ago they had gone into the question of State insurance. They had done all that could be done, and would yet achieve success, provided that they had behind them the loyal and undivided support of the Association. Again, later in the proceedings Dr. Maclean dealt with the rumours and suspicions and hints of disaffection which had been ventilated by certain representatives. His indictment of these signs of discontent made a deep impression upon the meeting, and his final appeal for confidence in himself and in those who were working with him was received with great enthusiasm. The final resolution carried by the representative body was:—

That preliminary consideration should be given to the organisation of the profession for the purpose of protecting their interests under the Insurance Bill, and that in order to prevent sectional defeats of the profession through terms having to be arranged locally between Local Insurance Committees and the profession, the Association take such steps as to secure: (*a*) That the Local Medical Committees throughout the country be kept in touch with one another through the central office of the Association; and (*b*) that no arrangements for attendance on insured persons be completed anywhere until the Association is assured by reports from the Local Medical Committees that terms in conformity with the policy of the Association *in detail* have been agreed upon everywhere.

Before the meeting closed its arduous and responsible task warm appreciation was expressed to the executive officers of the Association, including the editor of the *British Medical Journal*, for all their devoted work, and the concluding vote of thanks to Dr. Maclean was carried with loud acclamations.

THE NATIONAL INSURANCE BILL.

THE MEDICAL PROFESSION IN EDINBURGH AND THE INSURANCE BILL.

DURING the past week the profession in Edinburgh has been largely absorbed in the questions arising out of the Insurance Bill, which has passed through Committee of the House of Commons without having been altered as the profession had demanded. On Tuesday, Nov. 21st, the Edinburgh and Leith Division of the British Medical Association held a large meeting under the chairmanship of Dr. JAMES RITCHIE, and the meeting was unanimous in reasserting the six original cardinal points, while it further expressed unanimously disappointment at the tone of the report on the Bill of the Council of the Association as it at present stood. The correctness of this second opinion has been shown by the action of the Representative Meeting in London passing the newly-worded and strong resolutions on Friday last (Nov. 24th) after long debate.

On Wednesday, Nov. 22nd, a meeting of the Edinburgh and Leith Medical Practitioners' Association was held in the hall of the Royal College of Surgeons. The chair was occupied by Dr. ALEXANDER JAMES, and there was a very large gathering of the local profession.

The secretary, Dr. JOHN M. BOWIE, read a letter from Mr. G. A. Berry, President of the Royal College of Surgeons, in which he said: "My feeling is that the whole profession is bound to make the most determined effort to resist a scheme of legislation which, however beneficent in theory, seems calculated to degrade it, and therefore react unfavourably on the public. It was bad enough to introduce a measure affecting our profession as it would do, without adequate consideration of the conditions under which it could be carried into effect. Now that definite representations have been submitted practically unanimously by the profession, it is little short of an insult to the profession as well as to the public."

Dr. JAMES said they met at a time when they recognised that the real relationship of their profession to humanity was being endangered, and when all they regarded highest, as disciples of the healing art, was being threatened. Why was it, he asked, that this Bill, which promised such beneficial results to a large number of their fellow men and gained for itself the approbation and support of so large a public—why was it received by the medical profession in a spirit of aloofness, rapidly widening into open hostility? The answer was simply because, whilst the general public believed that this Bill would be able to perform all that it promised, the medical practitioner recognised that it was promising what it would not carry out. He felt that it would be unfair to themselves and to the community as a whole if he did not advance the claims of the medical practitioner to special fitness in estimating the value of this Bill in other aspects as well as those which were purely medical. In his daily intercourse with feebleness, suffering, and disease, the practitioner had every opportunity placed before him of interpreting the onset of bodily ills in the light of the social ills of humanity as a whole, and no one better than he could value the influence which successive Acts of municipal and State legislation had been exercising on those social ills. But no one knew better than he that there were limits to this State interference, and practically all of them there that night had years enough and experience enough to enable them to form a judgment as to the real value of the philanthropic and socialistic legislation which the last two or three decades had brought forth, and of which this Insurance Bill was to be regarded merely as the latest instalment. Recognising that, as all political economists had pointed out, the majority in any community must always be formed of the inferior, the practitioner in medicine could discern that the more readily such legislation commended itself to the majority, then with the least ultimate benefit from it accruing to the community, there would be the greatest immediate benefit accruing from it to the philanthropic legislators themselves. Philanthropic legislation was far too often the worst kind of legislation, because it tended to bring out the worst, both in those who made the law and in those who had to obey it.

Dr. JAMES SMITH, a well-known worker in the east side of the city and a member of the School Board, who said that he

was of the same shade of politics as Mr. Lloyd George, submitted the following resolution :—

That this meeting resolves that no medical practitioner ought to accept office under the National Insurance Bill if passed into law in its present form.

Professor F. M. CAIRD heartily supported the motion and the position the profession were taking up.

Dr. ROBERT ROBERTSON, who is a member of Edinburgh town council, moved the second resolution :—

That a pledge be given by each medical practitioner in the Edinburgh area that he will not accept office under the Bill if it becomes law in its present form.

This was seconded by Dr. A. LOGAN TURNER, who further proposed that a message should be sent to Lancashire and Cheshire : "United, we stand with you."

Dr. E. F. ARMOUR moved the third resolution :—

That each medical practitioner in the Edinburgh area binds himself not to accept any kind of appointment under the Insurance Act, unless the terms of such appointment have been approved by a local representative medical committee.

This motion was warmly supported by Dr. G. A. GIBSON, who said they were going to boycott the Act and all its doings. If the Bill became an Act in its present form it meant that the profession would be reduced to little better than the level of Poor-law inspectors, and the medical work of the past would become null and void.

Dr. W. ALLAN JAMIESON, Vice-President of the Royal College of Physicians, and others addressed the meeting. It was determined to send a copy of the resolutions to the Chancellor of the Exchequer and others. Dr. W. Craig, of Fife, who was on his way to London to attend the Representative Meeting, was asked to convey the resolutions to that body. All the propositions were carried with acclamation and the meeting was one of the most enthusiastic which has been held.

IMPORTANT MEETING IN GLASGOW.

Defending Rights and Privileges.

A meeting of the Fellows and Licentiates of the Royal Faculty of Physicians and Surgeons and of members of the medical profession in the city and district was held in the Faculty Hall, St. Vincent-street, Glasgow, on Saturday, Nov. 25th, for the purpose of considering a report by the Council of Faculty on the National Insurance Bill. Dr. JAMES A. ADAMS, President of the Royal Faculty, occupied the chair, and there were above 200 medical men present.

The CHAIRMAN said that the Insurance Bill had been so juggled with and changed that they really did not know where they were, and they had a dread that they might be jockeyed into a position which would be difficult to get out of. The Council had therefore determined to formulate certain resolutions which he would submit to the meeting. The first resolution which he moved, in the name of the Council, was as follows :—

That the Insurance Committee should include a representation of duly qualified medical practitioners to the extent of one-eighth of the total number and adequate representation on the auxiliary committees.

Dr. JOHN BARLOW, in seconding, said that many of the points to which medical men attached importance were left for final decision to the Insurance Committees. These would be formed in each county or burgh in Scotland. He was in favour of the Bill though opposed to contract practice altogether, but he thought they were all in agreement that a proportion of three medical practitioners out of 48 or 80 members, as the case might be, was not adequate. The proportion suggested by the resolution would ensure the medical point of view being brought forward fairly.

Dr. J. MCGREGOR ROBERTSON and Dr. J. HAMILTON suggested the desirability of discussing the question of approval or non-approval of the principle of the measure before dealing with details. Dr. Robertson thought that the members should be asked to say "whether they approved of chaining round the neck of the profession for ever the abominable system of contract practice."

The CHAIRMAN desired the public to recognise that while they made this protest they were doing all in their power in a courteous and tolerant manner to consider the scheme and to do the best they could with a bad bargain. Registering pious opinions would not stop the Bill from passing. He thought they should deal with the resolutions before them first.

The resolution was then approved.

The CHAIRMAN then moved the second resolution as follows :—

Wherever a voluntary hospital or other charitable institution is used by the Insurance Committee, adequate payment for the maintenance and treatment of the patient shall be made to such voluntary hospital or charitable institution by the Insurance Committee.

Professor J. GLAISTER, in seconding, reminded them that contributions of workmen and their employers in Glasgow formed practically two-thirds of the whole revenue of the hospitals, and were it not for the bequests from which deficiences in annual expenditure were made up the hospitals in Glasgow would be bankrupt. If the workmen's and employers' contributions were withdrawn, as they probably would be on the passage of the Bill, the hospitals would lose their power to afford charitable relief to those who required it. He thought, however, that at present they should continue the voluntary organisations as long as possible, and he strongly supported the resolution on the ground that if people were to be taxed for the funds under the Bill, when they required hospital treatment they should pay the corresponding proportion of the cost which they laid upon the hospital fund, and that fund should come from the local Insurance Committee.

Dr. MCNICOL moved a direct negative, and the amendment was carried.

The third resolution, moved by the CHAIRMAN and amended by Dr. HAMILTON, was as follows :—

That this meeting is of opinion that the other recommendations contained in the six cardinal points of the British Medical Association not included in the preceding resolution should be incorporated in the Bill.

This was carried.

Dr. ROBERTSON said that before that resolution was approved he would submit the following motion :—

That while this meeting approves of the amendments in details submitted on behalf of the profession by the British Medical Association, if the Bill is forced through more or less in its present form, it does not approve of the method of dealing with the profession which is at the foundation of the medical provisions of the Bill.

The Bill, he said, was contract practice writ large, with, besides, the stamp of the Government, of Parliament upon it, and while at any moment the medical profession, in any body or as individuals, could destroy, if they chose, medical contract practice as it existed, if they permitted this Bill to pass they would never destroy it, but would be riveting it round the neck of the profession for ever.

The resolution was carried.

On the motion of Dr. PERRY, seconded by Dr. DUNCAN, the meeting agreed unanimously to the following resolution :—

That in the event of the Insurance Bill becoming law without the amendments recommended by the British Medical Association, this meeting shall endeavour to ensure that no medical practitioner shall submit to the rules under the Bill.

A resolution was also carried as follows :—

That the foregoing resolutions be forwarded to the General Medical Council, the Prime Minister, the Chancellor of the Exchequer, and the Members of Parliament for the city of Glasgow.

ABERDEEN AND DUNDEE: THE MEDICAL QUESTIONS OF THE NATIONAL INSURANCE BILL.

The clerk and treasurer of the Aberdeen Royal Infirmary has sent a letter in the following terms to the local Members of Parliament :—

National Insurance Bill.

I am requested by the directors of Aberdeen Royal Infirmary to communicate to you the following resolution which was unanimously passed, (1) on 2nd instant, by the council of the British Hospitals Association; and (2nd) on 10th instant, by a large and representative meeting of hospital managers and administrators held in Glasgow, viz. :—

"That the National Insurance Bill is incomplete unless it provides for the hospital treatment which insured persons must have if their medical needs are to be covered by the Bill."

The directors fully concur in the resolution. They are of opinion that in omitting provision of hospital treatment for insured persons the Government has failed to realise the serious position in which such persons will be placed. It is certain that many of them will require medical and surgical treatment which cannot be rendered to the best advantage otherwise than in hospital, and yet the fact that they will be statutorily provided with sick and medical benefit, will in itself—under the constitutions of most of the voluntary hospitals—disentitle them to receive free treatment and maintenance in those institutions. In these circumstances the directors trust that you, along with your fellow Members of Parliament, will give this matter most serious consideration, with the view of, even yet, having this grave defect in the Bill rectified. I am further desired to say that the directors regard with great apprehension the possible effects of the Bill, if passed in its present form, upon the financial interests of the hospital.

The directors of the Dundee Royal Infirmary have forwarded a copy of the same resolution to the Members of Parliament for Dundee, Montrose Burghs, East Perthshire, East Fifeshire, and St. Andrews Burghs. To this the following communication has been appended:—

The directors (of the Dundee Royal Infirmary) are of opinion that the passing of the Bill in its present form will have such an effect upon the finances of this hospital that its work among the sick and hurt poor of the city will be greatly crippled. Over a fifth of the whole income of the institution is derived from contributions from the employees in mills, factories, and workshops, who will be insured persons under the Act, and from the personal knowledge of the directors they are satisfied that these contributions, as well as those of employers, will, if not altogether, at least to a large extent, be withdrawn upon the passing of the Act. The necessity for being able to give effective hospital treatment in a city such as Dundee is evident, when it is taken into account that the accommodation in the houses of large numbers of the population does not admit of their being properly attended to at home when serious illness overtakes them. If, therefore, the infirmary be not as available as in the past the workers would be the first to suffer. With regard to the maternity benefit, the directors would point out that the Dundee Royal Infirmary includes the Dundee Maternity Hospital, in which 370 indoor and 890 outdoor patients were attended last year. If it be decided that the indoor patients in a hospital are to receive the maternity grants for the upkeep of their homes during the four weeks of their inability to work it would seem reasonable that some arrangement should be made by which an allowance might be given to the hospital during their residence therein. The directors trust that you will give favourable consideration to any amendments which may be proposed for the provision of hospital treatment when required by insured persons, and that you will join in supporting such amendments.

A meeting of the medical practitioners in the area of the Aberdeen Division of the British Medical Association was held on Nov. 22nd. There were over 100 medical men present, and after a full discussion all the recommendations of the Council of the Association were unanimously and enthusiastically adopted, and the following resolution passed:—

That this meeting resolves that unless the Bill be so amended as to satisfy the medical profession in reference to the six cardinal points the profession refuse to work under the Bill.

At a meeting of the Dundee Branch of the British Medical Association the following resolution was passed:—

That the branch express its dissatisfaction with the National Insurance Bill as it now stands, and declare its determination not to undertake service under the Bill unless our cardinal points are granted.

Both the Aberdeen and the Dundee resolution were forwarded to be read at the meeting of Representatives of the British Medical Association in London.

THE QUESTION OF MEDICAL BENEFITS IN IRELAND: AN APPEAL TO MR. REDMOND.

In a letter addressed to Mr. Redmond by Mr. J. Smith Whitaker on behalf of the British Medical Association and the Irish Medical Association sets out the opinions of the Irish medical practitioners as to the provision of medical benefits under the Insurance Bill in Ireland. It is argued that if the Bill applies to Ireland at all the medical benefits given should be on the same terms as in Great Britain, though adjustment may be necessary to meet the case of the Irish Dispensary Medical Service. The Irish medical profession, it is stated, now withdraws any demand for a rate of remuneration to be fixed in the Bill, and will accept the view "that the terms of remuneration must depend entirely on the amount and nature of the work and other conditions of service." The well-reasoned letter considers the attitude of the Chancellor of the Exchequer, in having excluded Ireland from medical benefits, to be due to political expediency, and urges Mr. Redmond to remember the grave defects in the existing Irish Dispensary Service.

THE CONJOINT VIEW OF THE BRITISH AND IRISH MEDICAL ASSOCIATIONS.

At a meeting of the Conjoint Committee of the British and Irish Medical Associations, held last week, the following resolutions were passed:—

This Conjoint Committee approves of the restoration of medical benefit for Ireland, and on behalf of the profession in Ireland are prepared to accept the Bill under the same conditions as in Great Britain. We protest against the compulsory imposition of any duties under the Act on the Poor-law medical officers. It should be the object of wise statesmanship to emancipate the industrial classes from the Poor-law with the degrading effects on their moral and self-respect that come from charitable relief. Medical benefits administered on the conditions we desire would go far to accomplish this.

We strongly deprecate any suggestions that it is the duty of the profession, either as a whole or by any section of its members, to draft the scheme by which medical benefit may be applied to Ireland. The Irish professions are not more unreasonable than their English brethren, and we are convinced that if the same terms are offered in Ireland as in England they will be accepted. As Irishmen we protest against any attempt to treat Irish doctors with less justice and fairness than English doctors are treated under the Bill; we also protest, and if possible more strongly, against the imputation that in making our demands we are actuated by greed, rapacity, or a desire to wreck the Insurance Bill. This committee offers to afford any assistance in its power in consultation with any Members of Parliament or others who in an official capacity are concerned in formulating proposals for the restoration of medical benefits to the Bill.

THE FEELING IN NORTHERN IRELAND.

At a meeting in Londonderry on Nov. 22nd of the medical practitioners of the North-West of Ireland, the following resolution was unanimously passed:—

That we, the doctors of Londonderry and Donegal, are of opinion that the medical benefits under the Insurance Bill should be extended to Ireland on the same terms as may be acceptable to the profession in England.

The Belfast Trades Council has issued a circular, which has been forwarded to local trades unions, Irish trades councils, and public health authorities, strongly protesting against the exclusion of medical benefits from Ireland. A deputation, it is said in this document, representing 60,000 trade unionists, waited on Mr. Lloyd George at the House of Commons, and protested against the exclusion of Ireland from medical benefits, and the trades councils of Dublin, Limerick, and Belfast have constantly been urging the retention of Ireland under the full scheme. "The proposed exclusion," the circular says, "is to be made in favour of the Irish dispensary system, which, as you are aware, is controlled by medical men who have gained their experience in workhouses, and are appointed by boards of guardians, who are usually influenced in their selection by reasons entirely unconnected with the humane character or ability of the candidates. If this system, condemned by all recent investigation, is not good enough for England, Scotland, or Wales, why should the Irish party or Mr. Lloyd George consider it good enough for Ireland? We believe the dispensary system tends to perpetuate pauperism and degrades the Irish people." In this document it is also urgently pressed that unemployment insurance should apply to Ireland, with all fair and necessary modifications to suit the agricultural portion of the people. It is also suggested to hold public meetings and press Parliament on these lines.

It is clear now that the profession in Ireland wish for the inclusion of medical benefits on the same conditions as in England, for they see that unless this is done the alternative is club practice of the worst kind, but whether this will be allowed seems to depend on which politician has his way among the Nationalist Members. The abuse of the hard-worked dispensary medical officers should not have been published.

THE NATIONAL INSURANCE BILL AND THE HOSPITALS OF LONDON.

At a meeting of the Central Hospital Council for London, held at St. Thomas's Hospital on Nov. 23rd, the effect upon the voluntary hospitals of the passing of the National Insurance Bill as it stands at present was considered, and it was unanimously agreed—

1. That the effect upon the voluntary hospitals must be to diminish their income very seriously, and consequently to lessen the number of beds they will be able to maintain, as well as gravely to impair their efficiency as curative institutions, schools of medicine, and training schools for nurses.

2. That the National Insurance Bill will be incomplete until it provides for the hospital treatment which insured persons must have if their medical needs are to be covered at all adequately by the Bill.

THE POSITION OF CERTIFICATED DISPENSERS.

An important deputation representing the Society of Apothecaries and the Association of Certificated Dispensers waited upon the Attorney-General in his private room at the House of Commons on Thursday, Nov. 23rd, in order to urge the adoption of certain amendments to the Bill for the purpose of protecting the interests of persons holding the certificate in dispensing. The deputation received the most satisfactory assurances from Sir Rufus Isaacs that the Government had no intention of allowing the provisions of the Bill to prejudice the interests of the society's dispensers, and while agreeing that Clause 14 as at present amended in committee was unsatisfactory in this respect, undertook that the measure should be so further amended that these rights were fully protected.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH FOR 1910.

Rhondda Urban District.[1]—In the Rhondda Valley there is progress, though it be but slow progress. It is a large district composed of narrow valleys, where there have been much overcrowding, a high death-rate, and other unsatisfactory conditions. But, nevertheless, the death-rate is not so high as it used to be, and more houses have come into existence, though this is not a locality likely to tempt the builder. Numerous bench-marks taken throughout the area show that during the last 12 years the whole district has sunk. In many localities this subsidence amounts to 5 feet and more, the maximum being 7·95 feet at Llwynypia. This naturally endangers the stability of buildings and may cause the breaking asunder of water-mains, sewers, and pipes of different sorts. While the rapid development of the mining industry, in which 69 per cent. of the males above 10 years of age are engaged, helps to produce this subsidence of the soil, it has attracted a large working-class population, all needing dwelling-houses. Thus we are told that in 1871 there were only 3872 houses, there are now 26,000 houses. They are nearly all small cottages, with three bedrooms, a kitchen, and a parlour. At the Census of 1901 the average population was 5·92 per house, and the hope is now entertained that this average has fallen to about 5·8; this, if not much of an improvement, is a change in the right direction. The reduction in the death-rate is far more satisfactory, as the average for the ten years 1890–99 was 21·1; for the years 1900–09 only 18·4, and for the year 1910 we have a still further decrease to 15·7 per 1000 of the population. The infantile mortality is 56 per 1000 less than the average of the last 20 years, but it still amounts to 136 per 1000. This is the figure for 1910, while that for the 77 great towns was 115, and for England and Wales 106 per 1000. Thus the state of affairs in the Rhondda valley is still very unsatisfactory. The report expresses great satisfaction with the services rendered in checking infantile mortality by the two lady inspectors, who teach mothers how to wash and feed infants, while informing the authorities if there is anything insanitary in or about the dwellings. The difficulty of disposing of household refuse adds to any unwholesome conditions. There is but one destructor, which cannot consume more than 16 tons of refuse per day, and this at the rather elevated cost of 1*s.* 9*d.* per ton. But there are 200 cartloads of refuse collected daily, and therefore most of this is thrown down the 11 refuse tips scattered throughout the urban district. There it rots and ferments and creates unwholesome conditions which are likely to cause trouble in the future. Power for a scheme, however, has been sought to deal with this important matter. Dr. J. D. Jenkins has undoubtedly a busy task in watching over so scattered a district, where there are several exceptionally difficult problems to solve.

Glamorgan County.—Dr. David J. Morgan only came into office in April, 1910, so that the present report is based to a large extent on the work of his predecessor, Dr. W. Williams. The administrative county consists of 19 urban and eight rural districts, with a population of over 700,000 and a death-rate of 13·97 per 1000. The infantile mortality was equal to 125 per 1000 births registered. The highest was 151 at Aberdare, and the lowest 64 at Penarth. The overcrowding in the industrial districts is considered one of the principal causes of this evil, and the sanitary and educational authorities alone cannot accomplish all that is necessary. A separate chapter is devoted to each of the urban and rural districts into which the county is divided, and it would require much time and space to deal with them all. On reading over the various complaints made and the enumeration of the many requirements that have to be satisfied before the sanitary conditions can be considered perfect, it seems quite evident that these places are too small to carry out all the public works they need. There are the disposal of sewage and the prevention of the pollution of rivers; then come the house refuse problem and the slaughter-house difficulty. Obviously many of these districts should unite and share the cost of one central establishment between them. It is to be noticed that in most places complaints are made about the slaughter-houses, and where no complaint is made we get a statement that is sometimes even more condemnatory. Thus for Neath borough, and though it has a population estimated at 17,000, we are just simply told that the slaughter-house "was visited weekly by the sanitary inspector." When we consider that no killing should be allowed except in the presence of a veterinary surgeon, what are we to say about this one visit a week, and that only by a sanitary inspector. With the aid of tramways small urban and rural districts can be brought into cheap, prompt, and easy communication one with another. Therefore one large public abattoir, with a proper staff of veterinary surgeons attached, might supply the needs of a very wide area. By thus uniting different districts there would be less difficulty in obtaining the necessary funds. Penarth, which has the record for a low infantile death-rate, has also a very low general death-rate—namely, 9·08 per 1000. The zymotic death-rate was only 0·49 per 1000, and there was no summer diarrhœa. The water-supply is described as soft, pure, constant. The sewers have large flushing tanks, and are stated to be in a good condition. The outfall is taken as far as low tide, and house refuse is removed at least three times a week. There are five private slaughter-houses; these are clean and constantly inspected. Still the medical officer of health urges that under such conditions the meat-supply cannot be properly controlled, and that the private slaughter-houses should be replaced by a public abattoir. In spite of this criticism, it will be seen that the sanitary conditions at Penarth are improving.

Criccieth Urban District.—The annual report of Dr. E. Lloyd Owen, medical officer of health for the Southern Division of the Carnarvonshire Combined Sanitary Districts, for the year ended Dec. 31st, 1910, is divided into three parts. Part 1 deals with the administration of the Factory and Workshops Act, 1901. Part 2 consists of four tables of statistics, viz.—Table I., Vital Statistics of the District for 1910 and the previous ten years; Table III., Cases of Infectious Diseases notified during the year; Table IV., Causes of, and Ages at, Death during the year; Table V., Infantile Mortality during the year; Deaths from stated causes in weeks and months under one year of age. Part 3 summarises the vital statistics and sanitary work for the period. The Criccieth urban district is situated in the Pwllheli Union, and Pwllheli registration district and in the Criccieth registration subdistrict, and has an area, exclusive of area covered by water, of 472 statute acres. The population, estimated to June, 1910, is 1402. In England and Wales the birth-rate, death-rate, and infantile mortality were 24·8, 13·4, and 106 respectively, each of these being the lowest on record. Dr. Lloyd Owen's report shows a birth-rate of 8·55 per 1000 of population, which was lower by 16·25 than that in England and Wales, lower by 9·98 than that in the previous year, and lower by 10·95 than the average rate in the preceding 10 years. The death-rate, 12·12, however, is lower by 1·28 than that in England and Wales, and by 3·78 than the average rate in the preceding 10 years.

[1] See also THE LANCET, Sept. 2nd, 1911, p. 726.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7463 births and 4388 deaths were registered during the week ending Nov. 25th. The annual rate of mortality in these towns, which had been 13·5, 13·1, and 13·9 in the three preceding weeks, further rose to 14·2 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual rate of mortality in these towns averaged 14·1 per 1000, while the average death-rate in London during the same period did not exceed 13·7. The death-rates in the 77 towns last week ranged from 4·9 in Hornsey, 6·2 in Newport (Mon.), 6·6 in Wallasey, and 7·3 in Barrow-in-Furness, to 19·3 in Wigan, 20·1 in Burnley, 20·6 in West Bromwich, and 22·0 in Stockton-on-Tees. The 4388 deaths from all causes in the 77 towns were 69 in excess of the number registered in the preceding week, and included 259 which were referred to the principal epidemic diseases, against numbers steadily decreasing from 2900 to 267 in the 13 preceding weeks. Of these 259 deaths, 73 resulted from infantile diarrhœa, 61 from diphtheria, 44 from measles, 32

from whooping-cough, 29 from scarlet fever, and 20 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week did not exceed 0·8 per 1000, and was the lowest death-rate from these diseases recorded in any week of the current year. The deaths of infants under two years of age attributed to diarrhœa, which had steadily declined from 2714 to 76 in the 13 preceding weeks, further fell to 73 last week, and included 24 in London and its suburban districts, 4 each in Stoke-on-Trent, in Birmingham, and in Cardiff, and 3 each in Liverpool, in Bolton, in Manchester, and in Oldham. The deaths referred to diphtheria, which had increased from 46 to 64 in the four preceding weeks, declined to 61 last week; 21 deaths were recorded in London and its suburban districts, 5 in Leeds, and 3 each in Stoke-on-Trent, in Bolton, and in Bradford. The fatal cases of measles, which had been 36, 37, and 51 in the three previous weeks, declined to 44 last week, and of this number 9 were registered in London, 4 each in Nottingham, in Salford, and in Burnley, 3 in Wolverhampton, and 3 in West Bromwich. The 32 deaths assigned to whooping-cough were 1 in excess of the number in the preceding week, and included 9 in London and its suburban districts, 6 in Birmingham, 2 in Smethwick, and 2 in Liverpool. The deaths attributed to scarlet fever, which had declined from 30 to 21 in the three preceding weeks, rose again to 29 last week; 4 deaths occurred in Stoke-on-Trent, 3 in London, and 2 each in Birmingham, Liverpool, Sheffield, Hull, and Newport, Mon. The 20 deaths referred to enteric fever were 4 less than the number recorded in each of the two previous weeks, and included 6 in London and its suburban districts, and 2 each in Birmingham, Leeds, and Newcastle-on-Tyne. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 2213 in the 12 preceding weeks, declined to 2166 on Saturday last; 203 new cases of this disease were admitted to these hospitals during the week, against 269, 292, and 291 in the three preceding weeks. These hospitals also contained on Saturday last 1311 cases of diphtheria, 171 of whooping-cough, 101 of enteric fever, and 73 of measles. The 1146 deaths from all causes in London last week were 18 in excess of the number in the previous week, and included 243 which were referred to diseases of the respiratory system, against 170, 196, and 224 in the three previous weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 144, 136, and 167 in the three preceding weeks, declined to 158 last week, and 374 inquest cases were registered. The causes of 33, or 0·8 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Sheffield, Leeds, Bradford, Hull, Nottingham, Portsmouth, and in 56 other smaller towns. The 33 uncertified causes of death last week included 7 in Birmingham, 6 in Liverpool, 5 in London, 3 in South Shields, and 3 in Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 767 births and 548 deaths were registered during the week ending Nov. 25th. The annual rate of mortality in these towns, which had been 16·3 and 18·6 in the two preceding weeks, declined to 16·7 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·5 per 1000, and was 2·4 per 1000 above the mean rate during the same period in the 77 large English towns. The annual death-rates in the several Scotch towns last week ranged from 10·3 and 10·5 in Leith and in Paisley to 18·8 in Glasgow and in Aberdeen. The 548 deaths from all causes were 63 fewer than the number in the previous week, and included 63 which were referred to the principal epidemic diseases, against 48 and 65 in the two preceding weeks; of these 63 deaths, 23 resulted from measles, 16 from diarrhœal diseases, 7 from scarlet fever, 7 from whooping-cough, 7 from diphtheria, 2 from enteric fever, and 1 from typhus fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·9 per 1000, and was 1·1 per 1000 above the mean rate from the same diseases in the 77 large English towns. The deaths referred to measles, which had steadily increased from 1 to 28 in the eight preceding weeks, declined to 23 last week, and comprised 14 in Aberdeen, 7 in Glasgow, and 2 in Greenock. The deaths attributed to diarrhœal diseases, which had been 12, 9, and 19 in the three previous weeks, fell last week to 16, all but one of which related to children under two years of age; 5 deaths were recorded in Glasgow, 4 in Edinburgh, 3 in Dundee, and 2 in Greenock. The 7 fatal cases of scarlet fever were 4 in excess of the average in the three preceding weeks, and included 3 deaths in Glasgow. The deaths assigned to whooping-cough, which had been 11, 14, and 8 in the three previous weeks, slightly fell to 7 last week, and comprised 4 in Glasgow, 2 in Aberdeen, and 1 in Edinburgh. The deaths referred to diphtheria, which had been 9 and 4 in the two preceding weeks, rose to 7 last week, and included 4 in Glasgow, 2 in Dundee, and 1 in Greenock. The 2 fatal cases of enteric fever and also that of typhus fever were registered in Glasgow. The deaths referred to diseases of the respiratory system, which had been 116, 108, and 144 in the three preceding weeks, declined to 113 last week, and was 25 below the number in the corresponding week of last year. Of the 548 deaths from all causes in the Scotch towns last week, 165, or 30 per cent., were recorded in public institutions, and 31 were attributed to different forms of violence. The causes of 24, or 4·4 per cent., of the deaths in the eight towns in the week under notice were not certified or not specified; in the 77 large English towns the proportion of uncertified causes did not exceed 0·8 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 534 births and 396 deaths were registered during the week ending Nov. 25th. The annual rate of mortality in these towns, which had increased from 17·1 to 19·0 in the four preceding weeks, declined to 18·0 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·3 per 1000; in the 77 large English towns the mean annual death-rate during the same period did not exceed 14·1 per 1000, while in the eight Scotch towns it was equal to 16·5. The annual death-rate last week was equal to 20·3 in Dublin (against 13·2 in London), 17·3 in Belfast, 17·7 in Cork, 5·1 in Londonderry, 10·9 in Limerick, and 15·2 in Waterford; whilst in the 16 smallest of these Irish towns the annual death-rate was equal to 19·3 per 1000. The 396 deaths from all causes were 23 fewer than the number in the previous week, and included 44 which were referred to the principal epidemic diseases, against 33 and 47 in the two preceding weeks; of these 44 deaths, 19 resulted from diarrhœal diseases, 11 from whooping-cough, 5 from scarlet fever, 4 from measles, 3 from enteric fever, and 2 from diphtheria, but not one from small-pox. These 44 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·0 per 1000; in the 77 English towns the mean annual death-rate from these diseases last week did not exceed 0·8 per 1000, while in the eight Scotch towns it was equal to 1·9. The deaths attributed to diarrhœal diseases, which had been 24, 9, and 19 in the three preceding weeks, were again 19 last week, and with one exception related to children under 2 years of age; 7 deaths were recorded in Dublin, 7 in Belfast, and 3 in Cork. The deaths referred to whooping-cough, which had been 2 and 5 in the two previous weeks, rose to 11 last week, and included 5 in Belfast, 3 in Dublin, and 2 in Lurgan. The 5 fatal cases of scarlet fever were slightly in excess of the average in recent weeks, and comprised 2 in Dublin, 2 in Belfast, and 1 in Waterford. The deaths assigned to measles, which had been 9 and 8 in the two preceding weeks, further declined last week to 4, and were all registered in Dublin. Two of the fatal cases of enteric fever were recorded in Dublin and 1 in Newry. The 2 deaths referred to diphtheria occurred in Newry and Sligo respectively. The deaths referred to diseases of the respiratory system, which had been 77, 75, and 73 in the three preceding weeks, rose to 78 last week. Of the 396 deaths from all causes in the Irish towns last week, 138, or 35 per cent., were recorded in public institutions, and 13 were attributed

to different forms of violence. The causes of 14, or 3·5 per cent., of the deaths in the 22 towns in the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes last week did not exceed 0·8 per cent. in the 77 large English towns, but was equal to 4·4 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned surgeons have been promoted to the rank of Staff-Surgeon in His Majesty's Fleet: Walter Perceval Yetts, Thomas Dixon Liddle, Norman Sinclair Meiklejohn, William Perceval Hingston, Reginald Hugh St. Bernard Ellis Hughes, Frederick Morton Vincent Smith, Arthur Henry Sims Richardson, George Herbert Stephens Milln, Edward Bryan Kenny, Arthur Reginald Schofield, Francis Jollie Gowans, Evelyn Richard Townsend, James Campbell Bringan, Guy Leslie Buckeridge, Arthur Dillon Croker Cummins, Thomas Walter Jeffery, Palmer Devoy Ramsay, Edward Postle Gwyn Causton, George Deleval Walsh, James Ernest Johnston, and Bertram Raleigh Bickford (dated Nov. 23rd, 1911).

ARMY MEDICAL SERVICE.

Colonel Sir David Bruce, C.B., is seconded for service under the Colonial Office (dated Nov. 9th, 1911). Lieutenant-Colonel William W. Pike, D.S.O., from the Royal Army Medical Corps, to be Colonel, vice Sir D. Bruce, C.B., seconded (dated Nov. 9th, 1911).

ROYAL ARMY MEDICAL CORPS.

Major David Harvey is seconded for service under the Colonial Office (dated Nov. 9th, 1911).

Lieutenant-Colonel J. M. Irwin, senior medical officer at Tientsin, has been appointed Principal Medical Officer of South China, with headquarters at Hong-Kong, vice Colonel W. G. A. Bedford, C.M.G., transferred to the London District as Principal Medical Officer. Lieutenant-Colonel H. L. Battersby, from Bodmin, has been appointed to the Medical Charge of the Royal Horse Artillery Batteries at Ipswich. Lieutenant-Colonel E. Davis has taken up duty in Medical Charge at St. Peter's, Jersey. Lieutenant-Colonel A. Dodd, senior medical officer at Chester, has been removed from the roster for foreign service. Lieutenant-Colonel J. C. Morgan has taken over charge of the Military Hospital at Glasgow. Lieutenant-Colonel A. E. Tate has been selected to command the Station Hospital at Rawal Pindi, vice Lieutenant-Colonel M. O. D. Braddell, tour expired. Lieutenant-Colonel R. L. R. MacLeod, from Aden, has been appointed for duty on board the troopship s.s. *Plassy*, which left Bombay on Nov. 9th for Southampton. Lieutenant-Colonel J. J. C. Donnet, in medical charge of the Military Hospital at Belfast, has taken up duty as Senior Medical Officer at Singapore, vice Lieutenant-Colonel H. J. Barratt, who has been transferred to India. Lieutenant-Colonel F. H. M. Burton has been placed under orders for transfer from Colchester to Warley to fill the vacancy caused by the retirement of Lieutenant-Colonel T. W. O'H. Hamilton. Major R. J. Copeland has been transferred from Darjeeling to the Station Hospital at Meerut Cantonment. Major B. Forde, from Aldershot, has taken over the medical charge at Deepcut. Major A. Chopping, staff surgeon at Cherat, has been placed under orders to proceed home, tour expired, from India on the troopship s.s. *Rewa*, leaving Karachi on Dec. 9th. Major F. Smith, D.S.O., sanitary officer of the Second (Rawal Pindi) Division, has taken over charge of the Station Hospital at Calcutta, vice Lieutenant-Colonel T. McCulloch. Major H. O. B. Browne-Mason has been appointed Specialist in Dermatology and Venereal Diseases to the Sixth (Poona) Division. Major H. K. Palmer, specialist in advanced operative surgery at Meerut, has been granted six months' leave of absence. Major E. W. Slayter has been appointed to command the Station Hospital at Mount Abu for a period of two years. Captain R. R. Argles, from Lahore, has been detailed for duty on board the troopship ss. *Plassy*, which left Bombay for Southampton on Nov. 9th. Captain B. B. Hole, from Cosham, has joined the Scottish Command for duty as Adjutant of the Royal Army Medical Corps School of Instruction, Lowland Division. Captain A. F. Carlyon, from Devonport, has embarked for a tour of service at Mauritius. Captain W. J. Waters has taken up duty in North China. The leave of absence home from India granted to Captain H. W. Farebrother has been extended on the recommendation of a medical board. Captain A. J. Williamson, specialist in advanced operative surgery, from Woolwich, has embarked for a tour of service at Singapore. Captain R. C. Wilson, in charge of the Military Families Hospital at Netley, has been placed under orders for a tour of service at Gibraltar. Captain R. H. MacNichol, specialist in dermatology and venereal diseases, has taken over charge of the Military Hospital at Northampton during the absence on leave of Lieutenant-Colonel W. S. Dowman. Captain R. J. B. Buchanan has been selected for appointment as Clinical Pathologist to the Alexandra Hospital at Cosham. Captain F. W. W. Dawson has been detailed for a tour of service with the Third (Lahore) Division, Northern Army in India. Captain G. B. F. Churchill has been granted one year's extension of service in India. Captain F. E. Rowan-Robinson has been granted one month's leave of absence prior to embarkation for duty in Bermuda. Captain P. G. Hyde has joined for duty at Ceylon. Captain R. N. Woodley has been transferred from Bulford Camp, Salisbury Plain, to the Military Hospital at Cardiff. Captain J. M. M. Crawford, from Colchester, has taken up duty at Ipswich as Adjutant of the Royal Army Medical Corps School of Instruction, East Anglian Division, in succession to Major W. A. Woodside, under orders for India. Lieutenant M. White, from Bordon, has embarked for duty with the Eighth (Lucknow) Division, Northern Army in India. Lieutenant P. G. M. Elvery, from Cairo, has taken up duty at Cyprus. Lieutenant J. K. Gaunt, from Lisnagar Camp, has been appointed to Fermoy. Lieutenant W. P. MacArthur, from Aldershot, has embarked for a tour of service in Mauritius. Lieutenant A. T. J. McCreery, from the Station Hospital at Mhow, has been appointed for duty at Indore. Lieutenant C. T. V. Benson, at present serving at Aldershot, has been placed under orders for service in Burma.

INDIAN MEDICAL SERVICE.

The King has approved of the promotion of Captain Edward Owen Thurston to Major (dated July 27th, 1911).

Colonel W. A. Corkery, Principal Medical Officer, Lahore Division, has been granted three months' leave of absence. The Lieutenant-Governor of the Punjab has been pleased to appoint Lieutenant-Colonel D. T. Lane to be a Civil Surgeon of the First Class in succession to Lieutenant-Colonel J. A. Cunningham. Lieutenant-Colonel B. C. Oldham, Bengal Presidency, has arrived home on leave of absence. Lieutenant-Colonel W. Ronaldson Clarke has been appointed Civil Surgeon at Lahore, and Professor of Forensic Medicine at the Government Medical College, Lahore, on return from privilege leave, relieving Captain H. C. Keates, transferred. Lieutenant-Colonel D. M. Davidson has been selected for appointment as Medical Officer in charge of the Punjab Central Camp in the Coronation Durbar at Delhi. Lieutenant-Colonel C. E. L. Gilbert has been granted four months' extension of his leave of absence home from India by the Right Honourable the Secretary of State on the recommendation of a Medical Board. The services of Lieutenant-Colonel B. B. Grayfoot have been replaced by the Home Department of the Government of India at the disposal of the Bombay Government. Lieutenant-Colonel A. W. T. Boist has been appointed a Civil Surgeon of the First Class. Lieutenant-Colonel W. H. Gray, Superintendent of the Central Prison at Benares, United Provinces, has been granted leave of absence from India for two years. Major F. D. Blenkinsop has embarked for India on the expiration of his leave. Major F. Wall has been granted furlough for one year. Major A. W. R. Cochrane, superintendent of the lunatic asylum at Agra, has been granted six months' leave of absence. Major C. E. Williams, Bengal Presidency, has received an extension of his leave. Major H. Bennett has been appointed to officiate as a Civil Surgeon of the First Class, *vice* Lieutenant-Colonel C. T. Hudson, on leave. His Excellency the Governor of Bombay, in Council, has been pleased to appoint Major G. E. Stewart to officiate as Civil Surgeon at Dhulia, in succession to Captain R. F. Steel. Captain G. Holroyd has been selected to officiate as Superintendent of the Central Jail at Bhagalpur, in succession to Major J. M. Woolley, appointed Senior

Medical Officer at Port Blair. Captain S. H. Lee Abbott and Captain J. G. G. Swan have been appointed Civil Surgeons of the Second Class. Subsequent on the transfer of Colonel H. Hendley to the Military Department, Captain H. C. Buckley has been appointed Plague Medical Officer at Rohtak, on transfer from special duty under the Government of India. Captain E. T. Harris has been granted four months' extension of his leave of absence. Captain E. A. Roberts and Captain J. F. James have embarked for India. Captain H. C. Keates has been selected for appointment as Civil Surgeon at Jullundur. Captain J. M. A. Macmillan, civil surgeon at Hoshangabad, has been appointed to the medical and sanitary charge of the Central Provinces Camps at the Delhi Coronation Durbar. Lieutenant P. B. Bharucha has been appointed Surgical Specialist to the Second (Rawal Pindi) Division in succession to Lieutenant C. H. Smith.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Lieutenant Charles H. Carlton is confirmed in his rank.

TERRITORIAL FORCE.

Royal Engineers.

5th and 6th Battalions, The Royal Warwickshire Regiment: Surgeon-Captain George H. E. Bekenn resigns his commission (dated Nov. 25th, 1911).

Royal Army Medical Corps.

1st West Lancashire Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains (dated Oct. 1st, 1911):—Lieutenant John E. W. MacFall, Lieutenant Richard S. Taylor, Lieutenant Adam P. H. Simpson.

2nd West Lancashire Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains (dated Oct. 1st, 1911):—Lieutenant Charles S. Brebner, Lieutenant Walker L. Hawksley, and Lieutenant William Macdonald.

2nd Northumbrian Field Ambulance, Royal Army Medical Corps: Lieutenant James D. Sinclair to be Captain (dated Oct. 1st, 1911).

3rd West Riding Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains:—Lieutenant John W. Stokes (dated Oct. 1st, 1911), Lieutenant James Mackinnon (dated Oct. 1st, 1911), Lieutenant Ernest F. Finch (dated Oct. 6th, 1911), Lieutenant Charles G. Murray (dated Oct. 10th, 1911), and Lieutenant Edward F. Skinner (dated Oct. 11th, 1911).

3rd Wessex Field Ambulance, Royal Army Medical Corps: Lieutenant John A. Swindale resigns his commission (dated Nov. 25th, 1911).

2nd Scottish General Hospital, Royal Army Medical Corps: Major Robert W. Philip to be Lieutenant-Colonel (dated Sept. 15th, 1911). Captain Francis D. Boyd, C.M.G., to be Major (dated Sept. 15th, 1911). John William Simpson to be Captain (dated Sept. 15th, 1911).

Attached to Units other than Medical Units.—Major and Honorary Surgeon-Lieutenant-Colonel Duncan Stewart resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated Nov. 25th, 1911).

For Attachment to Units other than Medical Units.—Geoffrey Balmanno Fleming to be Lieutenant (dated Sept. 22nd, 1911).

Supernumerary for Service with the Officers Training Corps.—Captain Henry Buckley Roderick, from the Unattached List for the Territorial Force, to be Captain, with precedence as on the Unattached List, for service with the medical unit of Cambridge University Contingent, Senior Division, Officers Training Corps (dated Nov. 25th, 1911). Captain William Duncan Sturrock, from the Unattached List for the Territorial Force, to be Captain, with precedence as on the Unattached List, for service with the medical unit of the Oxford University Contingent, Senior Division, Officers Training Corps (dated Nov. 25th, 1911). Lieutenant Rudolf Albert Peters, from the List of Officers of the Royal Army Medical Corps attached to units other than medical units, to be Lieutenant (on probation), with precedence as in the Territorial Force, for service with the medical unit of the Cambridge University Contingent, Senior Division, Officers Training Corps (dated Nov. 25th, 1911). Andrew Francis Dixon to be Lieutenant, for service with the medical unit of Dublin University Contingent, Senior Division, Officers Training Corps (dated Sept. 23rd, 1910). Thomas Thomson to be Lieutenant, for service with the Royal College of Surgeons in Ireland Contingent, Senior Division, Officers Training Corps (dated April 7th, 1911). Henry Stokes to be Lieutenant, for service with the Royal College of Surgeons in Ireland Contingent, Senior Divison, Officers Training Corps (dated April 29th, 1911). William James Wilson to be Lieutenant, for service with the medical unit of the Belfast University Contingent, Senior Division, Officers Training Corps (dated May 25th, 1911).

Officers Training Corps.

Oxford University Contingent, Senior Division, Officers Training Corps: Lieutenant William D. Sturrock to be Captain (dated Oct. 26th, 1911).

Yeomanry.

Northumberland (Hussars) Yeomanry: Surgeon-Lieutenant Hamilton Drummond resigns his commission (dated Nov. 25th, 1911).

THE ROYAL NAVAL VOLUNTEER RESERVE.

The regulations concerning medical officers in this service have just been issued. Candidates for entry must not be over 32 years of age, and if accepted will be enrolled with the rank of Surgeon. There are 8 fleet-surgeons, 22 staff-surgeons, and 120 surgeons in the service. Application for entry should be made to the Admiralty Volunteer Committee, Whitehall, S.W.

HEALTH OF THE UNITED STATES ARMY.

The report of the Surgeon-General of the United States Army for the year 1910, which has just been issued, contains much interesting matter. The figures relating to the admission of soldiers to army hospitals for alcoholism show that in 1910 the rate was 23·51 per 1000. In 1900 it was 25 per 1000. In the ten years before the establishment of the canteen the average rate of admission was 55 per 1000; it fell to an average of 26 per 1000 while the canteen existed, and rose to 28 per 1000 in the ten years following its abolition. The improvement in the alcoholic rate began before the establishment of the canteen and continued during the greater part of the canteen period, in correspondence with the general progress of temperance. It would probably have been sustained but for the abolition of the canteen, which destroyed the attractiveness of the soldier's club and drove him outside for amusement, where he was tempted to drink strong drinks to excess in place of mild fermented liquors in moderation. 16,093 vaccinations against typhoid fever took place. The outstanding feature of the report in regard to anti-typhoid vaccination is the fact that only three of the vaccinated men became infected with typhoid fever. The disease in each case ran a mild course and recovery was rapid. The vital statistics indicate a steady improvement in the health of the soldiers. The ratios were 596·54 admissions to hospital, 3·4 deaths, and 28·35 rendered non-effective per 1000 in 1910, as compared with 628·91, 4·20, and 30·27 per 1000 respectively in 1909. The mean strength of officers was 4416, of which number 37, or 8·38 per 1000, were retired for disabilities in 1910, as compared with 19·21 for 1909. The mean strength of rank and file for 1910 is given as 71,534, as compared with 74,319 for 1909, and the discharge-rate for disability was 14·02 per 1000.

HOSPITAL ALMONERS' COUNCIL.—The inaugural meeting of the newly constituted Hospital Almoners' Council was held at Caxton Hall on Nov. 24th, the Bishop of Stepney, Vice-President, being in the chair. The Council has considerably increased its membership, and now includes 16 representatives of the governing bodies and medical staffs of 12 London hospitals. The heads of women's colleges in Oxford, London, and Dublin have also joined the Council, together with hospital almoners working in London, and others interested in the movement. The Council will continue to select and train women for almoners' posts, and to recommend them to hospitals. At the meeting a constitution was adopted and an executive committee was chosen. The speakers were Mr. C. S. Loch (the founder of the movement), Sir Edward Brabrook (Vice-President), Dr. R. Hutchison, Dr. T. W. Eden, and Dr. A. Chas E. Gray (former chairman of the Council). All communications with regard to this excellent work should be addressed to Mr. Edgar S. Kemp, at Denison House, 296, Vauxhall Bridge-road, London, S.W.

Correspondence.

"Audi alteram partem."

BICENTENARY OF THE SCHOOL OF PHYSIC OF IRELAND: JUNE, 1912.

To the Editor of THE LANCET.

SIR,—We are asked to draw attention to the proposed celebration of the bicentenary of the School of Physic in Ireland. This school, better known now as the Medical School of Trinity College, Dublin University, was founded early in the eighteenth century under the joint control of the University and the King and Queen's College of Physicians. The management of the school has been for some time past practically altogether in the hands of the Universities authorities, but the school still retains its old name and some of its most important professors are appointed by the College of Physicians.

A provisional committee has been appointed to make arrangements for the celebrations to be held at the end of June, 1912, and this committee is most anxious to receive suggestions from graduates who are willing to coöperate. A graduates committee will shortly be formed, and those who are willing to become members are invited to send in their names. The provisional committee is most anxious to receive loans of documents or other objects of interest which may illustrate the history of the school, and will be glad to hear from anyone who may possess such objects. All who are willing to assist are requested to communicate with any of the undersigned.

We are, Sir, yours faithfully,

JAMES LITTLE, M.D. Edin.,
Regius Professor of Physic.
CHARLES BALL,
Regius Professor of Surgery.
A. C. O'SULLIVAN, F.T.C.D.,
University Lecturer in Pathology.
W. H. THOMPSON, M.D. R.U.I.,
King's Professor of the Institutes of Medicine.
JAMES CRAIG, M.D. Dub.,
King's Professor of the Practice of Medicine.
T. PERCY C. KIRKPATRICK, M.D. Dub.,
A. FRANCIS DIXON, Sc.D. Dub.,
University Professor of Anatomy.

Nov. 27th, 1911.

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—At a largely attended meeting of the West Croydon and District Medico-Ethical Society the following resolution was agreed to unanimously, and I was instructed to forward the same to you for insertion in THE LANCET:—

That this meeting refuses to act under the Insurance Bill unless the six cardinal points are definitely and emphatically conceded. It further is of opinion that payment *per capita* is absolutely undesirable, and it will only consider the scheme if payment per attendance on satisfactory terms is guaranteed by the Local Health Committee. And, further, it is also of opinion that the medical representation on the Local Health Committee, as at present suggested, is altogether insufficient.

I am, Sir, yours faithfully,
WILLIAM V. BRADDON, Hon. Secretary.

Thornton Heath, Nov. 22nd, 1911.

*** We have received a large number of letters from medical men registering disapproval of the National Insurance Bill upon one or other of the many counts familiar to all our readers, as well as communications from local correspondents (see p. 1581). These confirm us for different reasons in the opinions expressed in our leading article.—ED. L.

THE CAUSE OF CANCER.

To the Editor of THE LANCET.

SIR,—Having regard to the views and claims advanced by Sir Henry Butlin in his recent lectures I am induced to invite his and his readers' attention to the thesis I put forward on this question so long ago as 1888 (THE LANCET, August 25th, p. 395, "In what does Cancer Consist?"), and more recently in the *British Medical Journal* of Dec. 26th, 1903. These views have received corroboration by the work of Messrs. Farmer, Moore, and Walker, published in the Proceedings of the Royal Society, 1903, wherein reference is made to my suggestions of 23 years ago.

I am, Sir, yours faithfully,
WILLIAM J. COLLINS.

Albert-terrace, Regent's Park, N.W., Nov. 27th, 1911.

MINER'S PHTHISIS.

To the Editor of THE LANCET.

SIR,—"Sooner or later every worker underground on these mines will contract miner's phthisis." These words were uttered before a representative meeting of mining engineers in Johannesburg on Sept. 9th, 1911, by Mr. Koetze, the Government mining engineer.

The number of white workers roughly at the present time going below is about 12,000 and the black about 150,000. The death-rate at the present time is appalling. What will it be in a few years? I refer your readers to the following paragraph in a letter from the well-known consulting engineer, Mr. E. J. Moynihan:—

The Mining Regulations Commission (Transvaal) of 1907-1910, of which Dr. Porter, M.O.H., of Johannesburg, was the medical member, practically finished taking evidence in June, 1908. Its report was not signed till March, 1910; and not issued till August, 1910, more than two years after practically all the evidence was in. Part of the work of this commission was to investigate the health of mining employees. Their figures show a death-rate, from *all* forms of phthisis, of about 11 per 1000 for the underground men. That this is entirely below the mark and based on wholly insufficient inquiry and data is now proved by the experience of the present duplicate Commission appointed (1) to examine the miners' lungs, and (2) to award temporary compensation.

Since three men per day are putting in valid applications for compensation, and are, most of them, in the last extremity and have only recently left work, it is clear that there either now are, or will be in the very near future, 1000 deaths annually from miner's phthisis (silicosis). This corresponds to a silicosis death-rate among the underground white men (about 12,000 in number) of over 80 per 1000 annually. The disease is mainly prevalent among the "machine men" (rock-drillers) who form less than half of the underground white employees. The machine-men therefore have a death-rate, from silicosis only, of probably more than 140 per 1000. This is an understatement, in effect, of the real truth, because the number of machines in use has increased more than 75 per cent. in the last two years. A large proportion of the men have therefore been exposed to risk for too short a time to produce any sensible proportion of the deaths. If this fact be dealt with by a rough correction factor, the corrected death-rate for machine-men from this one disease alone would be well over 230 per 1000. Such a death-rate from a single occupational disease must be unparalleled in the whole industrial world. It can only be compared with King Leopold's Congo Free State.

It is with the view of bringing directly to the notice of the home Government and your readers the present very serious state of affairs that I have sent you this letter, which, though necessarily omitting many details, gives the facts up to date.

Some nine years ago a letter was forwarded to THE LANCET pointing out the grave danger of this disease. Acting upon this letter Mr. Chamberlain ordered an inquiry, and the Miner's Phthisis Commission of 1902 was appointed. The commission did its work well, established the cause of the disease, and pointed out the remedy. A feeble attempt on the part of the mine-owners to do something was the result, and nothing more. In 1908 another commission was formed with a like result. This year another commission has been promoted. Beyond the fact that the Government mining engineer is enabled to make the first statement in this letter, no good has accrued from any of these commissions. The chairman of the first commission and several members and witnesses are all dead from the disease. Each commission recommends the use of water to keep down the dust which causes the disease, the recommendations are urged upon the mine-owners, and with the same results in each case—utter callousness and neglect.

To-day we are faced with such a truly appalling state of affairs that it is a very pertinent question whether the whole gold industry of the Rand shall not be closed down until the mine-owners are prepared to put their mines in order and give guarantees for the future. In spite of all the protestations of the mine-owners to the contrary, those of us who are in a position to know can truly say that with one or two exceptions the water-supply to the mines is a sham and a farce not worthy of the name. The argument that men will not use the means given them has now been dispelled.

Upon the Nanse mines it has been proved that with a proper system of supervision men can be brought under discipline as well below ground as above. Yet knowing these facts days and weeks roll by, whilst the mine-owners are supposed to be considering the matter, and the Government ditto.

I regret to say that, however estimable these gentlemen may be in private life, their attitude with regard to putting their house in order is difficult to express in words. There is not an extenuating circumstance to be urged on their behalf. They, and they alone, can make a serious beginning of stopping this disease by adopting the system so successful in the Nanse mines. But, no; they will wait until public opinion or the Home Government forces the local government here to inflict the severest compensation measures upon them. These gentlemen will then appeal for mercy on the grounds that the industry will be ruined. These gentlemen won't do anything so foolish as to allow the industry to be ruined. We all know that imagination is very largely essential to the ruining of a gold mine, but I regret to say that only one argument appeals to the mine magnate in dealing with life preservation, and that argument is to make him pay.

I am, Sir, yours faithfully,
J. L. AYMARD, M.R.C.S. Eng., L.R.C.P. Lond.

Johannesburg, Sept. 19th, 1911.

TWO RARE ABNORMALITIES OBSERVED IN THE COURSE OF OPERATIONS.

To the Editor of THE LANCET.

SIR,—In your issue of Nov. 18th Mr. J. D. Malcolm, drawing attention to a rare and interesting case under this title, characterised by a single mesentery and abnormal position of the large intestine, states that he believes that this condition has not been before described. I, however, reported a similar case in the *Durham College of Medicine Gazette* of March, 1908, and my drawing of the parts is exactly similar to that in Mr. Malcolm's article. Mr. Jonathan Hutchinson, in the *Clinical Journal*, June 5th, 1907, describes ten cases of complete volvulus of the intestine where also a somewhat similar arrangement of the mesentery existed, and I have also references to other examples. In these cases developmental rotation of the intestine had not occurred, resulting in an arrangement which is found in some of the pronograde animals. Apart from appendicitis arising on the left side, this disposition of the mesentery allows extensive volvulus to occur, the whole bowel from the duodenum to the descending colon being involved. In the case reported by me the volvulus was reduced, and the patient recovered. The further history of this patient has not been published, but two recurrences took place, both of which were relieved by abdominal section and reduction. This case was seen at the Royal Victoria Infirmary, Newcastle-on-Tyne, during my house surgeoncy.

I am, Sir, yours faithfully,
Newcastle-on-Tyne, Nov. 26th, 1911. FREDERICK C. PYBUS.

To the Editor of THE LANCET.

SIR,—I am much interested in Mr. John D. Malcolm's case of malposition of the large intestine as described under this title in THE LANCET of Nov. 18th, p. 1401. I have recently had a similar case, discovered during X ray examination after bismuth feeding in the routine investigation of an abdominal case of Mr. Moynihan. The cæcum was situated just above the symphysis pubis and a little to the left of the middle line. The colon ascended on the left side to a point about the level of the splenic flexure. The "transverse" colon was represented by a loop descending to the level of the umbilicus and rising again to the splenic flexure. The descending colon was normal in position.

In Mr. Malcolm's case no transverse colon is represented and it would be interesting to know if it was in the form of a loop as in my case. This could be easily decided by X ray investigation.

I am, Sir, yours faithfully,
LEO. A. ROWDEN, M.B., C.M. Glasg.

Leeds, Nov. 25th, 1911.

SYPHILITIC AUTO-REINFECTION.

To the Editor of THE LANCET.

SIR,—Without wishing in any way to criticise the general tenour of Major French's recent Hunterian lectures on Syphilis—*quot homines, tot sententiæ*—I would like to draw attention to a statement on p. 1385 which, as quoted, is entirely misleading. He says: "Mr. McDonagh states that he has had 3 cases within the last 12 months of men early in the secondary stage cured by salvarsan return with a diffuse macular rash ..... which appeared a few weeks after the patient noticed the site of his original sore swell and become red." The crux of the whole argument is here omitted, and if the original be read (*British Medical Journal*, Sept. 23rd, 1911, p. 678) the following completes my sentence: "Which, by the way, is a very rare recurrent syphilide." I might even have been a little stronger, since I have never seen a case where six weeks after a swelling and redness of the chancre the patient developed a polyadenitis and a rash all over the body indistinguishable from the primary rash which had followed the chancre only a few months back. The explanation is simple. As a result of the "606" all the spirochætæ in the body have been destroyed except in the chancre, owing to the drug not having reached them in sufficient quantity; because they are shut up in fibrous, non-vascular tissue, a sequence of the induration. As a result of external irritation or because there are no antibodies present these imprisoned organisms "wake up," multiply, and are capable of giving rise to a fresh infection. This is a strong argument in favour of the advisability of excising a chancre which I have advocated for a long time, and also demonstrates that there is no such thing as absolute syphilitic immunity either to a foreign or a home virus. In consequence of there being no immunity the three patients referred to developed another general infection, as shown by the polyadenitis, macular rash, and reappearance of a positive Wassermann. Therefore, such cases are not relapses in the true sense of the word, and Major French could never have put them down as such, since he has probably never seen a similar case and admits that he has never used "606."

Excising the chancre and giving two intravenous injections of salvarsan before the Wassermann's reaction is positive—i.e., before the stage of general infection is reached—is practically a certain cure in my opinion. I have had 29 cases treated in this manner in the last 16 months, in which the Wassermann's reaction is still negative and the patients have been free from all symptoms. Surely this speaks for the efficiency of salvarsan—also mentioned in above number of *British Medical Journal* but omitted in Major French's lectures.

Last June I showed a case of auto-reinfection after a long period had elapsed since the primary infection at the Dermatological Section of the Royal Society of Medicine.[1] The patient contracted syphilis in 1905, and under mercurial treatment all the symptoms disappeared except the induration of the chancre. The induration persisted for six years when, as a result of irritation, erosions appeared on the surface, and six weeks later the glands of the body became enlarged. The patient was covered with a macular rash and had a sore throat. Contrary to the general belief, induration may persist for a considerable period irrespective of how much mercury the patient has had.—I am, Sir, yours faithfully,

J. E. R. MCDONAGH, F.R.C.S. Eng.

Harley-street, W., Nov. 24th, 1911.

SPECIAL RETURN OF PAUPERS UNDER MEDICAL TREATMENT.

To the Editor of THE LANCET.

SIR,—Acting on behalf of the Council of the Poor-Law Medical Officers' Association of England and Wales I have approached the Local Government Board on the above subject.

May I ask you to give publicity to the enclosed copies of the correspondence?

I am, Sir, yours faithfully,
MAJOR GREENWOOD, Honorary Secretary.

[ENCLOSURE.]

34, Copthall-avenue, E.C., Nov. 11th.

Secretary, Local Government Board—

Special Return of Paupers under Medical Treatment.

SIR,—On Oct. 27th last a circular was issued by the Local Government Board to boards of guardians in England and Wales asking for a special return of paupers under medical treatment. In consequence, a request has been made by the clerks of the various unions to the district medical officers throughout the country to furnish a considerable number of details, at the cost of much time and labour.

It is generally thought throughout the Poor-Law Medical Service

[1] Proceedings of the Royal Society of Medicine, vol. x., No. 9, p. 129.

that some payment should be specially made for this work, as not appertaining to their official duties.

This matter is to be considered at a council meeting shortly to be held, and I should be greatly obliged if you could give me the following information. 1. In the opinion of the Local Government Board is the return referred to above comprised in the duties of Poor-law medical officers under Art. 205, Cons. Ord. July, 1847? 2. Would the Local Government Board be prepared to sanction a payment made by the guardians for this work?

Yours very obediently,
MAJOR GREENWOOD, M.D., LL.B., Hon. Sec.

Local Government Board, Whitehall, S.W.,
23rd November, 1911.

SIR,—I am directed by the Local Government Board to your letter of the 11th instant, with reference to the special return required by them in regard to paupers under treatment on the 4th November, 1911.

In reply I am directed to state that it appears to the Board that, under Article 205 (1) of the General Consolidated Order of the 24th July, 1847, it is the duty of a medical officer to furnish for the purpose of the return the requisite information respecting the case of any pauper who was under his care on the date in question.

I am to add that if in any particular case the guardians should be of opinion that an exceptional amount of work has been entailed upon the medical officer in connexion with the return, the Board would be prepared to consider an application from the guardians for their sanction to the payment of a reasonable gratuity.

I am, Sir, your obedient servant,
J. S. DAVY, Assistant Secretary.

Dr. Major Greenwood, Hon. Secretary,
Poor Law Medical Officers' Association,
34, Copthall-avenue, E.C.

VENESECTION IN THE LIGHT OF RECENT RESEARCH.

To the Editor of THE LANCET.

SIR,—In this year's Harveian Oration by Dr. C. Theodore Williams interesting reference is made to the treatment of consumption by blood-letting under the distinguished physicians of a bygone time, who employed it in their own empirical way. There is also evidence to show that this method was then looked upon as a panacea for all the ills, and self-medication, by resort to it in the barbers' shops, must have been an everyday occurrence in the large towns of Europe. The practice is in vogue, during the autumn and the spring, in a few Eastern countries at the present day, among semi-civilised Mahomedan peoples, who still cling to the old method of inoculation as a prophylactic against small-pox—needless to add, without the least aseptic precautions. The method probably originated with the old Arabian school of medicine B.C. But it is due to the highly instructive and important paper by Dr. R. F. Fox, entitled "Cases Illustrating the Use of Venesection," which appears in THE LANCET of Nov. 4th, that I feel prompted to add the following brief contribution.

The scientific significance of this method was, I believe, first elucidated in this country by Professor Dryer, of Oxford, at the Royal Army Medical College, Millbank, in November, 1907, by an elaborate lecture on the subject, at which I was a privileged listener. Professor Dryer, who is a pupil and colleague of Schröder of Copenhagen, drew special attention on that occasion to an "acme point" being reached, during successive proportionate bleedings of the inoculated rabbits, while their bodily resistance increased, and after further bleedings fell.

In Dr. Fox's excellent illustrations of both acute and chronic specific diseases it is acknowledged that no mere mechanical relief to the heart could explain the observed effects. Since Metchnikoff's epoch-making discovery of the phenomenon of phagocytosis as a mechanism of bodily defence, its relationship to the acquisition of immunity has been vaguely acknowledged and no more. There seems to be, therefore, a gap that requires linking up, with a view to the elucidation of these physiological phenomena. I venture to submit that this can only be achieved by increasing our little knowledge of the lymphatic systems of the body, about which next to nothing is known. The literature of this subject in English text-books is of the most meagre and fragmentary kind. One must needs turn to the elaborate works of such French authors as Poirrier, Cuneot, and Delamare, pupils of the great Sappey. The late Mr. Cecil H. Leaf's translation, entitled "The Lymphatics," is the most instructive English work of its kind. Since its publication in 1903, the subject has had a fascination for me, and I have taken notes.

I beg to submit the following suggestions for realisation: 1. Leucocytosis is a physiologically perpetual phenomenon on a vast scale, which is more noticeable after food is partaken of, and during extravascular infectious processes of the body. 2. Leucocytes are not the normal cellular constituents of the blood, but of the extra-vascular plasma. Their intrusion into the blood-stream is accidental, and in the venous blood they run risks of asphyxiation. 3. That while their relative proportion to the erythrocytes is 1 in 500 in the blood-stream itself, their actual proportion to erythrocytes in the body is nearer 5,000,000 to 1. 4. That phagocytosis is performed normally outside the blood-stream, where anti-bodies are only generated, and the lowering of blood pressure by venesection facilitates the infusion of these, by an aspiratory effect into the blood circulation.

I am, Sir, yours faithfully,
Wimpole-street, W., Nov. 15th, 1911. H. D. MCCULLOCH.

ELECTION OF DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—Kindly permit me through your valuable columns to thank the 3424 medical practitioners who recorded votes in my favour at the recent election. Especially are my thanks due to numerous personal friends in London and the provinces who voluntarily undertook the labour of forming committees and canvassing in their respective districts. I sincerely regret that the state of my health prevented me from effectively seconding their efforts by organising and attending meetings of the profession in London, Manchester, Liverpool, Leeds, and other large towns to discuss the objectionable National Insurance Bill and other medico-political questions of the day. Had the election campaign been carried out actively on the usual lines on behalf of my colleagues, Drs. Hawkyard and Lawrence, and myself, I venture to think that a considerable number of the 12,000 and more registered practitioners who did not take the trouble to fill up their voting papers would have voted solidly for us.

The events connected with the recent election, in my opinion, emphasise strongly the need of an early reform of the Medical Acts, especially in regard to Direct Representation on the General Medical Council.

I am, Sir, yours faithfully,
Callington, Cornwall, Nov. 15th, 1911. GEORGE BROWN.

A SPHYGMOGRAPHIC METHOD FOR THE ESTIMATION OF SYSTOLIC AND DIASTOLIC BLOOD PRESSURE.

To the Editor of THE LANCET.

SIR,—In Dr. Windle's note in your issue of Nov. 18th, he states that by the auscultatory method he takes as the reading of diastolic pressure the point at which the sound ceases to be heard on releasing air from the armlet bag. According to Dr. George Oliver and others, the point to take is that at which a distinct change in the intensity of the sound occurs, which is generally pronounced and limited to 1 or 2 mm. of the scale. The point at which the sound ceases to be heard is, I usually find, a very considerable number of mm. lower. In using Pachon's sphygmo-oscillometer, which has been recently described in various journals,[1] the point of definite decrease in the amplitude of oscillation on reducing air pressure is taken as corresponding to the point to which I refer, though on further reduction of pressure considerable oscillation still takes place. I have not, however, any practical experience of this instrument. It is still a debateable point as to what reading represents most truly the diastolic pressure. Having abandoned for some time the tactile method in favour of the auditory, I find the latter to give more precise readings, whatever their exact interpretation may be.—I am, Sir, yours faithfully,
Melton, Suffolk, Nov. 24th, 1911. STEPHEN G. LONGWORTH.

VETERINARY TRAINING AND THE PUBLIC HEALTH SERVICE.

To the Editor of THE LANCET.

SIR,—I should like to say a few words upon an annotation headed, "Veterinary Training and Public Health," which appeared in your columns recently. As one that has recently qualified at the London Veterinary College, and taken the post-graduate course at that institution, I could not help taking some of Dr. D. N. Knox's

[1] THE LANCET, Sept. 2nd, 1911, p. 680.

remarks as a slight to the veterinary profession, and I can only consider that he is ignorant of the methods of training employed at the Veterinary Colleges. The course of pathology and bacteriology at the London College, under Sir John McFadyean, is very thorough, and the students spend a considerable time in the laboratory. During the post-graduate course the men spend five hours a day in the laboratory for ten weeks, and I think that anyone having taken these two courses can reasonably consider himself capable to act as an official in a scientific laboratory. And I do not agree with Dr. Knox that at the present time, and for some time in the future, men would have to be chosen from the medical officers of health to fill these positions.

The final-year students and the men taking the post-graduate course attend the Islington cattle market regularly for the purpose of studying meat inspection, and lectures on this subject form part of the College curriculum. So that I think that the veterinary profession can justly claim to be the most suitable men, at least, for the inspection of meat. No other profession devotes its whole time and energy to the study of the diseases of the domestic animals.

I am, Sir, yours faithfully,

J. MALCOLM ARMFIELD, M.R.C.V.S.

Croydon, Nov. 14th, 1911.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Bristol Medical School: Annual Dinner.

THIS dinner was attended by over 100 past and present students of the Bristol Medical School. Mr. C. E. S. Flemming, of Bradford-on-Avon, occupied the chair, and Mr. Howard Marsh, professor of surgery in the University of Cambridge and Master of Downing College, was the guest of the evening. After the loyal toast, Professor Marsh's health was proposed by Mr. E. H. E. Stack; and Professor Marsh's reply included a proposal of the health of the University of Bristol. To this Professor E. Fawcett, Dean of the Medical School and professor of anatomy, replied for his own faculty, and Professor A. R. S. Kemp, professor of Greek, on behalf of the other faculties. The health of the students, past and present, was proposed by Dr. J. O. Symes, who spoke of the overloading of the curriculum and some of the evils consequent thereon, to which Dr. Cecil Clarke and Mr. C. C. Harrison replied. The health of the president was proposed in an admirable speech by his brother, Dr. A. L. Flemming.

Chancellorship of the University of Bristol.

It has been officially stated that the name of Lord Haldane will be submitted to the next meeting of the court in December for election to the Chancellorship of the University. It is universally agreed that no more suitable and honourable name could have been brought forward.

A Medical Mayor's Dilemma.

Dr. Charles J. Vlieland, the mayor of Exeter, who is one of the assistant medical officers of health of the city, recently placed his resignation of the latter office in the hands of the city council on the ground that his retaining a salaried appointment was incompatible with his holding the office of mayor. After some discussion, in which members of the council stated that it seemed most unfair to expect Dr. Vlieland permanently to resign the appointment and for the city to lose his valuable services, it was decided to accept the resignation for the year of office only. The matter was referred to the sanitary committee to make arrangements for the performance of his duties as assistant medical officer of health during the ensuing year.

Gloucestershire Royal Infirmary.

The annual meeting of the members of the Gloucestershire Royal Infirmary League was held on Nov. 15th, under the presidency of the chairman, Colonel Curtis Hayward. It was stated that during the past 12 months members of the league had collected £236, and that this sum had been handed over to the treasurer of the infirmary. Colonel Hayward said he was sorry to see that it was proposed to erect a memorial hospital to the late Sir Charles Dilke at Speech House, in the Forest of Dean. He hoped that the memorial would take the form of a convalescent home, as the original scheme would divert subscriptions from their own infirmary.

Acute Poliomyelitis in Devonshire.

The medical officer of health of Devon, Mr. G. Adkins, reports that since the outbreak of the disease last July, 129 cases of poliomyelitis have been reported, with 24 deaths. During the same period, four cases of cerebro-spinal fever have occurred.

The Didworthy Sanatorium for Consumptives.

On Nov. 4th, the mayor of Plymouth, in the presence of a large gathering, laid the foundation-stone of a new pavilion, to be added to the Didworthy Sanatorium for Consumption, at Brent, near Plymouth. This is a portion of the Plymouth memorial to the late King.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Association of School Medical Officers for Scotland.

A GENERAL meeting of this association was held in the Ophthalmic Institute, Glasgow, on Nov. 18th. Dr. E. T. Roberts, the president, occupied the chair, and 41 members were present. Seven new members were duly elected. Dr. H. Wright Thomson gave a demonstration of eye diseases in relation to school medical inspection. Cases of blepharitis marginalis, catarrhal and strumous ophthalmia, interstitial keratitis, trachoma, ophthalmia neonatorum, and myopia were shown. Dr. Thomson concluded his most instructive demonstration with a review of the methods of instruction at present employed in the education of the blind and partially blind. Dr. Walter F. Brown read a paper on "A Plea for Special Classes for Cases of High Myopia," in which he detailed the methods of teaching as carried on in these classes in London and elsewhere, and urged that such classes would be of great benefit in rural districts where access to institutions was difficult. On the proposal of Dr. Roberts votes of thanks were awarded Dr. Thomson and Dr. Brown. It was arranged to hold the next meeting of the association in Perth on Saturday, Jan. 20th, 1912.

Control of Phthisis in Glasgow.

The report just issued by the Local Government Board on the administrative control of tuberculosis in Glasgow is worthy of serious consideration, not only for its own sake and in relation to the specific recommendations—of which the chief is the vesting of all control in the public health authority instead of dividing control between that body and the parish councils—but because of its suggestive value as regards the best way of grappling with the whole problem involved. Two years ago, owing to the pressure on the available hospital and poorhouse accommodation, the Local Government Board instituted an investigation as to the whole control of tuberculosis in Glasgow, and three reports are the outcome of this investigation, and are given in a Blue-book just published. In the first Dr. F. Dittmar, medical inspector, summarises and illustrates the work of the Glasgow parish council, and also describes the sanitary and economic conditions of a series of patients on outdoor relief. In the second, Dr. Elizabeth M. McVail shows the work done in that section of Glasgow served by Govan combination poorhouse, and describes fully the clinical and economic conditions of 100 patients. In the third, Dr. T. F. Dewar deals with the administrative measures taken by the public health authority, and analyses 100 consecutive cases notified to the medical officer of health in order to illustrate the administrative difficulties and the methods whereby they may be solved. In his report Dr. Dewar draws attention to the fact that throughout the country generally considerable uncertainty prevails concerning the relation of the authorities entrusted with the administration of the Poor-law and the care of the public health respectively as regards the responsibility for the control and the eradication of tuberculosis. In Glasgow the problem is especially grave and acute for several reasons. The solution of the question is divided between two administrative departments, resulting in overlapping, want of continuity, and deficient coördination. There are yet other factors which make inquiry and consideration of the whole subject a matter of extreme urgency and difficulty. Under the existing Poor-law

in Scotland it is illegal to relieve the dependents, whether ill or healthy, of an able-bodied man. As a result, if a wife be tuberculous and the husband can only partially contribute towards her maintenance in hospital, she cannot be relieved. Again, as pointed out by the medical officer of health of the city, while the consumptive pauper may obtain accommodation and treatment in a Poor-law institution, there is no such provision for the patient just above him in the social scale, so that the improvident are better off than the provident. It is true that something much better than the law provides is frequently done, but all will admit that it is not a very healthy state of affairs when the law must be broken, or evaded, or ignored in the interest of humanity and common-sense. In Glasgow compulsory notification was adopted in 1910, and at present there are five sources of information—"private" notification from medical practitioners, "parochial" by the Poor-law medical officers; "public" notifications from hospitals, dispensaries, and other public medical institutions; "death-cards" (following the visit of a sanitary inspector to a house in which a death has occurred); and from the Poor-law hospitals. On receipt of notification, whatever its source, the patient's house is visited by a sanitary inspector, who fills up a schedule as to the home conditions, ascertains if the visits of the phthisis nurse would be acceptable, arranges for the washing and disinfection of clothes, and presents the patient with a leaflet of instructions. Four nurses are employed in the domiciliary visitation of patients' homes. In addition, five tuberculosis dispensaries have been established by the health authority throughout the city. These are intended to act as a "clearing house," and also to link up the various agencies into administrative association. Dr. Dewar makes the following suggestions:—

1. The whole duty and responsibility for the control of phthisis should be vested in the local authority (as apart from the relief of dependents rendered destitute by the incapacity of the wage-earner).
2. There should be such extension of the accommodation for cases of phthisis as will permit of (*a*) a period of educational isolation for early or hopeful cases; (*b*) isolation of all advanced cases prepared to accept it.
3. There should be such modification of the methods of disinfection as will imply the thorough cleaning of premises by the tenant or owner as advised by the sanitary authority.
4. Cases which have been notified should be kept under observation so long as they remain a menace to the public health.
5. Patients who are excreting tubercle bacilli should, under the powers conferred by the Public Health Act, be detained in hospital, if their houses or habits make domestic isolation impossible.
6. There should be close and regular supervision of all notified cases which usually reside in common lodging houses.
7. Suitable premises should be provided for the conduct of the work of the dispensaries, and that work extended by increase of medical and nursing staff.

Nov. 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Bicentenary of the School of Physic in Ireland.

A MOVEMENT is on foot to celebrate in suitable fashion the bicentenary of the School of Physic in Ireland, better known as the Medical School of Trinity College. Although there was a professor of physic and a *socius medicus* from the early times of the College, it was not until the second decade of the eighteenth century that anything like an organised school existed. Within a few years professorships and lectureships in anatomy, chemistry, botany, and physic were founded, the last-named from funds left by Sir Patrick Dun. It is proposed to hold the celebrations next June, and a provisional committee has been formed consisting of Professors James Little, Sir Charles Ball, W. H. Thompson, James Craig, A. Francis Dixon, Dr. A. C. O'Sullivan, and Dr. T. P. C. Kirkpatrick. A committee of graduates will shortly be formed, and those who are willing to become members are invited to send in their names. Meanwhile, the provisional committee is anxious to receive suggestions as to the conduct of the celebrations, and invites the loan of documents or other objects of interest which may illustrate the history of the school.

The Milk-supply Commission.

The Irish Milk-supply Commission, the appointment of which was announced recently, has commenced its sittings in Dublin Castle. Among the first witnesses examined were Sir Charles Cameron, medical officer of health of Dublin, Mr. A. Watson, chief veterinary inspector for Dublin, and a representative of the Local Government Board.

Town Planning Association.

A public meeting was held on Nov. 27th, under the presidency of Her Excellency the Countess of Aberdeen, to inaugurate a Housing and Town Planning Association of Ireland. The object of the association, as explained by a provisional committee, is to supply a permanent educative force on behalf of reform and regeneration, and to create in Ireland a body of sound public opinion which would eventuate in the uprise of beautiful and healthy towns, the amelioration of the hard lot of the workers, and indirectly in the decline of pauperism and crime.

The Government and Irish Schools.

At the monthly meeting of the Londonderry No. 1 School Attendance Committee on Nov. 22nd, the Ven. Archdeacon Colquhoun presiding, the Rev. Patrick O'Doherty proposed a resolution urging upon the Commissioners of National Education the necessity of providing a new school in the townland of Altahoney. The Rev. John Beckett, in seconding the resolution, said the Irish National Schools were a disgrace. He was strongly of opinion that Government should make the children its first care, for they were the only hope of the State. It is interesting to find the clergy of the various ecclesiastical bodies in Ireland taking steps to ventilate a matter to which medical men have so frequently called attention in Ireland.

Typhoid Fever Epidemic at Omagh Asylum.

At a meeting of Omagh rural council held on Nov. 25th the medical officer of health forwarded 77 notifications of cases of typhoid fever at Tyrone and Fermanagh Asylum. He again directed the council's attention to the necessity of the asylum authorities providing a tank for the proper treatment of the sewage before it reached the river which flowed through Omagh. The chairman replied that the cause of the outbreak had not yet been discovered, and suggested that the asylum authorities be asked if they had received a report on this matter from the expert they had employed, a course which was agreed to. It is to be hoped the Local Government Board will compel the authorities to take some action to prevent sewage from an institution full of typhoid fever patients to pass untreated into a river which subsequently passes through a county town until the cause of the outbreak is discovered.

Enteric Fever at Hillsborough, Co. Down.

At a meeting of the Hillsborough rural council held on Nov. 21st it was reported that the outbreak of enteric fever there was probably due to the pollution of the surface well used by the occupiers of eight houses, in four of which the disease had occurred. Suggestions were made by the Local Government Board Inspector (Dr. B. O'Brien), who pointed out that it was the duty of the sanitary authority to provide a pure water-supply, and that the wells should be properly protected and that pumps should be erected instead of the dip wells. A committee was appointed to investigate the matter.

Pomeroy Dispensary.

At a meeting of the Cookstown board of guardians, held on Nov. 25th, Mr. W. J. F. Mayne, M.B. Edin., was elected medical officer of the Pomeroy dispensary district at £80 per annum to begin with—that is, £10 less than formerly. Subsequently, at a meeting of the rural council, Dr. Mayne was appointed medical officer of health for the Pomeroy district at a salary of £20 per annum.

Nov. 28th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Canadian Death Toll in Four Years.

"WHAT we Pay for Hustle" is the title of an editorial article in the *Monetary Times*, Toronto, of recent date. In four years in Canada there have been killed by steam railways 2049 persons; by electric railways, 301; by industrial accidents, 5296; by fires, 1072; total, 8718. Those who have been injured by steam railways number 7344; by electric railways, 8296; by industrial accidents, 10,444;

by fires (estimated), 1908; total, 27,992. This looks as though Canada needs better laws for the protection of life.

St. John Ambulance for Quebec.

The general secretary of the St. John Ambulance Association has arrived in Montreal from Ottawa in connexion with the establishment of a provincial branch for this association in Quebec, with headquarters in Quebec. The Canadian branch, which was only recently organised, is at the present time giving instruction to more than 3000 people. The Canadian Pacific Railway, recognising the value of the movement, has established posts for instruction from coast to coast. After the branch is established in the province of Quebec five lectures on first aid will be given weekly by a Montreal physician. Lectures will also be given exclusively for women.

Small-pox in Quebec.

In spite of all the measures adopted by the Provincial Board of Health of Quebec small-pox is spreading in that province. The outbreak is active in the Lake St. John district, the North Shore of the St. Lawrence, Beauce County, L'Islet, Ottawa district, and St. Maurice County. In the latter county 20 cases were recorded during the first week in November, and the strictest quarantine measures have been adopted. Dr. Elzear Pelletier, secretary of the Quebec Board of Health, says that the greatest obstacle encountered by the board is the apathy of local municipal authorities, who are rather loath to enforce vaccination. He considers that opposition to general vaccination was the real cause of the actual outbreak. Country physicians are also too prone to diagnose mild cases of small-pox as chicken-pox.

McGill University as a Model for the English Royal Commission.

It is gratifying to Canadians that the structure and constitutional development of McGill University, as regards the relations of the University to practical trades and industries, is being carefully studied by a British Royal Commission. Before the Commission now sitting Principal Peterson gave some history of McGill in the last 15 years, which he summed up in the word "unification." He also cited the great reversion of feeling in connexion with the teaching of medicine in that institution. Whereas formerly to a large extent medical teaching was in the hands of practitioners, the medical men asserting that the proper teaching of medicine was the teaching of medical men by medical men, and the unification conception was depreciated, now the medical men of the school are satisfied that the university view of medical study is absolutely indispensable for the success of a well-conducted medical school. Referring to the sciences, Principal Peterson declared that the aim in Canada was to begin with the highest department of technical and scientific work. Every year from 80 to 90 men pass from McGill equipped with the science degree straight into well-remunerated positions of usefulness. The number of students from England is increasing year by year; and there are now some 50 or 60 English boys taking their education in the science branches alongside of Canadians. McGill has not yet rivalled Toronto University in granting a degree in domestic science.

Infant Mortality in Montreal.

Out of every 100 children born in the city of Montreal in the year 1909, when the last blue-book was issued on this subject, 29 died in the first year; and out of the total mortality of the people 54·92 per cent. was caused by the deaths of children under 5 years of age. In the month of July in the present year out of 1419 deaths 1033 were those of children under 5 years of age, giving 72·92 per cent. of that month's mortality. Out of 6297 deaths occurring in Montreal from Jan. 1st to July 31st, 1911, 3482 were those of children under 5 years of age. According to Professor N. H. Alcock, the newly appointed professor of physiology at McGill, succeeding the late Dr. Wesley Mills, one of the pressing needs of McGill University is an institute of physiology, which Professor Alcock considers could be provided for £5000 and maintained for £800 a year. He considers that the infantile death-rate in Montreal, through scientific precautions, could be materially lessened, as in Paris, where it has been reduced one-half.

Cancer in Ontario.

According to the report for 1909 of the Registrar-General of Ontario, which has just been issued, there were in that province 1597 cases of cancer resulting in death. The advance in cancer in the province is shown by the fact that in the year 1902 there were 1048 deaths from cancer; in 1903, 1156; 1904, 1253; 1905, 1224; 1906, 1411; 1907, 1329; 1908, 1348. In the county of York, in which Toronto, the chief city of Ontario and the second of Canada is situated, there were 308 deaths from cancer, of which 259 occurred in Toronto, but many go to the hospitals of the city to be operated on.

Deaths from Venereal Diseases in Ontario.

It is significant of the times that the Ontario Board of Health in its report takes cognisance to some extent of the deaths resulting from venereal diseases in that province. Under the head of syphilis and gonorrhœa the deaths are set at 25. Of these, 15 were found in children, 13 being in those under 1 year of age, and the remaining two under 2 years of age. Twenty-two of these cases occurred in the cities, 19 being in Toronto. The report considers this question one of vital importance, and advises systematic instruction in the schools about these diseases. Opinion is divided on this matter, but the opinion is growing that all venereal diseases should be under the direct surveillance of the medical health officer.

Deaths from Tuberculosis in Ontario.

In the year 1909 there were 2380 deaths from tuberculosis in Ontario. In 1870 the number was 886. Year by year these deaths increased until the year 1900, when they stood at 3484. Since that time there has been a decline. There were 131 less in 1909 than in 1908. The ratio per 1000 of the population is 1·06, whilst the percentage of deaths from tuberculosis, compared with the number (32,628) of deaths, is 7. The new building at Ste. Agathe is now in full operation and caring for 45 patients. The paid-up donation fund amounts to $85,949, but there is still a debt of $77,000 on the building. There was a deficit in the expenses for the year of $1,994.

Registration at the University of Toronto.

Over 3500 students have registered in all departments of the University of Toronto for the ensuing year. The arts number 1765; medicine, 512; education, 266; applied science, 780; household science, 143; forestry, 47. With "regular occasionals," dental and veterinary students, and teachers in the summer session, the year's total is brought up to 4144.

Academy of Medicine, Toronto.

The formal opening of the new building of the Academy of Medicine, Toronto, took place on Oct. 26th. The President, Dr. N. A. Powell, with Mrs. Powell, received a large number of members and their friends. Mr. Allan Hazen, a New York expert on water-supplies, delivered an address on the filtration plant about completed for Toronto. Dr. Powell's Presidential address went very fully into the hospital situation in Toronto. The Academy of Medicine will ask the Government to supply antityphoid vaccine to those going into lumber camps for the winter. Speaking on this resolution, Professor McPhedran considered it was more important for the Government to supply pure water.

Toronto's Filtration Plant.

The completion of Toronto's water filtration plant, which was begun two and a half years ago, is announced. The cost will be $1,250,000. It covers 17½ acres. It has 12 filters, each measuring 312 by 117 feet. The capacity of the filters is 50,000,000 gallons in 24 hours. The capacity of the pure-water reservoir is 8,000,000 gallons. The process is that of slow sand filtration. Each filter is lighted by 12 interior electric lights; its walls are 3 feet thick at the base and 20 inches thick at the top. Some time hence Filtration Plant Park will be one of the prettiest spots in the neighbourhood of Toronto Island.

Violent Deaths on the Increase in Toronto.

Toronto's list of violent deaths increases every year. The total number for the past official year reached 177, the number of drownings, as usual, heading the list with 29, one less than for the previous year. Carbolic acid poisoning comes next, claiming 18 victims. This would show that the law governing the sale of carbolic acid is not properly enforced. There were 17 deaths from street-car accidents; 13 steam-car accidents; 11 burned to death; and 7 automobile deaths. The victims of gas poisoning numbered 13,

as against 8 of the previous year. Five people shot themselves this year; last year, none. Three people hanged themselves.

Annual Meeting of the Laurentian Sanatorium.

The annual general meeting of the Laurentian Society was held recently in Montreal. Mr. D. Lorne McGibbon, the President, occupied the chair.

Nov. 7th.

Obituary.

WILLIAM WILFRID WEBB, M.D., C.M. ABERD., M.R.C.S. ENG., F.S.A.,

LATE MAJOR, INDIAN MEDICAL SERVICE.

Dr. Wilfrid Webb was a son of Dr. F. C. Webb, physician to the Great Northern Hospital and editor of the *Medical Times and Gazette*. He was born in 1857, and was educated at King's College School, at Charing Cross Hospital, and at the University of Aberdeen. He became L.S.A. in 1878, M.R.C.S. in 1880, and in April, 1881, he graduated M.B., C.M., at Aberdeen, with highest academical honours, being the only man in his year to gain this distinction. He graduated M.D. in 1894. He held the following appointments in London before entering the Indian Medical Service: assistant demonstrator of anatomy and demonstrator of physiology at Charing Cross Hospital School, house physician at the Great Northern Hospital, and medical registrar at Charing Cross Hospital. In the spring of 1882 he suffered severely from rheumatic fever, and by the advice of his friends he gave up his intention to practise as a physician in London. In 1882 he obtained the second place in the open competition for commissions in the Indian Medical Service. At Netley he was awarded the gold medal for military medicine and the Fayrer prize in pathology. Proceeding to India, he served in the following regiments: 14th Sikhs, 2nd Regiment of Central India Horse, 29th Punjab Infantry and Meywar Bhil Corps. In the July of 1886 he was seconded for service in the political department under the Indian Foreign Service, being sent as residency surgeon to the court of H.H. the Maharanah of Udaipur, and thence he was in due course transferred to Bikanir. At Bikanir, as at Udaipur, he not only had charge of the Government medical work, but he was also superintendent of all the hospitals, dispensaries, and jails in these States and head of the vaccination department. In 1888 he acted as guardian to H.H. Ganga Singh, and he also held charge of the Bikanir Political Agency. His career in India was brought to a close by another attack of rheumatic fever, and in 1894 he was placed on permanent half-pay. In 1893 he became secretary of the Army Medical School and curator of the Museum at Netley. There he remained until the abolition of the Army Medical School, when his connexion with the service was finally severed. While at Netley he carried on a considerable private practice, and took an active interest in local affairs. In 1899 in consequence of the issue of the Royal Warrant, he was ordered to assume the title of captain, and in 1900 he was promoted to the temporary rank of major. During his life he did much useful literary work; he was for about 15 years a constant contributor to THE LANCET, and for many years he contributed the article on the Public Services to our Students' Number. He also published a book on the Indian Medical Service in 1890, and a work on "The Currencies of the Hindu States of Rajputana," illustrated by himself. He took great interest in biographical, genealogical, and heraldic work, and contributed many articles to "The Dictionary of National Biography." On the abolition of the Army Medical School he went to reside at Berkhamsted. Subsequently he moved to Exeter, where he died on Nov. 18th.

Dr. Wilfrid Webb will be greatly regretted by all who knew him. The above brief enumeration of the facts of his life shows that he was a highly gifted man, whose promising career was terribly prejudiced by ill-health.

WILLIAM MILLINGTON, M.D. EDIN., M.R.C.P. LOND.,

CONSULTING PHYSICIAN, WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

ANOTHER link with the past has been severed by the death, on Nov. 5th, of Dr. William Millington, of the Clevelands, Wolverhampton, at the advanced age of 90 years.

Born at Oldbury in 1821, he began his professional studies at Guy's Hospital, London, where he came under the teaching of Aston Key, Bransby Cooper, Cock, Hilton, and Poland. He afterwards proceeded to Dublin and to Edinburgh, where he was clinical assistant to Dr. Robert Christison and Dr. Allison. He tied with the late Sir John Burdon Sanderson for one of the University distinctions. In 1851 he obtained the graduation gold medal for the thesis on the Pathology of Pus in the Blood. Many of the observations upon which this essay was based were the outcome of his studies under Sir James Y. Simpson, who wrote of his pupil, "He is sure to acquire the very first rank in his profession in whatever part of the world he may settle, for I have seldom seen professional zeal and earnestness more thoroughly combined with extensive professional abilities and information." Until the last year of his life he continued to take the same keen interest in pathological and clinical details which had characterised him as a younger man.

Having already enjoyed extensive opportunities for clinical study, he spent the summer of 1843 in Paris, where he attended the hospital practice and teaching of Roux, Lisfranc, and Velpeau. He became a Member of the Royal College of Physicians of London in 1859. In 1852 he was elected honorary physician to the South Staffordshire and Wolverhampton Hospital, with which institution he was thus connected for 60 years. For many years he was indefatigable in his work there, where an enormous number of patients attended under him, and where his reputation added greatly to that of the hospital. At the same time he had a large and extended practice, both private and consulting. He will chiefly be remembered by many of his patients as a pioneer in the open-air treatment of consumption, of which he was always a strenuous advocate. On his retirement from the staff of the hospital in 1885 he was elected consulting physician. He was largely instrumental in founding the Wolverhampton Eye Infirmary and was a member of the managing committee.

Dr. Millington was one of the original members of the Staffordshire county council and did valuable work, especially on the health committee of that body. He was a liberal supporter of many charitable and religious institutions.

The deceased leaves a widow, who is a sister of Sir Robert Ball, the professor of astronomy at Cambridge, and of Sir Charles Ball, the Regius professor of surgery at the University of Dublin, both of whom attended his funeral.

WILLIAM HENRY WEBB, M.D. DURH., L.R.C.P. LOND., M.R.C.S. ENG., L.S.A.,

SURGEON-LIEUTENANT-COLONEL 2ND BATTALION DEVON REGIMENT (T.F.), V.D.; MEDICAL OFFICER OF HEALTH OF KINGSBRIDGE (DEVON) URBAN AND RURAL DISTRICTS.

Dr. W. H. Webb died at Thurlestone, Devon, on Nov. 14th, in his fifty-ninth year. The deceased, who received his medical education at St. Bartholomew's Hospital, London, qualified M.R.C.S. Eng. and L.S.A. in 1876, ten years later he obtained the L.R.C.P. Lond., and graduated M.D. of Durham in 1893. Dr. Webb joined the late Dr. Cornish in partnership at Kingsbridge about 30 years ago, and on the retirement of the latter a few years later succeeded to the practice. He was highly respected and esteemed in Kingsbridge and the district, and had a very extensive practice. He was medical officer of health of the Kingsbridge urban and rural districts, honorary surgeon to the Kingsbridge Cottage Hospital, medical officer and public vaccinator for the third, fifth, and tenth districts of the Kingsbridge Union, and was also certifying factory surgeon for the district. He took a great interest in the Volunteer movement, and was Surgeon-Lieutenant-Colonel of the 2nd Battalion Devon Regiment (T.F.), V.D. He was a keen worker also in all local matters connected with Kingsbridge, and served on several of the public bodies connected with the town.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Bernhard Fraenkel, formerly honorary professor of laryngology in the University of Berlin, aged 75. His early professional life was spent in general practice in Berlin, and as a military surgeon during the wars of 1864, 1866, and 1870. Later he held various hospital appointments in Berlin and lectured on children's diseases. He then established a private dispensary for throat and nose cases, and obtained so much reputation for his scientific work in that field that the university took over the dispensary and made it a university clinic, Dr. Fraenkel being appointed

professor. This was the first university laryngological clinic established in Prussia. His publications are very numerous and include articles on throat and nose diseases in Ziemssen's Handbook and Eulenburg's Encyclopædia. He also edited the *Zeitschrift für Praktische Medizin* and the *Archiv für Laryngologie*. In addition to his purely scientific work he took a great part in the conduct of medical societies and was much esteemed in professional and non-professional circles, where he will be greatly missed.—Dr. Vincenz Fukala, of Vienna, whose views on the correction of myopia by operative measures attracted attention some years ago. His age was 64.—Dr. Louis Harvey Jones, formerly professor of forensic medicine in the Atlanta College of Physicians and Surgeons.—Dr. Hermann Kiefer, formerly professor of medicine in the Ann Arbor University, Michigan.—Dr. Henry Merriman, formerly lecturer on gynæcology in the Rush Medical College, Chicago.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

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TUESDAY, NOV. 28TH.

THE General Council of Medical Education and Registration commenced its winter session at its offices, 299, Oxford-street, W., to-day. Sir DONALD MACALISTER, the President, was in the chair.

New Member.

Mr. Rutherford John Pye-Smith took his seat as representative of the University of Sheffield. He was introduced by Dr. Caton.

The President's Address.

The President, Sir DONALD MACALISTER, then delivered his address. He said: We miss to-day, with deep regret, the familiar and ever-helpful presence of our general registrar, Mr. H. E. Allen. The news of his sudden death on July 10th brought a sense of personal loss to every member of the Council. For 33 years he had been associated with its work, and had performed the important duties assigned to him with assiduity and skill. Of those who constituted the Council when he entered its service not one is now with us, and only four remain of those who took part in his first appointment as general registrar. His great experience in all that related to the Council's business, his fidelity in carrying out its decisions, and his unsparing efforts to promote the efficiency of its administration, were constantly and gratefully recognised by successive Presidents, treasurers, and other members of the Council. His courteous bearing and his readiness to be of service impressed all who sought his aid, whether officially or privately. The spontaneous tributes paid to his memory by those within and without the Council whom he had thus assisted and befriended testify to the warm regard in which he was held. The Executive Committee, which naturally had special opportunities of estimating his character and abilities, has placed on the minutes an expression of its appreciation which the Council as a whole will doubtless endorse with sympathy.

In accordance with the Standing Orders the Executive Committee met in July and appointed the Assistant Secretary, Mr. Norman Carew King, to perform temporarily the duties of Registrar. With the loyal help of the other members of the staff Mr. King, as Acting Registrar, has since carried on the regular operations of the office. To these has been added the onerous and responsible work connected with the recent general election of Direct Representatives, undertaken on behalf of the English Branch Council. As President I have paid frequent visits to the office during the recess, and I have assured myself, as I am now pleased to assure the Council, that its administrative business has been conducted with great efficiency and economy under Mr. King's direction, and that its interests have suffered no detriment during the vacancy in the registrarship.

Certain changes in the membership of the Council have been intimated as actual or imminent. Dr. Cocking, the first member appointed by the University of Sheffield, whose ill-health prevented him, to our regret, from attending last session, has resigned his seat. In his place the University sends Mr. R. J. Pye-Smith, its Professor of Surgery. He bears a name that is honourably associated with the profession of medicine, and in particular with the rise and progress of the Sheffield Medical School. Dr. Finlay is about to resign the Regius chair of medicine in the University of Aberdeen and will retire from the Council next month. Happily, he will continue during the present session to afford us the benefit of his sound and sober counsel, in relation especially to the work of the Penal Cases and Examination Committees, to which during the past ten years he has rendered much good service. It is announced that his successor is Professor Theodore Cash, F.R.S., whose eminence as an investigator in the domain of rational therapeutics will ensure him a welcome. The election of a representative by the registered practitioners of Scotland has resulted in the return of Dr. Norman Walker unopposed. This notable token of approval and confidence on the part of his professional brethren in Scotland will give much satisfaction to his colleagues on the Council. In England Dr. Langley Browne and Dr. Latimer have been re-elected, by large majorities, for a further term of five years. The Council is to be congratulated on thus retaining the services of two members who have in the past so ably contributed to its practical efficiency. In pursuance of a recent Order in Council, an additional representative was elected at the same time, to hold office from the beginning of January. The new member is Dr. T. J. Verrall, and the election shows that he holds a high place in the favour of his fellow practitioners. He has taken an active part in medical organisation and is conversant with the public questions which at present engage professional attention. His experience will enable him to contribute a valuable element to our discussions.

Before turning to topics other than personal, let me mention the passing of one of the most eminent of our former members, the late Sir Samuel Wilks. He sat with us as the representative of the University of London for nine years, during which he was at the height of his fame as a scientific physician. His strong individuality, his sententious wisdom, and his downright sincerity of purpose, made an abiding impression on those who then were privileged to work with him.

The progress through Parliament of the National Insurance Bill has been watched by your committee with close attention, and occasionally with some perplexity. The proposals for its amendment, which you adopted at the last session, were duly communicated to the Government through the Lord President; and they were also advocated at personal interviews with the Chancellor of the Exchequer and other officers of the Treasury. The correspondence with the Chancellor which ensued has been made public at his request, and is in your possession. The Chancellor indicated his personal agreement with most of the Council's recommendations, and promised that they should have his favourable consideration when the Bill came to be amended in Committee of the House of Commons. Copies of the Bill, as amended in Committee, have now been placed before you, in order that you may judge of the extent to which effect has been given to your suggestions. The committee in charge of the subject will report on it during the present session of the Council, but in the meantime it may be convenient if I indicate in a few words the position which appears to have been reached.

It is now provided that of the Insurance Commissioners for England "one at least shall be a duly qualified medical practitioner who has had personal experience of general practice." The Advisory Committee, appointed for the purpose of giving the Insurance Commissioners advice and assistance in connexion with the making and altering of regulations, is by law to include duly qualified medical practitioners. The Local Health Committee (otherwise called the Insurance Committee) of a district may now consist of from 40 to 80 members. Of these, two are to be elected by the medical practitioners of the district, and at least one other member is to be a practitioner appointed by the Insurance Commissioners. It was pointed out by your committee that in the Bill as originally framed it might happen that not more than two practitioners were appointed on a Local Committee of 22. It will be observed that under the new provisions it is possible that a Local Committee of 80 may not include more that three medical practitioners. The Insurance Commissioners have power to appoint a larger number if they think fit, but they are not obliged to do so. The Council will have to consider whether the minimum

proportion prescribed by the Bill can be described as adequate.

A very satisfactory change in the Bill has been made in respect of the administration of "medical benefits." It is now provided that "medical and sanatorium benefits shall in all cases be administered by and through Local Health Committees." If this provision stood alone it would fully meet the request which was strongly urged by the Council—namely, that the administration of medical benefits by "approved societies" should be eliminated from the scheme of the Bill. But a clause, subsequently introduced, modifies to some extent the universal application of the principle thus laid down. The clause referred to admits "medical attendance and treatment," supplied under an existing system or organisation, to recognition and subsidy as "medical benefit" under the general scheme. This arrangement may prove to have a far-reaching application. As it appears likely to perpetuate the undesirable features of systems of "medical aid," already pronounced by the Council to be detrimental to professional efficiency, and therefore to the public welfare, it should not receive any sanction from us.

The regulations respecting "medical benefit" to be made by the Local Committee, with the approval of the Insurance Commissioners, are to be so framed as to provide for the establishment of a list of practitioners willing to act under the scheme, for the choice by an insured patient of the practitioner who is to attend him, and for the supply of medicines and appliances by properly qualified pharmacists. The importance of these points, which seem to have been overlooked in the original Bill, was pressed upon the Government by your committee. It is satisfactory to find that they have received due attention in the amended Bill. But it must be kept in mind that these and many other questions, on whose satisfactory solution the successful working of the scheme will depend, are to a large extent transferred from the domain of statutory enactment to that of local administrative regulation. For this reason it is of the highest importance that the various authorities concerned, both in framing and in carrying out the local regulations, should have ample facilities for obtaining counsel and assistance from medical practitioners of experience.

On the important question of the hospital treatment of insured persons, some steps have been taken to amend the Bill in the sense desired by the Council. There is still, however, much ground for the fear that the stability of many of the clinical hospitals will be endangered by the operation of the scheme, even in its present form. The efficiency of these institutions, in which medical students receive their practical training in the diagnosis and treatment of disease, is a matter of deep concern to this Council. It is our simple duty, in the public interest, to continue to urge upon the Government the importance of ensuring that their efficiency shall not be impaired.

With reference to the somewhat obscure subject of "maternity benefit," which is to be administered either by an "approved society" or by the Local Committee, it is now arranged that the mother shall herself select the medical practitioner or midwife who is to attend her. I have been informed that a further amendment is contemplated whereby the fee of a practitioner, who is called to attend a case initially under the charge of a midwife, will be chargeable on the funds of the body administering the "maternity benefit." This amendment, if adopted, may help to remove a defect which has seriously marred the working of the Midwives Act. It remains to add that bodies of Insurance Commissioners, distinct from the Commissioners for England, are to be established for Scotland, Ireland, and Wales respectively. It is not expressly provided that these bodies, or the Advisory Committees which will presumably be appointed to assist them, shall include any medical practitioners. This may be an oversight, but it should be made good before the Bill passes into law. In the case of Ireland "medical benefit" is for the present excluded from the purview of the general scheme. Whether the members of the Branch Council for Ireland will view this exclusion with apprehension or with relief I am not in a position to state. In a sense, however, it disposes for the present of the point raised by the Council—namely, that the Irish Poor-law Medical Service should be kept separate from the medical service of the insured part of the population.

The attention of Parliament has been so completely preoccupied since we last met that no steps have yet been taken to bring before it proposals relating to the administration of anæsthetics, the restriction of unqualified practice, or the registration of diplomas in tropical medicine. As a result of recent judicial decisions, it has become notorious that the law, with regard to the assumption by unqualified persons of misleading designations in dentistry, is seriously defective, and ought in the interest of the public to be amended forthwith. The inquiries I have made on behalf of the Council as to the prospects of legislation on any of these matters in the coming session of Parliament have yielded little ground for hopeful expectation. The Council can only continue to press on the attention of the Government departments concerned the gravity of the existing conditions and the necessity of providing a remedy.

The Pharmacopœia Committee has undertaken the duty of preparing a revised text of the British Pharmacopœia with a view to a new issue. It has appointed as editors Professor Tirard, of King's College, London, and Professor Greenish, of the Pharmaceutical Society of Great Britain. Each of these gentlemen has taken an important part in the preliminary inquiries, which have been for some years in progress under the direction of the Pharmacopœia Committee itself, and of the Committee of Reference in Pharmacy nominated by the Pharmaceutical Societies of Great Britain and of Ireland. They are at present engaged in arranging the abundant materials bearing on the subject of revision which have been accumulated by the committee since the last issue of the Pharmacopœia and its addendum, and they will therefrom prepare a first draft of successive sections of the new issue for the consideration of the committee. The committee will from time to time report as to the progress made; but some considerable interval must elapse before the complete work is ready for submission to the Council.

The inspection of the various qualifying examinations in dentistry and dental surgery has been carried out during the past year by Mr. A. S. Underwood. His official reports, with the observations thereon made by the qualifying bodies, and a report on the results of the cycle of inspections by the Dental Education and Examination Committee, will probably be placed before you at the present session. The memoranda received from the several universities and colleges on the subject of public health diplomas, with special reference to recent proposals for altering the educational and other conditions under which these are now conferred, will be communicated by the Public Health Committee. The Council will thus have at its disposal the materials necessary for a considered judgment on the proposals in question.

So far as I can estimate from the documents before me, the other matters which fall to be dealt with on this occasion, though important in themselves, are not likely to require a prolonged sitting of the Council.

On the motion of Dr. LITTLE the President was thanked for his address.

Commissions in the Services.

On the motion of Sir DAVID MCVAIL, the following yearly tables for 1911 were received: (*a*) Table showing results of competition held in May, 1911, for vacancies in the Naval Medical Service; (*b*) table showing results of competition held in July, 1911, for commissions in the Indian Medical Service.

It was also agreed, on the motion of Sir DAVID MCVAIL,

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy and the Under-Secretary of State for India respectively, for the returns which they have again furnished to the Council, with the request that such returns may in the future continue to be furnished to the General Medical Council.

Apothecaries Society of London.

On the motion of Mr. NORTON, Mr. Vincent Warren Low, F.R.C.S., was appointed Assistant Examiner in Surgery to the Apothecaries Society of London in the place of Mr. Stansfield Collier, who retired on account of illness.

The New General Registrar.

The Council, sitting *in camerâ*, appointed Mr. Norman Carew King to the office of General Registrar, which was rendered vacant by the death of Mr. H. E. Allen.

Penal Cases.

The Council took up the consideration of penal cases. The most important of these was that of Mr. James Robertson Wallace, who had been required by the Council at their last session to produce evidence at the present session that his professional conduct had been satisfactory. Mr. Wallace explained his position at the Health Institute connected with

the name of Mr. Sandow, and the Council decided to postpone judgment on the case until next session, requiring of Mr. Wallace the testimony of medical practitioners or other persons of position as to his practice and conduct in the interval. Mr. C. E. Trimble was informed by the President that owing to his conformity to professional standards since the summer session his name would remain on the Register.

Restorations to Dentists Register.

After deliberation *in camerâ* the PRESIDENT announced that the Registrar had been directed to restore to the Dentists Register the names of Walter Clifford, Ruby Edmund Clifford, Isidore Clifford, and Stanley Clifford.

WEDNESDAY, NOV. 29TH.

The whole of the sitting was occupied with the consideration of penal cases.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—E. G. Brisco-Owen (Section II.), Cardiff and Royal Free Hospital; B. W. Brown (Sections I. and II.), Westminster Hospital; and C. C. Messiter (Sections I. and II.), St. Bartholomew's Hospital).
Medicine.—F. C. Shone (Section I.), University College Hospital; and W. H. Vincent (Sections I. and II.), St. Mary's Hospital.
Forensic Medicine.—B. W. Brown, Westminster Hospital; and L. K. Edmeades, Guy's Hospital.
Midwifery.—B. W. Brown, Westminster Hospital; and A. J. Tozer, St. Mary's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: E. G. Brisco-Owen and C. C. Messiter.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berne:* Dr. Guggisberg, *privat-docent* of midwifery and gynæcology, has been promoted to the chair vacated by Dr. Kehrer, who is going to Dresden.—*Breslau:* Dr. Karl Alexander, whose specialty is urinary surgery, has been granted the title of Professor.—*Königsberg:* Dr. Franz Unterberger has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Santiago (Chile):* Dr. Westenhoeffer, who has for some years been engaged in teaching pathological anatomy and establishing a pathological institute on German lines, has recently returned to Berlin, where he was formerly Virchow's assistant. Before leaving he was honoured by a great demonstration of Chilian students, amongst whom he was very popular.—*Tübingen:* The well-known gynæcologist Dr. August Meyer has been awarded a University prize of £500 for his researches.

THE ROYAL DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students of the Royal Dental Hospital of London was held at the Hotel Metropole on Nov. 24th, Mr. Walter Harrison occupying the chair. The chairman, in proposing the toast of "The Past and Present Students of the Royal Dental Hospital and the Dental School," said he very much appreciated the honour they had done him in asking him to be the representative old student to preside on that occasion. It was always a joy to meet old colleagues, and their annual gathering was a source of encouragement to the present students. He drew an interesting comparison between the way educational work was done in his student days and the progressive methods of the present time. As a teaching institution he was sure the Royal Dental Hospital took the lead for efficiency. He thought the teaching of chemistry and physics within the walls of the hospital a step in the right direction. He suggested that an annual oration should be instituted on these occasions. Mr. G. Northcroft replied in appropriate terms on behalf of the past students, and Mr. E. B. Armitage in a quite neat speech undertook the same duty for the present students, referring in eulogistic terms to the hospital staff and the teachers in the school. The Dean also responded to this toast, and referred to the success of the popular lectures which had been instituted, and to the research work, principally in connexion with the teeth of children, which had been carried out in the school. The toast of "The Visitors" was proposed by Mr. R. McKay, to which Dr. W. Hunter replied. The toast of "The Chairman" was proposed by Mr. C. Robbins. During the evening an excellent and enjoyable programme of music was gone through.

THE NATIONAL LEAGUE FOR PHYSICAL EDUCATION AND IMPROVEMENT.—The sixth annual general meeting of this league will be held at the Mansion House on Friday next, Dec. 8th, at 3.30 P.M., the Lord Mayor of London in the chair.

NAVAL MEDICAL DINNER.—We are asked to state that this dinner had to be deferred on account of the movements of the various divisions of the Home Fleet, but that Dec. 19th has now been fixed upon and officers concerned will receive detailed notices. Communications may be made to Deputy Surgeon-General J. Lloyd Thomas, Dinmor, Penmon, Beaumaris.

ACCIDENT TO PROFESSOR NEISSER, OF BRESLAU.—Dr. Neisser, whose name is well known in England, has had the misfortune to fracture his thigh. The accident occurred while he was inspecting some buildings to be used in a special exhibition of what we should call lock hospital arrangements. According to the latest intelligence he is progressing favourably.

UNIVERSITY EXTENSION GUILD (UNIVERSITY OF LONDON).—Mr. D'Arcy Power will deliver a lecture at the University of London on Friday evening next, Dec. 8th, taking as his subject the Evolution of the Surgeon in London. The lecture will commence at 8.15, and tickets of admission, price 2*s.* 6*d.*, can be obtained on application by post to the honorary secretaries of the guild, care of the Registrar, University Extension Board, University of London, S.W. Members of the guild will be admitted free.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on Nov. 17th, Dr. F. de Havilland Hall being in the chair. The records of the society are still very satisfactory, showing a good increase in the number of new entrants and a large addition to the funds, which now amount to just upon a quarter of a million sterling. The increase in the number of members is made more gratifying by the fact that the society has no agents, pays no commission for the introduction of new business, and spends almost nothing on advertisement. Over £180,000 have been disbursed by the society in claims, and in this way the advantages of membership are brought to the notice of the medical profession. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery-lane, London, W.C.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.—A council meeting of this association was held at 34, Copthall-avenue, E.C., on Nov. 21st. Surgeon-General G. J. H. Evatt, in the absence of Mr. D. B. Balding, chairman of council, presided. It was reported that the dispute between the Islington guardians and the local profession had been settled, and the "warning notice" withdrawn. In the dispute between the Shoreditch guardians and the local profession the honorary secretary, Dr. Major Greenwood, pointed out that the effect of local professional action had been to raise the salary of the district from £115 to £150 a year. No local practitioner had come forward, but the appointment had been given to the late assistant of one of them. Certain correspondence between the honorary secretary, Mr. E. G. D. Pineo, of Axbridge, and the clerk to the Axbridge guardians was laid before the council. Mr. Pineo had attended under a medical order a pauper who had died leaving a considerable estate, and he claimed to be paid extra out of this estate. The next-of-kin who inherited the money did not dispute the claim, but letters had passed between the clerk to the Axbridge guardians and Dr. Major Greenwood as to the legal position of the guardians in the matter. The council expressed its satisfaction that Mr. Pineo had recovered his charges, and thought that the legal opinion of the honorary secretary was probably correct, though the clerk did not accept it. The council then considered the recent circular of the Local Government Board respecting statistical information with respect to all paupers under treatment on Nov. 4th last. A letter was read from Mr. W. C. Milward, of Cardiff, enclosing another from the clerk to the Cardiff guardians, which very clearly denoted the amount of extra work thereby thrown on the medical officers if the requirements of the Local Government Board were to be properly carried out. Dr. Greenwood wished to know if any action was

to be taken by the association. He had written to the Local Government Board on the subject, but had as yet received no answer. He thought personally that such duties did not come under Article 205 (1) of the General Consolidated Order, July 24th, 1847, and that some extra payment ought to be made, but it was difficult to say what action could be taken at the present time. The council was strongly of opinion that extra payment should be made for this work, but did not think the time opportune to press the matter. It was resolved to wait till an answer had been received from the Local Government Board to a letter on the subject from the honorary secretary of the association (see p. 1589).

SOCIETY OF APOTHECARIES: LORD MAYOR'S DAY DINNER.—A distinguished company dined with the Society of Apothecaries on Nov. 29th in the ancient hall of the society. The Lord Mayor, Sir Thomas Crosby, M.D., who is this year's Master, presided, and he received many congratulations upon the great honour which the City of London has conferred upon him and upon the vigour and health which he enjoys at the advanced age of 81. He was supported by the President of the Royal College of Physicians of London (Sir Thomas Barlow), the President of the Royal College of Surgeons of England (Mr. Rickman Godlee), the Sheriffs of London, Dr. Norman Moore (representing the President of the General Medical Council), Sir Francis Champneys, Sir James Goodhart, Dr. J. Mitchell Bruce, Sir David McVail, Sir John Moore, Sir Shirley Murphy, Mr. G. H. Makins, and other leading members of the medical profession.

THE NATIONAL SANATORIUM, BENENDEN: A VISIT BY PRINCESS CHRISTIAN.—Her Royal Highness Princess Christian paid a surprise visit to Benenden Sanatorium on Nov. 25th. Her Royal Highness, who is the president of the National Sanatorium Association, was accompanied by Lord Camden, the Lord Lieutenant of the county of Kent, Lady Camden, the Hon. Mrs. William West, and Major Martin. The party visited the wards, administration buildings, and dining and recreation halls, as well as the gardens where the patients are under treatment by a system of graduated work. Patients were seen employed at all the various gardening operations and in carpentry in the open-air workshops of the establishment. Those patients nearing the completion of their treatment were seen performing tasks requiring heavy muscular exertion, whilst those in the earlier stages of treatment were occupied in such light tasks as wood-chopping and weeding. Princess Christian in leaving expressed her keen interest in the work being done by the sanatorium and the excellent results which were being obtained. Her Royal Highness was received by the chairman of the institution, Mr. C. H. Garland, and the honorary advisory physician, Dr. T. D. Lister (who were present on a visit of inspection); the medical superintendent, Dr. J. D. Macfie; Dr. G. M. Mayberry, assistant medical superintendent; and the secretary, Mr. Henry Seagrave.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill.

THE names of the Commissioners under the National Insurance Bill, with the exception of that of the medical Commissioner, have been announced by the Chancellor of the Exchequer. The chairman will be Sir ROBERT MORANT, the permanent secretary of the Board of Education. The others will be Mr. JOHN BRADBURY, C.B., principal clerk to the Finance Department of the Treasury; Mr. D. J. SHACKLETON, labour adviser to the Home Office; Mr. J. LISTER STEAD, secretary to one of the largest friendly societies in the kingdom; and Miss MONA WILSON. Mr. J. D. STUART SIM, the Chief Registrar of the Friendly Societies, will be an *ex-officio* member of the Commission, to which Mr. W. J. BRAITHWAITE will be secretary. Mr. LLOYD GEORGE is not yet in a position to announce the name of the medical member of the Commission.

The House of Commons commenced consideration of the National Insurance Bill on report on Tuesday, Nov. 28th. New clauses were first dealt with. One was adopted on the motion of the Chancellor of the Exchequer which has for its purpose to permit of the variation of benefits in certain cases.

Further Concessions to Medical Representations.

As the result of deputations to the Chancellor of the Exchequer made during the week from the British Medical Association Mr. LLOYD GEORGE has placed on the paper a series of amendments, which have been summarised as follows in a *communiqué* to the press:—

An increased representation of doctors on the Health Committees to be appointed by the county councils.

Insured persons, although receiving benefits through institutions existing at the time the Bill passes, are to have the option of exercising their free choice of medical attendants.

Persons who are aged and infirm and cannot be insured, but who are present members of a society which has become an approved society, are to receive medical attendance and treatment on the same terms as those arranged with respect to insured persons.

Health Committees to have power to appoint not only district committees but sub-committees, a coöpted element being admitted to the latter.

Medical committees are empowered to arrange for district medical committees.

A Conciliation Board will be set up to settle medical disputes.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 22ND.

Scottish Insurance Commissioners.

IN answer to Mr. BARNES, Mr. MCKINNON WOOD (Secretary to the Treasury) stated that a woman would be appointed as a member of the Scottish Insurance Commissioners.

Foreign Milk and Contagious Disease.

Mr. STANIER asked the President of the Local Government Board whether the milk imported from foreign countries (where it was known contagious diseases existed) was examined bacterially and otherwise to see there was no contamination and that the milk was pure and free from disease.—Mr. BURNS said in reply: Samples of fresh milk imported from abroad continue to be taken by my officers for bacteriological examination in regard to tubercle and examination as to general cleanliness of the milk. During the past autumn 28 samples of fresh milk have been taken from consignments arriving from France and Holland, which have been the only sources of this supply. No tubercle has been found in the 13 samples so far reported upon, and no exception can be taken to the milk on the ground of its general cleanliness.

Mr. STANIER: Is it examined before it is allowed to be retailed in this country?—Mr. BURNS: Yes; and it is subject to examination by local authorities.

Feeding London School Children.

Sir CLEMENT KINLOCH-COOKE asked the President of the Board of Education whether he was aware that the number of meals provided out of the rates in 1910 for children in London County Council schools was 9,100,000, showing an increase of 1,800,000 over the figures for 1909; and whether he could explain the cause of the increase.—Mr. J. A. PEASE replied: The facts are as stated in the first part of the question. It is understood that the increase may be attributed to the more complete development of the system of care committees and to the greater attention paid by them to the question of malnutrition as affecting the education of children in the elementary schools. Meals were provided in 165 more schools in London during the year 1909-10 than in the preceding year.

Vaccination Officers.

Mr. PETO asked the President of the Local Government Board whether the gratuity he was now suggesting that boards of guardians should pay to their vaccination officers was equal to the amount that the officer had lost in consequence of the operation of the Vaccination Act and Order, 1907.—Mr. BURNS replied: The gratuity which the Board has suggested amounts approximately to half the difference between the average annual amount of fees received before 1908 and the amount of those received since.

Mr. C. DUNCAN: Can the right honourable gentleman state when the arrangement will come into operation?—Mr. BURNS: No, sir, not at this moment.

Cerebro-spinal Meningitis.

Mr. GOLDSMITH asked the President of the Local Government Board whether any inquiries had been made into the causes of the recent outbreak of cerebro-spinal meningitis in Suffolk.—Mr. BURNS answered: The outbreak of disease in Suffolk has been the subject of correspondence and inquiries on the part of the Board and of the local authorities concerned. In a large number of districts of Suffolk both cerebro-spinal fever and poliomyelitis have recently been made compulsorily notifiable, and pathological material has in several instances been sent to the Board for examination. The evidence points to the conclusion that the disease which has recently occurred is poliomyelitis and not cerebro-spinal fever. This disease generally is at present the subject of reports by medical inspectors of the Board which will shortly be issued.

National Insurance Bill.

Viscount WOLMER asked the Speaker whether the National Insurance Bill was a Money Bill within the meaning of the Parliament Act.—The SPEAKER said in reply: The National Insurance Bill, as it now stands, is not, in my opinion, a Money Bill within the definition of Section I. of the Parliament Act.

THURSDAY, NOV. 23RD.

The Notification of Phthisis in Scotland.

Mr. E. WASON asked the Lord Advocate whether it was the intention of the Local Government Board for Scotland to issue regulations making consumption a notifiable disease in Scotland in the same way as it had recently been made a notifiable disease in England.—Mr. URE said in reply: The Local Government Board for Scotland has for years urged upon local authorities the desirability of making pulmonary phthisis a notifiable disease, with the result that compulsory notification has already been applied and is in force over areas containing 57 per cent. of the population of Scotland. The Board has now under consideration the question whether the time has come for the issue of a general order on the lines suggested by my right honourable friend.

The Insurance Bill and the Medical Panel.

Mr. GRETTON asked the Secretary to the Treasury whether a medical man who served on a health committee under the National Insurance

Bill would under the proposed regulations be able to remain upon the panel of doctors appointed by the same health committee.—Mr. MCKINNON WOOD wrote in reply: Yes, sir, any duly qualified medical practitioner has the right to be included in the panel, which it is not quite accurate to describe as "appointed" by the health committee.

MONDAY, NOV. 27TH.

The Wrapping of Sweets.

Mr. EDMUND HARVEY asked the President of the Local Government Board whether his attention had been called to the conditions under which caramel wrapping was stated by the medical officer of Islington to be carried on in certain homes; whether he was aware that the work was done by persons suffering from infectious diseases and was therefore calculated to convey infection to the consumer; and whether any steps were being taken to deal with the matter.—Mr. MCKENNA said in reply: My right honourable friend has asked me to answer this question. The Home Office received from the medical officer of health of Islington a copy of his report on this matter, and inquiries have since been made into the conditions prevailing in this industry both in London and elsewhere. It appears that the work carried on in the cases referred to by the medical officer is not the wrapping of caramels, which owing to their soft nature could not be given to outworkers, but the wrapping of some kinds of cheap sweets. Only one maker has been found who employs outworkers on this work, and he employs some 30 or 40 outworkers under conditions which in many cases are extremely insanitary, and in some cases carry danger of infection. I propose to issue at once a draft Order extending the provisions of Sections 107, 108, and 110 of the Factory Act to this class of work.

Medical Officers to the Post Office.

Mr. EDMUND HARVEY asked the Postmaster-General whether the appointments of medical officers to the Post Office were regarded as political patronage, and whether, to avoid misunderstanding, he would arrange that public notice should be given before local appointments were made, enabling all duly qualified candidates to apply.—Mr. H. SAMUEL replied: Political influence is not allowed to enter into the selection of medical officers to the Post Office. Appointments are made solely with regard to the personal qualifications of the candidates and the proximity of their consulting-rooms to the Post-office premises. Vacancies for medical officers to the Post Office in the London district are advertised in the local press. In the provinces applications are generally invited from all suitable local medical practitioners.

TUESDAY, NOV. 28TH.

Malaria-bearing Mosquitoes at Port Said.

Mr. RAMSAY MACDONALD asked the Secretary of State for Foreign Affairs whether he had received information that malaria-bearing mosquitoes had reappeared at Port Said owing to the negligence of the sanitary authorities; and whether he would communicate with Lord Kitchener on the subject.—Sir EDWARD GREY said in reply: I have been informed that mosquitoes have reappeared at Port Said, but I cannot say owing to what cause, nor do I know whether they are of a malaria-bearing species. I am inquiring of Lord Kitchener as to the facts.

Certifying Surgeons.

Lord HENRY CAVENDISH-BENTINCK asked the Secretary of State for the Home Department how many certifying surgeons hold other public appointments, including all the public medical officers mentioned in the memorandum of the Local Government Board to the local authorities issued in December, 1910.—Mr. MCKENNA replied: I regret that I am not able to give the noble lord the information he asks for, but the figures of certifying surgeons in England and Wales holding the posts of medical officer of health and district medical officer is as follows:—The number of certifying surgeons holding both posts is 247; the number holding the post of medical officer of health only is 141; the number holding the post of district medical officer only is 502. The total number of certifying surgeons in England and Wales, apart from medical men appointed to act as certifying surgeon for an institution under Section 5 of the Factory Act of 1907, is 1280.

WEDNESDAY, NOV. 29TH.

The Provision of Sanatoria.

Mr. GOLDMAN asked the Secretary to the Treasury whether steps would be taken immediately after the passing of the Insurance Bill into law to increase or extend sanatoria throughout the country to meet the needs of those who would be entitled to immediate sanatorium benefit under the Bill, and if he could state the nature of the steps which would be taken.—Mr. MCKINNON WOOD answered: The answer to the first part of the question is in the affirmative. The precise nature of the steps to be taken depends upon the Insurance Commissioners and the Local Government Board.

BOOKS, ETC., RECEIVED.

APPLETON, D., AND CO., New York and London.

The Diseases of Infancy and Childhood. For the Use of Students and Practitioners of Medicine. By L. Emmett Holt, M.D., Sc.D., LL.D., Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York. Assisted by John Howland, A.B., M.D., Professor of Diseases of Children in Washington University, St. Louis. Sixth edition, fully revised. Price, cloth, 25*s.* net.

BAILLIÈRE, TINDALL, AND COX, London.

A Manual of Diseases of the Eye. By Charles H. May, M.D., New York, and Claud Worth, F.R.C.S. Eng., Consulting Ophthalmic Surgeon to the West Ham and East London Hospital. Third edition. Price 10*s.* 6*d.* net.

CHURCHILL, J. AND A., London.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. Hale White, M.D. Lond., M.D. Dub. (Hon.), Senior Physician to and Lecturer on Medicine at Guy's Hospital. Twelfth edition. Price 6*s.* 6*d.* net.

A Short Practice of Medicine. By Robert A. Fleming, M.A., M.D., F.R.C.P.E., F.R.S.E., Lecturer on Practice of Medicine, School of the Royal Colleges, Edinburgh. Second edition. Price 12*s.* 6*d.* net.

CURRIE, JOHN, 16, Teviot-place, Edinburgh.

Outlines of Early Development. For Obstetric Students. By R. W. Johnstone, M.A., M.D., F.R.C.S.E., M.R.C.P.E., Assistant to the Professor of Midwifery, University of Edinburgh. With a Preface by Sir J. Halliday Croom, Professor of Midwifery, University of Edinburgh. Price 1*s.* 6*d.* net.

DULAU AND CO., LIMITED, 37, Soho-square, London, W.

Department of Applied Statistics, University College, University of London. Drapers' Company Research Memoirs. Studies in National Deterioration. VII. The Intensity of Natural Selection in Man. By E. C. Snow, M.A., Biometric Laboratory, University College, London. Price 3*s.*

GREEN, WILLIAM, AND SONS, Edinburgh and London.

The Control and Eradication of Tuberculosis. A Series of International Studies. By Many Authors. Edited by Halliday G. Sutherland, M.D., Medical Officer to the St. Marylebone Anti-Tuberculosis Dispensary. Price 15*s.* net.

HERBERT AND DANIEL, 21, Maddox-street, London, W.

Modern Surgery and its Making. A Tribute to Listerism. By C. W. Saleeby, M.D., F.R.S.E. Price 10*s.* 6*d.* net.

HODDER AND STOUGHTON, London, New York, and Toronto.

The Life of Dr. Arthur Jackson of Manchuria. By the Rev. Alfred J. Costain, M.A. With a Preface by the Rev. William Watson, M.A. Price 2*s.* net.

HORN, JOHN, LIMITED, 149, Howard-street, Glasgow.

Diet Charts. For the Use of Physicians. Part I. By J. Cralk Taylor, M.B. Glasg. Price 1*s.* net.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, London.

Practical Hints for Pastoral Work Among the Sick. By H. Gordon Mackenzie, M.A., M.B.; and Notes and Suggestions on Visiting the Sick, together with Short Service and Private Devotions for the Sick. Compiled by Rev. Archibald O. Hayes, M.A., Vicar of Holy Trinity, Lambeth, and Hospitaller of St. Thomas's Hospital. With an Introduction by Sir Dyce Duckworth, Bart., M.D., LL.D. Price not stated.

LEONARD, W. M., Publisher, Boston.

Case Histories in Neurology. A Selection of Histories setting forth the Diagnosis, Treatment, and Post-mortem Findings in Nervous Disease. By E. W. Taylor, A.M., M.D., Instructor in Neurology, Harvard Medical School. Price not stated.

LEWIS, H. K., London.

A Handbook of the Diseases of the Eye and Their Treatment. By Sir Henry R. Swanzy, A.M., M.D., D.Sc., Past-President of the Royal College of Surgeons in Ireland; and Louis Werner, M.B., F.R.C.S.I., Sen. Med. Univ. Dub., Ophthalmic Surgeon to the Mater Hospital, Dublin. Tenth edition. Price 12*s.* 6*d.* net.

LIPPINCOTT (J. B.) COMPANY, Philadelphia and London.

Text-book of Ophthalmology. By Dr. Ernst Fuchs, Professor of Ophthalmology in the University of Vienna. Authorised Translation from the Twelfth Revised and greatly enlarged German Edition, with numerous Additions by Alexander Duane, M.D., Surgeon, Ophthalmic and Aural Institute, New York. Fourth edition. Price 25*s.* net.

MCGRAW-HILL BOOK COMPANY, 239, West 39th Street, New York. HILL PUBLISHING CO., LIMITED, 6 and 8, Bouverie-street, London, E.C.

Experimental General Chemistry. By James H. Ransom, Ph.D., Professor of General Chemistry, Purdue University. Second edition, revised. Price 4*s.* 6*d.* net.

Experiments for Engineering Students in General Chemistry. By Joseph H. James, B.S., Ph.D., Professor of Chemical Engineering, Carnegie Technical Schools, Pittsburgh; and John A. Schaeffer, A.M., Ph.D., Instructor in Chemical Engineering, Carnegie Technical Schools, Pittsburgh. Price 4*s.* 6*d.* net.

MACMILLAN COMPANY, THE, New York.

The Conquest of Nerves. By J. W. Courtney, M.D. Price 5*s.* 6*d.* net.

METHUEN AND CO., LIMITED, 36, Essex-street, London, W.C.

Circumstances or Character? Studies in Social Work. By Clement F. Rogers, M.A., Lecturer in Pastoral Theology, King's College, University of London. Price 3*s.* 6*d.* net.

Health Readings. By C. J. Thomas, M.B., B.Sc. Lond., D.Ph., University Scholar and Gold Medallist in Medicine. Price 1*s.* 6*d.*

OLIVER AND BOYD, Edinburgh.

The Transactions of the Edinburgh Obstetrical Society. Vol. XXXVI. Session 1910–1911. Price not stated.

SAUNDERS (W. B.) COMPANY, London and Philadelphia.

The Illustrated Medical Dictionary. By W. A. Newman Dorland, A.M., M.D. Sixth edition, revised and enlarged. Price 19*s.* net; with thumb index, 21*s.* net.

Minor and Emergency Surgery. By Walter T. Dannreuther, M.D., Surgeon to St. Elizabeth's Hospital and to St. Bartholomew's Clinic, New York City. Price, cloth, 6*s.* net.

SHERRATT AND HUGHES, 33, Soho-square, London, W.; 34, Cross-street, Manchester.

Unity in Nature. An Analogy between Music and Life. By C. E. Stromeyer, Past Member of the General Board of the National Physical Laboratory. Price 12*s.* 6*d.* net.

UNIVERSITY OF LONDON PRESS, London. (Published for the University of London Press, Limited, by Hodder and Stoughton, London.)

Infectious Diseases and Their Preventive Treatment. By E. C. Seaton, M.D. Lond., F.R.C.P., F.I.C., Consulting Medical Officer, Surrey County Council. Price 7*s.* 6*d.* net.

London Practitioners' Manuals. Minor Surgery. By Leonard A. Bidwell, F.R.C.S., Surgeon to the West London Hospital. Price 6*s.* net.

London Practitioners' Manuals. Anæsthesia and Analgesia. By J. D. Mortimer, M.B. Lond., F.R.C.S. Eng., Anæsthetist, Royal Waterloo Hospital. Price 6*s.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BADLEY, S. B., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Manchester Royal Infirmary.

BANNERMAN, JAMES, M.B. Edin., has been appointed Medical Officer to the Stanhope and Weardale Joint Isolation Hospital.

DIGGLE, F. H., M.B., Ch.B. Vict., has been appointed House Surgeon to Special Departments at the Manchester Royal Infirmary.

FARRIES, J. STOTHART, L.R.C.P. & S. Edin., has been appointed Medical Superintendent of the Minda Institution for the Feeble-minded and Epileptic, Adelaide, South Australia.

GALBRAITH, THOMAS, M.B Edin., has been appointed Honorary Vaccine Therapist to St. John's Hospital for Diseases of the Skin.

HENDERSON, ROBERT G., M.B., Ch.B. Aberd., F.R.C.S. Edin., has been appointed Assistant Surgeon to the Royal Infirmary, Oldham.

HIGGINS, T. T., M.B., Ch.B. Vict., has been appointed Accident Room House Surgeon at the Manchester Royal Infirmary.

KAUNTZE, W. H., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Manchester Royal Infirmary.

MAITLAND, LYTTON, M.B., B.S. Lond., has been appointed Resident Medical Officer at the London Fever Hospital.

MORGAN, T., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Llandovery District of the county of Carmarthen.

PEDLER, H. C. G., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at University College Hospital.

PRANCE, G. H., M.D., M.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Weston-super-Mare District of the county of Somerset.

RAMSBOTTOM, A., M.D. Vict., M.R.C.P. Lond., has been reappointed Assistant Medical Officer to the Manchester Royal Infirmary.

REID, W. J., M.B., Ch.B. Aberd., has been appointed Cancer Research Officer at the Manchester Royal Infirmary.

RIGG, J. R., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Manchester Royal Infirmary.

ROBSON, J. D., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Dumfries District of the county of Dumfries.

SCOTT, J. B., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

SNEATH, W. A., M.B., Ch.B. Vict., has been appointed Senior House Surgeon at the Manchester Royal Infirmary.

THOMPSON, G. K., M.B., Ch.B. Vict., has been appointed House Physician at the Manchester Royal Infirmary.

WILLAN, R. J., M.S. Durh., F.R.C.S. Eng., has been appointed Demonstrator of Surgical Pathology in the University of Durham College of Medicine, Newcastle-upon-Tyne.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £100 per annum, all found.

BATH, EASTERN DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 per annum, with rooms, coals, gas, and attendance.

BATH ROYAL UNITED HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £200 per annum, with rooms, fire, light, and attendance.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £160 per annum, with rooms, coals, gas, and attendance.

BURNLEY, VICTORIA HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with residence, board, and washing.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—Resident Medical Officer, unmarried. Salary £90 per annum, with board, lodging, and washing.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Resident House Surgeon. Salary £50 per annum, with board and residence. Also Registrars and Clinical Assistants.

CROYDON GENERAL HOSPITAL.—Additional Member of Honorary Medical Staff.

DONCASTER, ROYAL INFIRMARY AND DISPENSARY.—Senior House Surgeon and Assistant House Surgeon. Salaries respectively £100 and £80 per annum, with board, lodging, and washing.

FLORENCE NIGHTINGALE HOSPITAL FOR GENTLEWOMEN, 19, Lissongrove, N.W.—House Surgeon. Salary £100 per annum.

GLASGOW, SCHOOL BOARD OF.—Female Lecturers on Hygiene and Home Nursing. 7*s.* 6*d.* per lecture.

GOVAN DISTRICT ASYLUM, Hawkhead, near Paisley.—Second Assistant Medical Officer. Salary £150 per annum, with rooms, board, laundry, and attendance.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

GRIMSBY AND DISTRICT HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board, lodging, attendance, and washing.

HELLINGLY, EAST SUSSEX COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £160 per annum, with board, apartments, washing, and attendance.

HENDON, N.W., CENTRAL LONDON SICK ASYLUM.—Assistant Medical Officer. Salary £120 per annum, with board and residence.

HÔPITAL FRANÇAIS, 172, Shaftesbury-avenue, W.C.—Resident Medical Officer, unmarried, for six months. Salary £100 per annum, with full board and laundry.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £80 per annum, with board and lodging.

INDIAN MEDICAL SERVICE.—Twelve Commissions.

ITALIAN HOSPITAL, Queen-square, London, W.C.—Honorary Assistant Physician.

KENSINGTON DISPENSARY AND CHILDREN'S HOSPITAL.—Vacancy on the Honorary Medical Staff.

LEICESTER INFIRMARY.—Assistant House Physician for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, residence, and washing.

LONDON LOCK HOSPITAL.—House Surgeon to Female Hospital. Also House Surgeon to Male Hospital. Salary in each case £100 per annum, with board, lodging, and washing.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Surgical Registrar. Salary at rate of 40 guineas per annum. Also Resident Medical Officer. Salary £120 per annum, with board, lodging, and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Assistant Medical Officer and Pathologist. Salary £60 per annum.

NAPSBURY, MIDDLESEX COUNTY ASYLUM, St. Albans.—Assistant Medical Officer. Salary £180 per annum, with board, lodging, washing, and attendance.

NORTHAMPTON GENERAL HOSPITAL.—Senior Resident Medical Officer, unmarried. Salary £120 per annum, with apartments, board, washing, and attendance.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.

POPLAR WORKHOUSE, High-street, Poplar.—Medical Officer. Salary £250 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL EAR HOSPITAL, Soho.—Honorary Visiting Physician. Also Honorary Pathologist.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Female Medical Registrar and Junior Obstetric Assistant.

ST. BARTHOLOMEW'S HOSPITAL.—Chief Assistants and Clinical Assistants for Aural Out-patient Department.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Physician.

ST. PAUL'S HOSPITAL FOR SKIN AND URINARY DISEASES, Red Lion-square, W.C.—Clinical Assistants.

SALFORD UNION INFIRMARY.—Senior Assistant Medical Officer, unmarried. Salary £130 per annum, with apartments, attendance, and rations.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—Junior Resident Medical Officer. Salary £60 per annum.

SHEFFIELD UNION HOSPITAL, Firvale, Sheffield.—Resident Medical Officer. Salary, if married, £375 per annum, with house partly furnished, coals, light, laundry, &c.; if single, £300 per annum, with apartments, rations, and the other usual residential allowances.

SHREWSBURY, COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £170 per annum, with board, apartments, washing, attendance, &c.

SUNDERLAND ROYAL INFIRMARY.—House Physician for six months. Salary £80 per annum, with board, residence, and laundry.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board, washing, and attendance.

THROAT HOSPITAL, Golden-square, W.—Honorary Assistant Surgeon.

VIRGINIA WATER, SURREY, HOLLOWAY SANATORIUM FOR THE INSANE.—Junior Assistant Medical Officer (female). Salary £150 per annum, with board, lodging, laundry, attendance, &c.

WADSLEY, NEAR SHEFFIELD, WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary £140 per annum, with board, &c.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Assistant Honorary Surgeon in the Eye, Ear, and Throat Departments.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Kingsbridge, in the county of Devon; at Longtown, in the county of Cumberland; and at Chatham, in the county of Kent.

Births, Marriages, and Deaths.

BIRTHS.

DOW.—On Nov. 26th, at Bentham, Yorks, to James Fleming Dow, M.D., and Catherine Dow—a daughter.

HUGHES.—On Nov. 26th, at Barnsley Hall, Bromsgrove, Worcestershire, to Dr. and Mrs. Percy T. Hughes—a daughter.

MARRIAGES.

BREMER—MCKENZIE.—On Oct. 14th, at St. George's Presbyterian Church, Johannesburg, Karl Bremer, M.B., B.S. Lond., of Cradock, Cape Province, to Alice Elizabeth, eldest daughter of Mr. and Mrs. Thos. McKenzie, Johannesburg.

DEATHS.

HUBERT.—On Nov. 22nd, suddenly, of heart failure, at Billingshurst, Sussex, William Henry Hubert, M.R.C.S. Eng., L.S.A., aged 66.

MARTIN.—On Nov. 23rd, at Claremont-place, Sheffield, John W. Martin M.D., aged 65.

Notes, Short Comments, and Answers to Correspondents.

VITAL STATISTICS OF SEYCHELLES.

ACCORDING to the Blue-book for 1910 of the Seychelles Islands (the total area of which is estimated at 148½ square miles) the population is 22,620—11,522 males and 11,098 females. The births during the year numbered 709, being 31·35 per 1000, and the deaths 368, being 16·26 per 1000. There were 119 marriages. The density of the population is 145 to one square mile. The rainfall was again short, reaching only 83·31 inches. There was a severe drought from June to October. In the latter month only 0·03 inch was recorded. The mean temperature was 79·5°. April was the hottest and August the coolest month of the year. There were 480 in-patients treated in the Victoria Hospital in 1910, exceeding by 100 the number in 1909, which was the highest recorded. There were 30 deaths, giving a percentage of 6·25. Sixteen persons suffering from beri-beri were treated, of whom three died. This disease appears to be decreasing rapidly with the use of nitrogenous foods. There were 11 cases of, and three deaths from, tubercular complaints, and two deaths out of eight cases of cancer. There are six dispensaries, at which 3196 persons received treatment. The numbers show a large decrease (25 per cent.), which is satisfactory, inasmuch as it has always been evident that the privilege of free treatment has been abused. A small outbreak of beri-beri on Coetivy Island was promptly checked by a change of diet amongst the labourers. An assistant medical officer visited the island, and with the substitution of Bengal for Rangoon rice no further cases occurred. The chief medical officer notes that all previous cases were of the œdematous type, while all the cases from Coetivy were of the emaciated type. Tuberculosis appears to be stationary, but the medical officers report an increase in venereal disease and in the number of infants suffering congenitally. Nine cases were treated in the Round Island Leper Asylum with one death. The home is well kept and is constantly visited by the assistant medical officer at Praslin. Experiments are being made with the new treatment—nastin. These experiments are of too recent a date for any pronouncement to be made, but the patients take readily to the treatment. The lunatic asylum is now in full working order. Two males and one female were discharged as recovered, one male patient died, and 22 patients remained at the close of the year.

ROYAL MICROSCOPICAL SOCIETY: AN INTERESTING FIND.

AT the meeting of this society on Nov. 15th Mr. C. F. Rousselet, the curator, exhibited and described an old microscope bearing the name of Andrew Pritchard, which Captain Warrington had discovered in India and had presented to the society. It was probably made by Andrew Ross for Pritchard, who sold microscopes made for him by Ross and Hugh Powell. The date to be assigned to it would be between 1834 and 1838. Mr. Rousselet also described another microscope from India lent by Mr. A. H. Lethbridge. It was a combination of a pocket telescope and microscope. The eyepiece of the telescope, being removed and screwed into a "drum" form of stand, constituted a low power microscope of itself, and on removing the field lenses of the eyepiece "French buttons" can be screwed on giving higher magnifications. The name inscribed on the apparatus is Charles Nephew and Co., Calcutta. The date is uncertain, but would be some time after the introduction of the "French button." The society exhibited under microscopes a number of slides of rock sections from Australasia presented by Mr. H. J. Grayson and cut by him by his improved apparatus. Mr. J. E. Barnard read a paper on a Geometric Slide Photomicrographic Apparatus. Mr. Barnard said the apparatus was designed throughout on the principle of the geometric slide as enunciated by Lord Kelvin and Tate. The base of the apparatus was formed of two castings designed on the girder principle, braced together at each end and in the middle. The portion to carry the microscope was also formed by a pair of castings braced together in the same way. Great rigidity was obtained, and the whole apparatus would move together if subjected to shock or vibration. Rods were fastened down on the top of the castings to support the apparatus, and the camera slid along these on two V grooves on one side and on a plane surface on the other side. The camera was supported on vertical rods fixed on the geometric slides. The apparatus could be used equally well as a horizontal or vertical camera or at an angle of 45°. A paper on Fridericia by Rev. Hilderic Friend, F.L.S., was read. The genus Fridericia was created by Michaelson in 1889 to receive certain species of Enchytraeids, 11 in number, possessed of dorsal pores and having sets of unequal lengths. In 1895 Beddard reckoned 12 species, but not one was known as British. Moore, Friend, and others added to the list, which in 1900 stood at 21. Bretscher, Issel, and others then took up the study, and at the present time some 70 or 80 species of Fridericia are known to science. The largest is F. magna, Friend, which has been found in England, Ireland, and Scotland, but so far has not been reported abroad. The author, whose researches into this genus began in 1896, here reports no fewer than 30 species found up to the present time in the British Isles. Some of these are new to science, and a series of keys is appended to enable the student readily to distinguish the allied species.

THE GUILD OF THE BRAVE POOR THINGS.

H.R.H. Princess Louise, Duchess of Argyll, has promised to visit the exhibition and sale to be held in support of the Guild at 19, Grosvenor-square, by kind permission of Mrs. Cazalet, on Monday, Dec. 4th, from 3 to 6 P.M. The sale will include fine needlework and woodwork from the Heritage Craft Schools in Sussex, of which Mrs. Cazalet is the patroness, and copper, silver, and basket-work made by Guild members at the various branches. The Guild of Play children will give a recital of dance carols and court dances at 6 P.M.

GUARDIANS AND PRIVATE PATIENTS.

THE Lewisham board of guardians recently considered an interesting point concerning a woman of whom it was reported by the clerk to the board that she was not destitute, although it had been decided that she should be attended by the district medical officer. On her decease it was ascertained that she had left a sum of money amounting to £60, and her relative, who benefited under the will, had refunded to the board £3 3*s*. for the doctor's attendance. It was argued that the fees should be handed over to the district medical officer as the board had no right to make a profit out of persons o means, who should be the private patients of the medical profession. The board, however, decided to take no action.

ESPERANTO.

MEDICAL Esperantists, both in this country and abroad, will regret to hear that, owing to pressure of duties, Colonel John Pollen, C.I.E., has resigned the presidency of the British Esperanto Association.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

Dec. 4th–9th (Havana, Cuba).—American Public Health Association.
" 12th–14th (Washington, D.C.).—Southern Surgical and Gynæcological Association.
" 19th–23rd (Moscow).—Third Pan-Russian Therapeutical Congress.
" 27th–30th (Baltimore).—American Physiological Society.

In 1912:—

Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
Feb. 13th–14th (London).—Central Poor-Law Conference.
March 7th–11th (Berlin).—Thirty-third Balneological Congress.
" 23rd–April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
" (London).—First Congress of Pure Food and Health Society of Great Britain.
April 1st–7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
" 14th–20th (Rome).—Seventh International Congress on Tuberculosis.
" (Rome).—Seventh International Congress of Dermatology and Syphilology.
" (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 7th–17th (Washington).—Ninth International Red Cross Conference.
" 27th–June 1st (London).—Eighteenth International Congress of Americanists.
" (London).—International Horticultural Exhibition.
June 24th–27th (London).—The (Biennial) Health Conference and Exhibition.
June (London).—Missionary Exhibition.
July 2nd–5th (London).—Congress of the Universities of the Empire.
" 2nd–6th (Doncaster).—Seventy-third Annual Show of the Royal Agricultural Society of England.
" 12th–16th (London).—Imperial Conference of Teachers' Associations.

The following journals, magazines, &c., have been received:— Archives de Médecine et Pharmacie Navales, La Clinique Ophtalmologique, Review of Neurology and Psychiatry, Quarterly Journal of Microscopical Science, Annales de l'Institut Pasteur, Medical Review of Reviews, Therapeutic Gazette, Journal of Nervous and Mental Diseases, Archives of Internal Medicine, Revue d'Hygiène, Pacific Medical Journal, Journal of Physiology.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

PATHOLOGICAL SECTION (Hon. Secretaries—J. C. G. Ledingham, A. E. Boycott): at 8.30 P.M.

LABORATORY MEETING at the Imperial Cancer Research Fund, Victoria Embankment, West Entrance (opposite Savoy Hotel).

Dr. J. A. Murray: (1) Relative Frequency of Cancer of the Mammæ in Mice of Cancerous and Non-cancerous Ancestry; (2) Results of Inoculating a Mixed Emulsion of Spontaneous Tumours into the Mice Providing them; (3) Results of Operative Treatment of Carcinoma Mammæ in the Mouse; (4) Tumours showing Multiple Differentiations—Metaplasia.

Dr. B. R. G. Russell: (1) The Reaction of Animals to Tumour Parenchymata of Various Types of Growth; (2) Failure to Obtain Evidence for Passive Immunity against the Inoculation of Cancer.

Mr. W. H. Woglom: (1) The Curves of Resistance to the Implantation of Carcinoma as Induced by Normal and Tumour-Tissue respectively; (2) The Histology of the Site of Inoculation of Carcinoma in Normal and Resistant Rats; (3) Resistance Induced Subcutaneously to the Implantation of Cancer is Effective against Implantation into Internal Organs.

Dr. E. F. Bashford: (1) The Modes of Growth and the Relative Rates of Growth of 85 Propagable Tumour-strains; (2) The Experimental Test of the Validity of the Assumption of a Differential of Avidity as Explanatory of Tumour Growth; (3) The Variability of Tumour Cells during Propagation.

THURSDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—J. H. Targett, W. W. H. Tate), at 11, Chandos-street, W., at 8 P.M.

Specimens:

Dr. Hedley: Cervix Adherent to Posterior Vaginal Wall.

Dr. Barris; Solid Malignant Growth of Ovary.

Dr. Macnaughton-Jones: (1) Section of Carcinoma of Vulva; (2) Cyst Growing from Remains of a Resected Ovary.

Dr. Walter Tate: Extra-uterine Gestation; Death of Fœtus near Term; Removal of Entire Sac Three Months Later.

Dr. Whitehouse: Ruptured Four Months' Gestation in Rudimentary Horn of Bicornuate Uterus.

Dr. Maxwell: Chorion-angioma of Uterus.

Dr. Herman: A Dissection of the Pelvic Fascia.

Short Communications:

Dr. Maxwell: Sequel to a Case of Cystic Degeneration of Chorion.

Dr. Eardley Holland: Case of Ovarian Pregnancy.

Dr. Whitehouse: Cases of Primary Carcinoma of Female Urethra.

FRIDAY.

GENERAL MEETING OF FELLOWS at 4.45 P.M.

Election of Candidates for Fellowship.

CLINICAL SECTION (Hon. Secretaries: James Galloway, Charles H. Fagge): at 8.30 P.M.

Cases:

Mr. Tilley: Four Cases illustrating Surgical Treatment of Chronic Empyema of the Nasal Accessory Sinuses. Demonstration by Direct Method of Papillomata of the Vocal Cords.

Mr. H. Morriston Davies: Case showing the Result of Operation for Dislocation of Patella.

Mr. H. J. Curtis: Case of Acute Periostitis of Rib with Separation of Sequestra (Non-tuberculous, Non-traumatic).

Mr. Edred M. Corner: Case of Healed Double Empyema.

Mr. R. P. Rowlands: Case of Perforated Jejunal Ulcer following Anterior Gastro-jejunostomy.

Mr. C. G. Watson: Case of Excision of Large Myeloid Sarcoma of the Ischium.

Cases will also be shown by Dr. J. Fawcett, Mr. Raymond Johnson, and others.

RONTGEN SOCIETY, Institution of Electrical Engineers, Victoria Embankment, W.C.

TUESDAY.—8.15 P.M., General Meeting. Paper:—Prof. W. H. Bragge: The Energy of the X Ray.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—8.30 P.M., Council Meeting. 9 P.M., Clinical and Pathological Evening.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Clinical Cases.

WIMBLEDON AND DISTRICT MEDICAL SOCIETY, Johnston's Rooms, 6, Broadway, Wimbledon.

FRIDAY.—9 P.M., Dr. R. W. Allen: Modern Methods of Treating Tuberculosis, with Special Reference to Pulmonary Tuberculosis and Tuberculins.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

WEDNESDAY.—5 P.M., Mr. R. Clement Lucas: Some Points in Heredity. (Bradshaw Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. J. L. Bunch: Clinique (Skin). 5.15 P.M., Lecture:—Dr. D. Forsyth: The Diagnosis of Organic Nervous Lesions.

TUESDAY.—4 P.M., Dr. W. H. Willcox: Clinique (Medical). 5.15 P.M., Lecture:—Mr. E. Lane: Syphilis d'Emblée.

WEDNESDAY.—4 P.M., Mr. G. E. Waugh: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. R. Maguire: The Solution of Calculi in the Urinary Passages without Operation.

THURSDAY.—4 P.M., Dr. H. Campbell: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. W. D'Oyly Grange: Some Disorders of the Liver and their Treatment.

FRIDAY.—4 P.M., Dr. G. Thompson: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Bidwell: Gastro-enterostomy and Duodenal Ulcer.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Etherington-Smith: Clinical. (Lecture I.)

WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine. (Lecture V.)

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture V.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. R. Lloyd: Administration of Anæsthetics.

SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. E. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Mr. Walton: Abdominal Anatomy.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Pathological Demonstration (Dr. Duncan).

TUESDAY.—Clinic; 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld).; Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. A. E. Giles: Pessaries.

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen): Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Pathological Demonstration (Dr. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappell).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Pathological Demonstration (Dr. Duncan).

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Mr. W. Hampson: X Ray Epilation for Ringworm.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell; Bullous and Vesicular Eruptions—I., Urticaria; II., Pemphigus; III., Pompholyx; IV., Varicella.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Perkins: Some Clinical Effects of Tuberculin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. G. Stewart: Treatment of Muscular Paralysis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. G. Stewart: Apoplexy.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Mr. J. G. French: Pharynx and Naso-pharynx.

FRIDAY.—3.45 P.M., Lecture:—Dr. Abercrombie: Pharynx and Naso-pharynx.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. C. H. Melland: Malaria. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (9th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

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THE LANCET Office, Nov. 29th, 1911.

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Nov. 23	29·65	N.E.	...	48	44	36	40	42	Overcast
,, 24	29·86	E.	0·03	51	44	41	40	41	Overcast
,, 25	29·97	N.E.	...	52	44	41	40	41	Overcast
,, 26	29·93	N.E.	...	63	40	35	34	36	Cloudy
,, 27	29·84	S.E.	0·01	43	41	35	36	36	Overcast
,, 28	30·03	S.E.	0·09	51	50	36	41	41	Foggy
,, 29	30·25	S.W.	0·01	62	51	41	46	46	Overcast

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The Bradshaw Lecture

ON

INTRATHORACIC TUMOURS AND ANEURYSMS IN THEIR CLINICAL ASPECT.

Delivered before the Royal College of Physicians of London on Nov. 2nd, 1911,

BY GRAHAM STEELL, M.D. EDIN., F.R.C.P. LOND.,

CONSULTING PHYSICIAN, MANCHESTER ROYAL INFIRMARY, AND EMERITUS PROFESSOR IN THE VICTORIA UNIVERSITY OF MANCHESTER.

MR. PRESIDENT, FELLOWS OF THE COLLEGE, AND GENTLEMEN,—My first duty is to express to you, Sir Thomas Barlow, my grateful thanks for the honour you conferred upon me by appointing me Bradshaw Lecturer for the present year. With the appreciation of an honour such as this there mingles, I fancy, in the minds of most recipients a sense of the greatness of the task which the appointment imposes. At any rate, it was so in my case.

My predecessor in office gave you an interesting sketch in words of Dr. William Wood Bradshaw, whose widow founded the lectureship in memory of her husband. Dr. Newton Pitt also showed his portrait, the representation of which in the *British Medical Journal* has made the profession at large acquainted with the outward personality of the man whose memory is perpetuated by this lectureship and "whose righteousness hath not been forgotten."

It so happened that the year in which I have the honour of being Bradshaw Lecturer is also the year in which I ceased, by the rules of the institution, to be a member of the acting staff of the hospital in the service of which I had been privileged to be for over 30 years. At such a time it is perhaps only natural that I should look backwards rather than forwards, and—dare I confess it!—clinical medicine seems to me at the present moment to be in danger of losing something of its old charm and, in the future, of losing much more. It was no other than Trousseau who exclaimed some 50 years ago in an address on medicine—"Pray, gentlemen, let us have a little more art, a little less science." Yet who would have welcomed with greater warmth such triumph of science as the introduction into practice of diphtheritic antitoxin? Indeed, "the individual withers, and the world is more and more." This is only evolution after all.

INTRODUCTORY REMARKS.

The subject I have chosen is a very practical one: "Intrathoracic Tumours and Aneurysms in their Clinical Aspect."

I regard aneurysms as tumours—only of a special kind and revealing themselves by special signs. The inclusion of aneurysms may be adversely criticised, but, I believe, I am right in regarding intrathoracic *aneurysm*, as soon as it exerts pressure on neighbouring structures—say the recurrent nerve—*as a tumour*. All who have had much acquaintance with the two conditions—neoplasm and aneurysm within the chest—will, I think, admit the difficulty occasionally experienced in distinguishing between them, even when the greatest care is taken.

Notwithstanding the great help in diagnosis afforded by recent discoveries in physical science and their utilisation in clinical medicine, for years to come, I fancy, the manifestations of intrathoracic tumours will still be investigated at the bedside in the old way—by the *symptoms* and by the *signs* they occasion, or in other words, *subjectively* and *objectively*, though the division at times proves rather arbitrary.

While including aneurysms with neoplasms as intrathoracic tumours, it is the latter (neoplasms) that I wish specially to consider, inasmuch as, paradoxically, aneurysms are common and tumours comparatively rare. The distinction between the two is, however, a matter of considerable practical importance in view of the fact that aneurysms not rarely admit of at least having their symptoms much relieved by treatment and of a useful life being considerably prolonged, while the downward progress of the patient with intrathoracic neoplasm is seldom even interrupted and our therapeutic endeavour is too often limited to the promotion of euthanasia, albeit without any shortening of life. If it be the first duty of the physician to "obviate the tendency to death" of his patient, then surely the second is to relieve his sufferings. Whether we have regard to intensity of actual pain, such as the pain of angina pectoris, or to its persistence, as in aneurysm grinding the vertebræ, or to suffering other than pain, such as suffocation and consequent air-hunger, in the whole field of clinical medicine no class of diseases can be compared with that we have under consideration in potency of production of pain and suffering. Even this is not all: the duration of such pain and other sufferings may be great, whether they be persistent, remittent, or intermittent.

No longer ago than 1889 the writer of one of the best known monographs on the subject, "Affections of the Mediastinum," Dr. Hobart Amory Hare, remarked that "for some unaccountable reason this subject has remained a field in which but few workers have toiled, and whose surface is therefore almost barren." Since these words were written no doubt several very valuable contributions have been made to the study and literature of the subject, among which I would mention Sir Douglas Powell's and Dr. Frederick Roberts's articles in Allbutt and Rolleston's "System of Medicine," the late Dr. Lindsay Steven's contributions in the *Glasgow Medical Journal*, and most recently the contribution of Dr. Newton Pitt in his Bradshaw lecture of last year.

With these introductory remarks I will now plunge *in medias res*.

PAIN.

It is customary to consider symptoms before signs, and in the clinical investigation of the former one has to consider the past as well as the present. I will begin with *pain*, the most *subjective* of all symptoms. Pain is seldom altogether absent in the course of intrathoracic tumours. One may say indeed that it is *never* absent if we include under the term such distresses as dyspnœa and insomnia. Here, however, I use the word in the conventional sense. In inquiring about this symptom in the study of a case one has to bear in mind the difficulty experienced by patients in describing their painful sensations even when present at the moment. How much greater must this difficulty be experienced when a remote pain is being described? As has been said, to recall such sensation in full intensity would be tantamount to suffering it again, and we may conclude that Nature has mercifully decreed that there shall be vague and indefinite recollection of even a severe pain. So, I fancy, clinicists till recently were apt to underrate the value of the symptom—pain—and we owe a debt of gratitude to Dr. Henry Head for the way in which he has shown how fruitful in diagnosis may be the careful investigation of this symptom, the "inwardness" of which, to use Sir William Gairdner's expression, exceeds that of all others. Speaking generally, I think it may be stated that aneurysmal tumours are the more productive of pain, and in their case not only is the frequency of pain greater, but its intensity and its persistency also. Yet the seeming caprice of pain, even with regard to its mere presence, must be borne in mind, and from time to time one is forced to marvel, in the presence of its abundant physical causes, at the absence of the symptom—such cause, for instance, as a projecting aneurysmal tumour, which by its slow terebrating action has gradually but effectively absorbed alike sternal bone and costal cartilage. In striking contrast with such painlessness is the common long-drawn-out agony of aneurysmal pressure on the spine. Actual pain is certainly in frequency, and specially in intensity, much less characteristic of neoplasm than aneurysm, though suffering other than pain—yet quite as great, if not greater—is the common accompaniment of neoplasm, for instance, when it compresses the trachea or superior vena cava.

Speaking of intrathoracic tumour in general, different types of pain are met with, the chief of which I will only very briefly enumerate. 1. There may be referred pain—for instance, angina pectoris, which is by no means rare in aneurysms involving the ascending aorta. My experience would lead me to believe that the coronary orifices are always involved in such cases, but I do not wish to be dogmatic, especially in view of the fact that I have had two cases of typical angina pectoris in girls with mitral stenosis as the only cardiac lesion, one of whom died and

was found to have perfectly sound coronary orifices and arteries. Pain, and especially tenderness in Head's "inferior laryngeal triangle," should be remembered and inquired for, and if present, associated with probable implication of the transverse portion of the arch by aneurysm. 2. There may be pain, not referred, due to direct pressure on somatic nerves, such as is apt to occur in aneurysm of the descending thoracic aorta or secondary implication of the spine by neoplasm. Interference with other afferent functions of these nerves may be discovered, later, on objective examination. 3. There is the all-important pain, due to pressure directly upon bone, especially the spine. It is a trite saying that long-continued persistent pain in the back should make one think of aneurysm, unless there has already been neoplasm in some other part of the body. 4. Lastly, one cannot ignore the fact, I think, that severe, seemingly local, pain has been complained of in rare cases of rupture of the internal coat of the aorta, although the fact hardly concerns us in our present consideration.

While definite and persistent pain is, then, much more common in the case of aneurysm than neoplasm, indefinite pain and, still more frequently, distress, that can hardly be called pain, are seldom absent in the case of the latter. In the earlier stages of a case of aneurysm, moreover, indefinite fleeting and recurrent pains about the upper part of the chest, shoulders, upper arms, and neck are so common as, at least, to suggest a careful examination for the signs of aneurysm when they have been complained of.

I would remind you, lastly, in the consideration of pain as a symptom of intrathoracic tumour, of the occasional *occipital pain* suffered by patients the subjects of aneurysm of the arch. Twice I have known this symptom so severe as to be the most prominent of the case. The headache is not that common in heart cases and associated with irritation of the tenth dorsal spinal segment from a congested liver. Dr. Head states that when the third cervical segment of the cord is involved, the pain is found to "shoot from the back through the head to the centre of the forehead." From the description I have received from patients with aneurysm of the arch, the pain seemed to be essentially occipital. The pain of secondary pleural and possibly of lung conditions need only be mentioned.

DYSPNŒA.

Among the symptoms of intrathoracic tumour dyspnœa is entitled to an important place. Moreover, it occurs not in one form, but in various forms, and these may be met with in combination. If we consider the effects of obstruction situated, so to speak, at the root of the bronchial tree, on the one hand, and contrast them with the effects of the cutting off, and withdrawing from function, of a large portion of the vesicular field for oxygenation, on the other hand—types of dyspnœa exemplified respectively by laryngeal obstruction in croup and by pneumonia—we have the two extremes of dyspnœic types met with in intrathoracic tumour. But between these there are many intermediate varieties—such, for instance, as occur in ordinary bronchitis with much secretion in the intermediate bronchi. Those types of dyspnœa in which the obstruction is at the trunk or in the larger branches are, in common language, designated *laboured respiration*, and they occur, as might be foreseen, frequently in cases of intrathoracic tumour. On the other hand, when such obstruction has affected one main bronchus and has led to the *complete* withdrawal from function of a whole lung, while the trachea and other bronchus does not come directly under the influence of the obstruction, such dyspnœa as there may be will be expressed by simple frequency of respiration, each act being rapidly and easily performed. When it is remembered that in the first or tracheal type of dyspnœa each act of respiration becomes a laboured struggle, it is obvious that great frequency of respiration is impossible, though it is true that when the respiratory acts are failing, the element of struggle being less pronounced, their frequency may again increase at the expense of their efficiency.

Effusion into the pleura is a common complication of intrathoracic tumour and diminishes the vesicular field and *per se* should induce dyspnœa of the pneumonic type. The two types of dyspnœa contrasted as stated may, however, be present together in varying proportion, but the laboured type is the more subjective and appeals more to the patient, at any rate while he is at rest.

When present, the stridor of tracheal obstruction predominates over all other respiratory sounds and may be heard at a great distance from the patient. It is important to note whether stridor is present with both inspiration and expiration, or with inspiration only, the latter condition pointing to paralytic glottic obstruction. Adventitious sounds, other than rhonchi, are not common, and their absence or ill-development under the circumstances may be suggestive in diagnosis.

If there be obstruction in the trunk or larger branches of the bronchial tree as the result of intrathoracic tumour, there is commonly observed the familiar "antero-lateral inspiratory retraction" of the lower part of the chest and exaggerated action of the diaphragm so well described by Dr. Sibson, who carefully distinguished between diaphragmatic "effort" and diaphragmatic "descent," as exemplified by abdominal protrusion. Sibson well remarked that "this diminution of abdominal protrusion with manifestly increased diaphragmatic effort allies in this respect emphysema and bronchitis with cases of extreme laryngeal obstruction, in which the same phenomena present themselves."[1]

One knows how in the case of simple copious pleuritic effusion any sign of interference with the function of the unaffected lung becomes a danger-signal, urgently calling for removal of the fluid, and this, though such sign may be only an occasional rhonchus. So in intrathoracic tumour, implication of the lung alone acting is of great moment. There may be only bronchitis or there may be œdema of the lung tissue itself, or there may be both conditions in varying proportion, but in any case asphyxia is threatened.

It is a remarkable fact that, even when one would think partial obstruction to the trachea or a main bronchus must be permanent and little varying, paroxysmal exacerbations are apt to recur from time to time. This occurrence is much more common in cases of aneurysm than of solid growth. Such attacks have been attributed to plugs of secretion becoming engaged at the site of obstruction, but this condition can hardly explain all cases. A most striking feature of these cases is the relief often afforded by the hypodermic injection of morphine and atropine.

Paroxysms of dyspnœa again may form the only evidence of an aneurysm situated at the posterior descending portion of the arch, in cases in which even accentuation of the aortic second sound (to be considered later) is absent, inasmuch as the aorta between the valves and the sac is not dilated. Such paroxysms are often described as "asthma." I once had the curious experience of, within a fortnight, having two patients under my care in hospital suffering from such paroxysmal dyspnœa due to the cause in question. In the first case the cause of the dyspnœa which resembled a cardiac dyspnœa, though no signs of heart disease were obtainable, was not recognised; in the second it was recognised, because the first, having proved fatal, had taught its lesson by autopsy. In both these cases an aneurysm of the posterior part of the arch had compressed the lower end of the trachea and left bronchus. These two cases presented the best examples I have met with of what Sir William Broadbent called the "aneurysm of symptoms." I take it they exemplified, too, the condition that is least incorrectly included under "asthma" and described as a symptom of intrathoracic tumour, specially aneurysm.

As a matter of clinical experience it will be found that dropsy of the lower extremities and trunk is not rarely observed towards the termination of a case of intrathoracic tumour that does not interfere directly with the inferior vena cava. In the skiagram I show there may be seen a marked projection to the right of the sternum, just below an aneurysmal similar projection, and due to dilatation of the right auricle as a part of general cardiac dilatation. In one case (neoplasm) in which a systolic murmur had long been audible over the whole of the right and unaffected side of the chest, towards the end murmur became audible over the heart itself, apparently as the result of cardiac muscle-failure, and consequent valve incompetence. It often, indeed, happens that towards the end of a case of intrathoracic tumour there is in the dyspnœa the element of cardiac muscle-failure, and the fact may possibly be utilised, in some small degree, as regards treatment. Pericardial effusion—dropsical or inflammatory—may take a share in

[1] Transactions of the Royal Medical and Chirurgical Society, vol. xxxi., p. 37.

the production of the dyspnœa of intrathoracic tumour, just as pleural effusion often does.

PULMONARY CHANGES RESULTING FROM INTRATHORACIC TUMOUR.

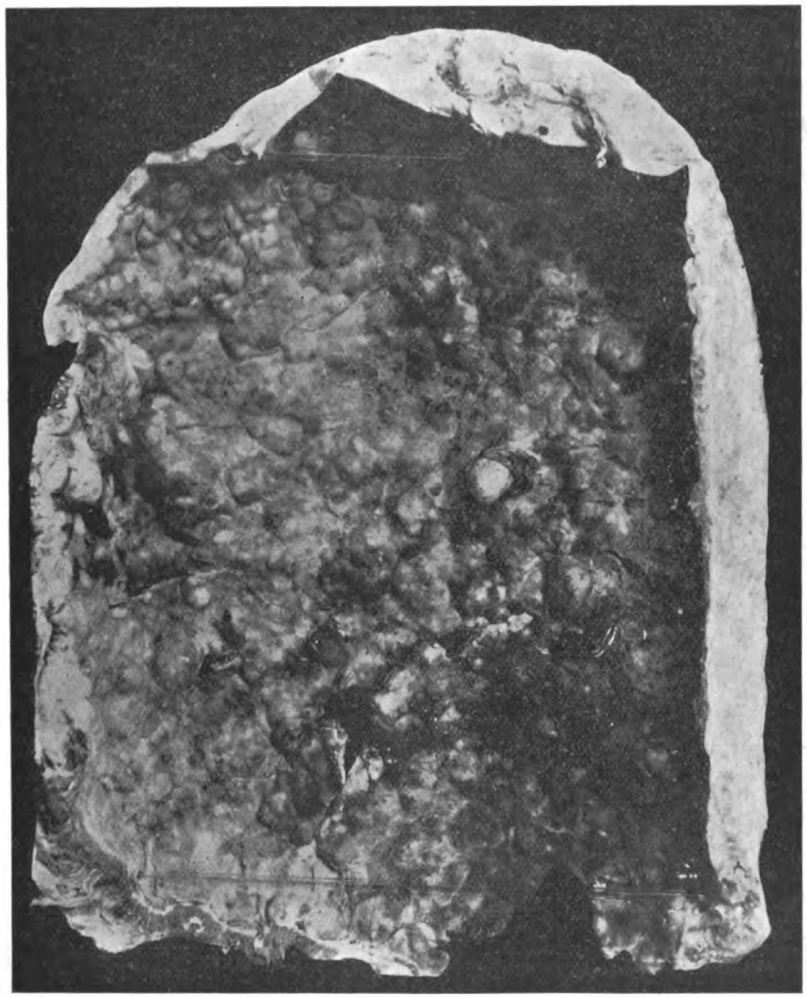
Before considering the percussion dulness of the side, that is so apt to be developed in the course of intrathoracic tumour, it will be well to have regard to changes in the lung resonance that may precede dulness.

Changes in Lung Resonance.

My predecessor in office, Dr. G. Newton Pitt, called special attention to a very peculiar condition of lung that may arise from *partial* bronchial obstruction, whereby it becomes over-distended, as it were, with air. While respiration is active the air under the circumstances, as Dr. Pitt states, "has greater difficulty in escaping than it had in entering, and the lung becomes over distended. The pressure may be so much raised that the diaphragm may be displaced two inches and the heart pushed out of position." If the whole lung be affected, its main bronchus being compressed or otherwise obstructed, the condition may be confused with pneumothorax, though in the latter case an X ray representation indicates the collapsed lung absent in the former. Dr. Pitt no doubt rightly, regarded this condition as usually persisting only for a time, inasmuch as through increase of the obstruction continued ingress of air becomes impossible and the imprisoned air is absorbed, dulness finally replacing the abnormal increase of resonance in question. We are under obligation to Dr. Pitt for directing attention to the subject. On first consideration, such increase of resonance as has been referred to may seem opposed to Skoda's dictum: "That the lungs partially deprived of air should yield a tympanitic, and when the quantity of air in them is increased a non-tympanitic, sound appears opposed to the laws of physics. The fact, however, is certain."

In corroboration of Skoda's statement Dr. Walshe remarked in his classic work: "Skoda is unquestionably right as regards the matter of fact, provided the word (tympanitic) be understood to mean 'tubular' or 'amphoric.'" But these are the only varieties of tympanitic resonance commonly met with over the lungs in disease, inasmuch as the abnormal air-containing space is not large, the "tubular" variety implying a smaller such space than the "amphoric." There is, moreover, no hard-and-fast line between them, as Walshe fully admitted. The essential thing is that *tympanitic quality* should be recognised, and whether we give to the resonance the name of "tubular" or "amphoric" will depend simply on the volume of air percussed. A still fuller tympanitic resonance such as, indeed, is seldom met with over the lung

FIG. 1.



From a case of endothelioma of the pleura. The illustration shows the internal surface of the parietal pleura. The pleura is very much thickened and shows many nodules, some of them as large as cherries.

is best described simply as a "full tympanitic resonance," but all three varieties possess tympanitic quality and vary only in "fulness" of resonance or volume of sound.

Let us take a healthy lung removed from the body and percuss it; it yields not the "non-tympanitic" resonance it yielded in the unopened chest, but "tympanitic" resonance, and to restore non-tympanitic resonance, such as the lung yielded in the unopened chest, what have we to do? Restore its tension by blowing it up with bellows attached to its bronchus.

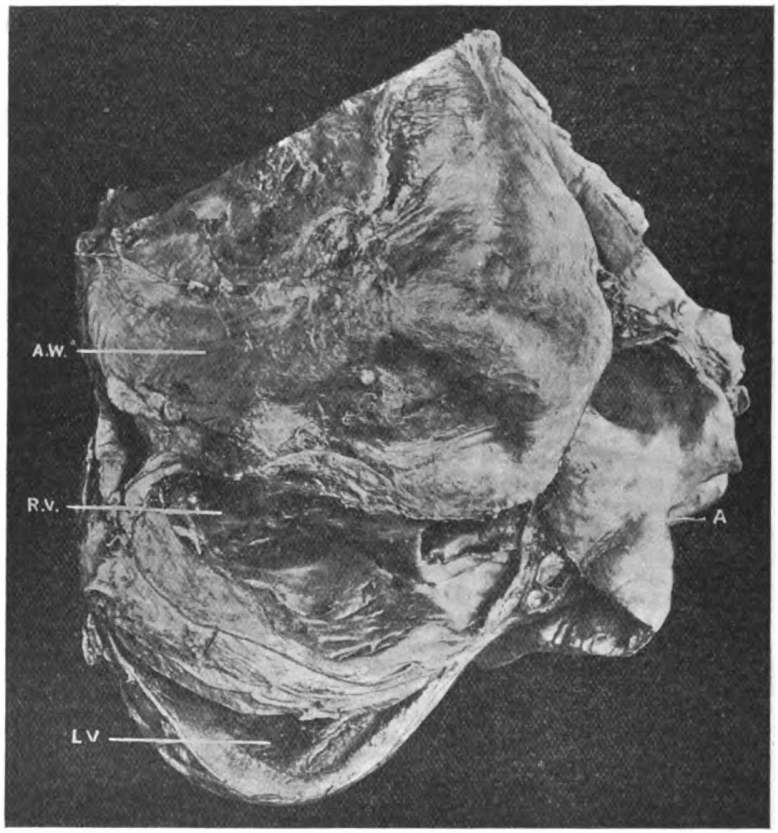
There is no more familiar example of *acquisition by lung resonance of tympanitic quality* than the so-called "tubular" percussion sound above a copious pleural effusion, but the consolidating process of pneumonia offers many examples. I would urge the clinical importance of the recognition of tympanitic quality in lung resonance under abnormal circumstances, and at the bedside students, as a rule, I think, find no difficulty in distinguishing between "non-tympanitic" and "tympanitic" resonance, whether the latter be "full" or "empty," to use Skoda's most useful classification. The assumption of tympanitic quality by the lung resonance—such as it is—will often be observed in the course of intrathoracic tumour, and the principles I have referred to will generally enable its correct interpretation to be made.

That there is a very natural tendency to confuse excessive degrees of "non-tympanitic" resonance with "tympanitic" resonance is admitted, but the distinction can be made. I have often remarked upon Dr. Walshe's accuracy of statement (though he was an opponent of Skoda's teaching) displayed in his definition of simple excess of pulmonary resonance when he used the words in his description of the "quality" of resonance in emphysema—"more or less *approaching* tympanitic."

It may be permissible here briefly to refer to a remarkable occurrence associated with excess of air in the chest outside the lungs and due to a mediastinal tumour composed of tuberculous lymphatic glands. The late Dr. Joseph Coats, of Glasgow, related the following example. An infant, not known to be ill, suddenly developed dyspnœa and subcutaneous emphysema and died in 18 hours. Post mortem the anterior mediastinum was greatly blown up with air. The left lung was greatly distended with interstitial emphysema. The lymphatic glands at its root were tuberculous and there was limited tuberculosis of an adjoining portion of lung. An adherent gland had discharged its contents into the bronchus connected with this tuberculous piece of lung. "An irregular aperture ..... was found in the wall of one of the smaller primary branches of the main bronchus. This aperture led into a cavity in the gland and had allowed the softened contents of the gland to escape and infect the lung and finally the air to escape from the lung to the tissues outside." The case at least illustrates how far-reaching may be the effects of a mediastinal tumour on the respiratory system, though in the adult tuberculous lymphatic glands seldom form a "mediastinal tumour" with its usual clinical phenomena.

Excessive non-tympanitic resonance and the change from the normal non-tympanitic to tympanitic resonance of varying degrees of fulness over the chest form interesting features in the clinical manifestation of mediastinal tumour —aneurysm or neoplasm. Their explanation, of course, is the change brought about in the air-content of the lung and in the tension of its structure. Dr. Frederick Roberts in his monograph in Allbutt and Rolleston's "System," Vol. V.,

FIG. 2.



Oval saccular aneurysm of the ascending aorta, the size of a cocoanut. It is adherent to and incorporated with the wall of the right ventricle. Adhesive pericarditis is well seen. A.W., Anterior wall of aneurysm. R.V., Right ventricle. L.V., Left ventricle. A., Aorta.

p. 647, goes so far as to state "that a growth may interfere with the trachea only to such a degree as to cause accumulation of air and consequent distension of both lungs." Such change, however, is, as a rule, unilateral or local.

The distinction between the percussion resonance of lung over-distended with air—that is, with a *plus* content of air—and of lung with a *minus* content of air is, I believe, of extreme importance clinically, and in conclusion of the subject I would remind you once more of the dictum of Skoda: "A healthy lung strongly inflated within the thorax so as to be made to press against its walls gives a full, clear, but non-tympanitic sound (on percussion) over every part where it comes in contact with the walls."

Causes of Dulness.

The causes of dulness over the lung area, as a result of intrathoracic tumour, are numerous, and are apt to occur in combination. The tumour itself may be the direct cause, and enormous tumours are on record, almost sufficient in themselves to account for the dulness of the whole side; but here we are concerned chiefly with those causes that depend on secondary pleural and lung changes. Pleural effusion we have noticed to be a very common result, and Dr. Pitt has shown it to be much more common in the case of neoplasm than in that of aneurysm. The pleura itself may be the seat of new growth, and I have brought a specimen which shows the pleura covered with tumours, though not one could be said directly to be the cause of pressure symptoms. (Fig. 1.)

The patient was an engine driver, aged 58 years, who had fallen down while on his engine and injured his right side and right knee in December, 1908, and who died on April 30th, 1909. The right knee had been injured 13 years before and again later. It showed marked thickening of bone with blurring of outlines resembling an osteo-arthritis when the patient came under observation on March 8th, 1909. On the 23rd he was admitted to the medical wards and the prominent feature of his case was a copious hæmorrhagic right pleural effusion which, after tapping, rapidly reaccumulated, while there was only slight and irregular pyrexia. On April 29th there was found in the fluid a small fragment of tissue composed of large round cells and very probably a fragment of growth as stated by Dr. Loveday, superintendent of the clinical laboratory. I need not refer in detail to the remarkable appearance of the pleural surfaces on the right side, as it can be seen in the specimen I show, and is well seen in the photographs thereof. In one place the right lung below its hilus was invaded by a growth of the size of a plum. Microscopically the growth in the pleura was found to be endothelioma, though "in places it bore resemblance to a round-celled sarcoma." The growth in the joint had "a similar structure." It was "packed with large round cells and practically devoid of stroma." It may seem straining a point to bring this case under the heading of "intrathoracic tumours," though certainly such were present in abundance. Dr. Samuel West's important observations on the adhesiveness, if I may so say, of the pleural surfaces are too well known to require more than mention, but looking at this pleura, the site of almost universal malignant disease, one can hardly avoid thinking of the influence that such disease would be likely to exert upon this remarkable property of the pleural surfaces had there been no fluid to separate them. The pleura may be so thickened by new growth as itself to contribute materially to the dulness of the side present.

In the briefest possible manner I would refer to another of the specimens I have brought and have had photographed, in which the pericardium presented a pseudo-cystic tumour formed by a localised collection of purulent fluid. In a third specimen the pericardium itself is the seat of new growth.

Pulmonary Changes Associated with Dulness.

The pulmonary changes associated with dulness on percussion, as a result of intrathoracic neoplasms and aneurysms, were so thoroughly considered by Dr. Pitt last year that it will be unnecessary again to consider them in detail. I will merely briefly recall Dr. Pitt's statements that: (1) the lung may become collapsed and therefore solid; (2) there may be a so-called "retention pneumonia," the alveoli being filled with catarrhal cells while giant cells, apart from tubercle bacilli, appear (when there is first collapse and the alveolar walls remain long in contact organisation with obliteration takes place and new connective tissue is formed; further there may be a general fibrosis of the lung beyond the obstruction and a bronchiectasis); (3) dilatation of the bronchial tubes which are generally full of secretion; (4) fibroid thickening of the lung; (5) secondary infections resulting in breaking down of the lung, and (6) the still more destructive process of gangrene; and (7) from such processes as the last two, pleurisy and empyema may result.

These lung changes, however, are too often apt to be of little interest as regards auscultation, inasmuch as the bronchus of supply becomes blocked, and the glottic breath sound cannot be transmitted, while, of course, there can be no play of the lung structure. Vocal fremitus and resonance are likewise apt to be annulled. The heart sounds may, however, it would seem, be well transmitted in the neighbourhood of the heart. In the rare event of a tumour mass becoming broken down into a cavity, communicating with the glottis through an unobstructed bronchus, there may possibly be bronchial breath sound audible on auscultation, and certainly there may be cracked-pot sound on percussion. In a case which I published in THE LANCET in 1888,[2] while the latter physical sign was present, the breath sound could only be called "indeterminate."

IMPLICATION OF NERVE-SUPPLY TO THE LARYNX.

In the clinical recognition of intrathoracic tumour the interference with the innervation of the muscles of the larynx that such tumour may cause has been a matter of great importance to the physician ever since the invention of the laryngoscope made examination of the movements of the vocal cords and associated parts feasible. Although it is in the case of aneurysmal tumours that implication of the vagus nerve, and especially of the left recurrent branch, is most commonly met with, aneurysmal tumours have by no means a monopoly in this respect, and I am disposed to think paresis or paralysis of a vocal cord due to intrathoracic neoplasm is more common than it is generally believed to be. As regards the recurrent branch of the vagi, that of the right side hardly enters into our consideration to-day, inasmuch as it lies practically outside the mediastinum. An innominate aneurysm may, however, so extend upwards as to involve the right subclavian artery in such a way as to exert pressure upon the nerve, or, associated with aneurysm of the arch, there may be an independent aneurysm of the subclavian or of the innominate artery involving the subclavian. The frequency of the existence of more than one aneurysm in the same individual is well known. Less rarely the right recurrent nerve is caught as it were in malignant disease of the œsophagus; but for this to happen such disease must be situated so high up as to lie in the root of the neck rather than in the thorax. Goitre may, again, cause pressure on one or both recurrents, at the same time extending behind the manubrium sterni and so becoming an intrathoracic tumour.

Then there is the interesting question, raised by the late Sir George Johnson, as to the possibility of pressure exerted upon the trunk of one vagus causing interference with the bilaterally associated nuclei of the nerves in the direction of inhibition and resulting in paralysis of both vocal cords—proof of such occurrence does not seem to have been obtained, and it would seem always more likely in a case of double recurrent nerve palsy that some accidental and independent pressure had been directly exerted upon the right nerve as well as upon the left, as, for instance, by an enlarged lymphatic gland in malignant disease, by thickening of the right pleura about the apex of the lung, or by a small independent aneurysm involving the subclavian in the case of intrathoracic aneurysm.

But the interest of bilateral palsy of the vocal cord does not end here; there comes in the question of the relative predominance of the adductor and abductor muscles respectively of the vocal cords—a matter of great clinical importance. It is now a well founded belief that the abductors are the muscles to be first weakened under paralysing influence. The fact has little importance, perhaps, when the affection is of one vocal cord only, but it is quite otherwise when there is bilateral paresis or paralysis of the abductors, permitting the adductors to close the glottis without any pronounced degree of spasm and simply by lack of the opposition which the abductors should supply under normal circumstances.

[2] THE LANCET, Oct. 27th, 1888, p. 809.

Another consideration, which I do not think has received all the attention it deserves and which was the subject of a thesis in 1865 by Professor Wyllie of Edinburgh University, relates to the concavity of the upper surfaces of the true vocal cords, whereby the edges of the cords may be forced into apposition and, in valve-fashion, the glottis be closed by the *in-rush* of air, especially when the current is forcible and the glottis small and narrow. Physiologists have long known that this valve action of the vocal cords is specially demonstrable in the case of young animals whose recurrents have been cut. Granted any weakness of abduction of the cords, the predominance of adduction will in all probability be rendered more dangerous by this valve action to which Wyllie called attention.

Sir George Johnson in 1875, with reference to a case described by him, remarked: "Looking into (the) larynx with the mirror, I saw the vocal cords of their natural colour nearly touching each other in the middle line and nearly motionless. ..... During inspiration the glottis did not expand as in the normal state, but, on the contrary, the cords appeared to be pressed nearer together by the inspiratory current of air, while in expiration again the cords were slightly pushed apart by the outgoing stream of air."

The greater the dyspnœa the more forcible will be inspiration, and consequently the greater this tendency of the true cords to act in valve fashion in this dangerous manner. The condition in which the abductors of both cords are weak is all the more likely to be overlooked without the laryngoscope, inasmuch as the voice is unaffected, and in quiet breathing there may be little or no stridor, although on any exertion and in sleep inspiratory stridor is usually pronounced. When there is direct pressure of an intrathoracic tumour, especially aneurysmal, upon the trachea, the stridor, as already noted, is usually double, though the inspiratory sound is the better developed as a rule. An interesting clinical point concerning the site of obvious obstruction—in the trachea or at the glottis respectively—is, in the latter case, the so-called excursion of the larynx downwards with inspiration and its return in expiration. While palsy of one cord may affect the voice little or hardly at all, direct pressure of a tumour or aneurysm on the lower part of the trachea may interfere to some extent with and diminish its tone, the clang of the cough being usually exaggerated in both cases.

Lastly, the two conditions, palsy of laryngeal muscles and direct pressure upon the trachea, are quite compatible in the same case. As regards the clinical diagnosis of one palsied cord, this can be reliably accomplished only by means of the laryngoscope, inasmuch as the degree of interference with the voice and the presence of stridor on forcible inspiration seem to vary a good deal in different cases.

With the production of adduction resulting from nerve-irritability and spasm there will again come into play what may be called the valve action of the vocal cords, and the greater will be the predisposition to this effect the more forcible is the inrush of air, as in dyspnœa. A very slight degree of spasm of the adductors, the result of nerve irritability, may then determine a very dangerous degree of closure of the glottis. To such result, however, spasm may contribute only by bringing the cords within the range of their dangerous mechanical valve action.

AFFECTION OF THE SYMPATHETIC NERVE.

Both in intrathoracic aneurysmal and neoplasmic tumour the cervical sympathetic nerves may be implicated, affection of the pupil, palpebral fissure, and sweat secretion resulting. The tumour must, of course, extend upwards high enough to involve the sympathetic fibres, leaving the cord by the first and second dorsal roots to ascend in the sympathetic chain, and it must extend in the backward direction. As Gairdner stated: "Intrathoracic aneurysm to affect the sympathetic may be expected to arise from the upper and back part of the arch ..... or its primary branches, the sac projecting backwards in the direction of the sympathetic trunk or its ganglia and of their communications with the spinal system." Before he published a case of the kind in 1855, Dr. MacDonnell, of Montreal, had called attention to a case of malignant tumour producing pressure on the sympathetic in connexion with contracted pupil and ptosis on the affected side. The usual affection is paralysis, with the familiar contracted pupil, diminished palpebral fissure, and interference with sweating on the affected side of the head and neck, though the opposite effects may result, it is believed, from irritation of the nerve. Dr. Purves Stewart has shown how well the area of skin rendered sweatless may be mapped out by dusting charcoal over the head and neck. After general sweating has been induced by pilocarpine the charcoal adheres to the normal sweating side, while it is easily blown off the dry side. Doubt has been recently thrown upon the exclusive causation of unequal pupils in the manner stated, and there has been supposed to exist a relationship between the state of the pupils and of the arteries—"with low blood pressure in one carotid the pupil on that side is dilated, with high pressure contracted." The various other causes of unequal pupils that may accidentally and independently coexist with intrathoracic tumour must, of course, be given due consideration in the investigation of a case before the symptom be admitted to have weight in evidence.

NERVE PRESSURE.

Affection of the brachial plexus, causing weakness and sensory disturbance of the arm, is often included among the symptoms of intrathoracic tumours, especially aneurysmal, but it is obvious that the tumour whatever its nature must extend high up in order to produce the symptom. The affection of the arm in true angina pectoris, with implication of the coronary orifices, must not be confused with that just referred to.

PARAPLEGIA.

One of the rarest clinical manifestations of an aneurysm of the descending aorta is paraplegia. When again the spinal column is invaded by malignant growth, secondary to like mediastinal growth, the same symptom may be developed. It was quite suddenly developed in the case of an aneurysm I witnessed during my hospital residence, the patient, while I was going round the ward, calling out with intense pain in his back and rapidly becoming paraplegic. Secondary malignant growth in the spine is a much less rare cause of paraplegia than aneurysm.

DYSPHAGIA.

It is a familiar fact that dysphagia may be a merely transitory and little pronounced symptom in cases of intrathoracic aneurysm, when the position of the aneurysm, in relation with the gullet, would seem to indicate a good deal of interference with the function of the latter. Moreover, the patient may never have been conscious of such interference under like circumstances. It is a good rule of practice to be careful in passing a bougie for dysphagia, lest the cause of the dysphagia should be an aneurysm.

In malignant tumour of the gullet dysphagia is, of course, an all-important symptom, and the possible implication of the recurrent laryngeal nerves in the growth has to be borne in mind with regard to the larynx.

HÆMORRHAGE.

Prolonged repeated slight hæmoptysis has long been recognised as significant of intrathoracic growth involving the lung. The late Sir William Gairdner, again, called attention to the oozings of blood that may result from an intrathoracic aneurysm. The important fact, in our present consideration, is that slight hæmoptysis may occur over a considerable period of time in the course of intrathoracic tumour—neoplasm or aneurysm. Such slight hæmoptysis, as the result of aneurysm, seems to be, as a rule, short and not much over a month in duration. It is curious to note, however, that a much more profuse single hæmorrhage may be survived for years. Sir William Gairdner related a case in which a profuse hæmoptysis occurred nearly five years before the death of the patient. For several years after the first hæmorrhage the patient "continued occasionally to bring up a more or less tinged expectoration—sometimes rusty, sometimes purple, almost never of anything approaching pure blood." At last this patient died after the sudden loss of 8 or 10 ounces of blood which suffocated him. Post-mortem examination revealed a very large aneurysm of the descending aorta "adherent over a considerable space to the left lung and opening freely into the lung and bronchus and trachea. ..... The left bronchus was stretched over the sac and had its posterior wall absorbed throughout its whole length. ..... The sac was filled with firm coagulum" to which no doubt the patient owed the prolongation of his life.

It may be said that hæmoptysis is often a late symptom in aneurysm and an early and frequently a persistent one in neoplasm. In one of my own cases of tumour the patient

attended the out-patient department of the infirmary for a slight hæmoptysis, which in the absence of definite physical signs was naturally regarded as probably of tuberculous origin. To increase the resemblance of the case to a tuberculous one, a large tumour mass was ultimately formed at the upper part of the right lung and actually became excavated, but there was fulness in the infraclavicular region, not the usual depression of the tuberculous process.

Hæmorrhage from Complicating Pulmonary Tuberculosis.

When we consider the great frequency of tuberculosis in general, it is not surprising that the disease should be found occasionally complicating intrathoracic tumours—neoplasmic or aneursymal. The affection may be old and obsolete. On the other hand, I have found it active miliary and the cause of pyrexia in a case of aneurysm. It is obvious, therefore, that hæmoptysis may be caused by tubercle, though an aneurysm be present. Rarely, again, hæmoptysis may proceed from lung tissue directly invaded by, and incorporated with, an aneurysmal sac, without the integrity of the wall of the latter being compromised. On the other hand, without any tuberculosis or direct implication of the lung by the aneurysm, blood from the sac may be aspirated into the lung structure, as pictured by Gairdner in his "Clinical Medicine," pp. 482-3.

Hæmatemesis.

Hæmorrhage into the gullet, usually soon, if not immediately, fatal is, of course, a well-known accident of intrathoracic aneurysm affecting the descending part of the arch. However confidently the diagnosis of intrathoracic growth had been previously made it would be a singular trial of one's faith in it, if the case terminated suddenly by a profuse hæmatemesis, and yet this practically happened in a case reported by the late Dr. Lindsay Steven.[3] That the blood did not appear externally is nothing to the point. The patient, aged 57, had suffered from dysphagia, which began in December, 1889. A No. 16 œsophageal bougie passed 13 inches and was then arrested. The diagnosis of cancer of the gullet was made, and on April 1st, 1890, Dr. Steven recorded that he was "quite satisfied that the case was one of cancer of the œsophagus." A great improvement in swallowing and consequent increase of the patient's weight, however, occurred. Dr. Steven was naturally led to doubt the accuracy of his first diagnosis and consider whether or not the dysphagia "might not be due to the presence of an aneurysm or solid tumour at the bifurcation of the trachea." In October he had the "gravest suspicion of aneurysm at the bifurcation of the trachea." On the 18th the patient spat up a small quantity of dark blood, and for the first time complained of pain in the chest. He died suddenly on the 29th, having "raised himself in bed suddenly because of some distress referred to the chest," and then sank back and speedily died with indications of internal hæmorrhage. At the post-mortem examination, on laying open the thoracic aorta (removed from the body) from below upwards "a circular opening with thin and somewhat ragged edges [was] found," which led "into a ragged cavity." On laying open the gullet "at the level of the obstruction ..... a large rugged ulcerated cavity ..... was found in its wall." The upper margin of this excavation was raised and rather sharp and presented the typical characters of the margin of a malignant ulcer. "The stomach [was] greatly distended, being filled with red blood. ..... The duodenum and several feet of the upper part of the small intestine were similarly distended."[4]

Cutaneous Hæmorrhage.

Cutaneous hæmorrhages in the form of petechiæ or ecchymoses may be only expressions of a general hæmorrhagic diathesis in the most malignant sarcomatous growths of the mediastinum, while, in the same case, hæmoptysis, and other hæmorrhages from within, may result from the same cause. On the other hand, the sac of an aneurysm (generally of the arch) coming forwards may be the source of actual cutaneous hæmorrhage. At first there is usually only blood-staining of the skin, but a local inflammatory condition is often set up, with redness and tenderness, so that, as in a well-known case, the patient may regard the red, tender, and possibly elevated spot as a "boil." The deposition of fibrin in layers is the great preventive of rupture externally as in other directions, and even when hæmorrhage does occur it is often, as Gairdner said, "a mere oozing or succession of oozings filtered through these obstructions." On the other hand, as I have seen, the issuing stream of blood may spout up a considerable distance above the surface of the chest of the recumbent patient. In a case I witnessed, as a hospital resident, the patient survived the rupture many days. Dr. Walshe recorded a case, indeed, in which the patient "must have lived for nearly two months with a gradually increasing extent of his chest wall and aorta replaced by lint."

[3] Glasgow Medical Journal, 1891, vol. xxxvi, p. 123.
[4] Ibid., p. 125.

PHYSICAL METHODS OF DIAGNOSIS.

Inspection.

It will often happen in cases of intrathoracic tumour and aneurysm that the mere inspection of the chests puts the observer almost at once in possession of the diagnosis. It is customary in chest diseases to limit the application of inspection, regarded as a physical method of diagnosis, to the thorax itself, but, specially in the case of intrathoracic neoplasm, it is better to include all that may be obvious to the observer possessing a bearing on the diagnosis under consideration. Thus enlargement of the lymphatic glands above and below the clavicle or in the axilla may afford valuable evidence of malignant growth within the thorax. The significance of external tumour on the thorax, either from projection of an internal one, or of a superficial and essentially parietal one, requires little comment, care o course being taken to exclude superficial tumours, that have existed for many years and clearly have nothing to do with recent developments. Significant tumours in our present consideration have usually appeared recently, or there may be the scar of a surgically-removed tumour.

Intrathoracic aneurysms frequently form local projections, neoplasms less often, and in the latter case independent growth in the chest wall has to be distinguished from projection of internal growth. In the case of aneurysm the seat of projection is usually, as might be expected, the upper part of the thorax often involving the middle line in some degree and extending more frequently to the right than to the left of it. But the projection may be altogether to the right of the sternum and extend under the nipple itself, encroaching on the situation of a distended right auricle, or in rare cases of aneurysm of the descending aorta, it may be situated to the left of the spinal column. In almost all cases careful inspection over its surface will reveal pulsation, though it is astonishing how easily pulsation may escape observation when there is no projection of an aneurysm. This year only I regarded a dull area as due to intrathoracic growth because I, and those associated with me, failed to observe pulsation carefully looked for. A few days later a somewhat accentuated aortic second sound and diminution of a radial pulse were allowed more weight than at first in the diagnosis, which was changed to that of aneurysm. The patient proved absolutely intolerant of iodide of potassium, which produced quite grave symptoms, and he died in a short time. Post-mortem examination revealed a large aneurysm. Why visible pulsation was absent in this case, overlooked if you will, is a mystery to me to this day. The only explanations I can offer are: that there was much deposition of clot in the sac, and that the heart was evidently greatly depressed, which probably accounted also, to some extent, for the ill-development of accentuation of the second sound, that, along with the absence of pulsation, at first led to the erroneous idea that neoplasm rather than aneurysm existed.

The distended, enlarged, often tortuous, veins coursing over the thorax and obvious in the neck and arms form a conspicuous feature of many cases of mediastinal tumour and aneurysm. This condition is again often associated with œdema of the face, upper thorax, and arms which may reach an extreme degree. It is commonly held, I think, that such a condition is more frequently present in the case of neoplasm than in that of aneurysm, a statement with which I cannot quite agree. At any rate, I have seen most pronounced examples of the condition in aneurysm, one case in a lad of 20. Enlarged veins in a lesser degree may course over the abdomen, the circulation within them passing downward to the tributaries of the inferior vena cava.

Inspection again may indicate important disturbance of lung functions, especially immobility more or less of one side, expansion being always more affected than elevation during inspiration. A difference between the two sides—

unilateral change—is often much more obvious to the eye as regards movement than as regards mere shape. For instance, it is a familiar fact that the changes in the contour of the chest produced by copious effusion into a pleura are bilateral rather than unilateral, though difference between the movements of the two sides is marked and obvious.

With unilateral *retraction* of the chest as the result of intrathoracic tumour there will generally go excessive play of the unaffected side. Complete obstruction of the main bronchus is probably in most cases the predominant factor in the production of unilateral retraction, though the retraction may be more apparent than real owing to the abnormal activity of the sound side.

"Tracheal tugging" is usually regarded as a palpation sign of aneurysm, but the diagnostic value of the sign is much enhanced when the movement of the larynx is so pronounced as to be visible and therefore to become an inspection sign. When this happens there is probably always aneurysm present.

Palpation.

One of the specimens I have brought with me shows a most unusual condition, and one, I may say, therefore peculiarly difficult of diagnosis. I have not been able to find a similar case recorded, though Sir William Osler makes reference to such an one in his article on Aneurysm in Allbutt and Rolleston's "System of Medicine," vol. vi., p. 658—a case of Dr. Gee's. During life in my patient there seemed to be two apex beats—if I may so say—one including and not extending much beyond the normal apex situation and the other quite separate and approaching the left mid-axillary line. Moreover, the whole heart seemed to be thrust forwards in systole, much as it is when a solid mass or an aneurysm lies behind the heart and between it and the spine. This led me to think that there was an aneurysm of the descending aorta behind the heart, causing the heart to be thrust forwards in each systole, though there was always, in this view, the difficulty of explaining the absence of pulsation between the spine and the more external of the two impulses. The curious fact was ascertained by examination post mortem that an aneurysm *in front of* the heart can occasion a pulsation closely resembling that of an aneurysm or neoplasm situated *behind* the heart, so much so indeed as to cause clinically confusion between two opposite conditions. About the same time, curiously, I had in the wards a closely similar case. Although a necropsy was made, it was made on condition that no part of the body should be removed.

The peculiar thrusting forwards of the heart in systole that occurs even when a solid tumour is situated *behind* the heart, no doubt depends on the ventricles of the heart becoming a solid mass of rigid muscle in systole, which mass thrusts itself between the spine and the sternum, with its adjoining cartilages. The spine cannot yield backwards, therefore the sternum has to yield forwards. What may be called the special impulses of the heart are quite lost in a *general* heave forwards. No doubt the instruments of precision we now possess may distinguish a dual pulsation in the case of an aneurysm situated behind the heart, but my old-fashioned ideas make me apprehensive of such blending of the two impulses in the case I refer to as would make their distinction one of peculiar difficulty. Of one thing I am convinced; it is: that to the eye, at any rate, the two very different conditions—a solid tumour and a large aneurysmal sac behind the heart—occasion to the clinical observer a very similar condition, while I doubt if the most sensitive hand could convey the double impulse that must, one would think theoretically, be present in front in the case of aneurysm of the descending thoracic aorta.

A valuable sign of intrathoracic aneurysm that has its place under palpation is the diastolic shock, representing the closure of the semilunar valves, that may be felt over a superficial aneurysmal sac. This shock, no doubt, is the palpation-sign corresponding to the peculiarly valuable auscultatory sign of accentuation of the second sound, to be considered under auscultation. Thrills too, generally systolic, rarely double and possibly diastolic only, felt under like circumstances come better under the discussion of auscultatory signs, with the murmurs, to which indeed they for the most part correspond. That neoplasmic tumours may occasionally pulsate seems to be unquestionable, and the fact that the large arteries are often found post mortem undiminished in calibre, though surrounded by new growth, is noteworthy.

ARTERIAL EFFECTS OF ANEURYSM.

In the distinction between aneurysm and neoplasm within the thorax, evidence from the condition of the arteries beyond the tumour may prove of great value. A difference between the radials, for instance, is a familiar sign of aneurysm of the aorta, though the interference with the affected radial may be brought about in different ways, certainly not always by the interposition of an elastic sac between the heart and the artery examined. Sir William Osler records a case in which there was "no trace of pulsation and not the slightest throbbing in the abdominal aorta or in the peripheral arteries of the leg." The patient "had a very large area of pulsation in the left scapular region" and presumably an aneurysm of the descending aorta. Dr. Fagge described "a case once in Guy's Hospital in which the pulses at the wrists became quite imperceptible." I had myself a similar case. In such cases the warmth and vascularity of the pulseless limbs are well maintained.

Although Stokes referred to the "subclavian or carotid arteries" becoming "obliterated" as a result of malignant growth within the thorax, it is a pathological fact already considered, that the large arteries may maintain their calibre in the very centre of a neoplasmic mass. I think it may be granted that interference with peripheral arteries, in weighing evidence between aneurysmal and neoplasmic intrathoracic tumours, must go to the side of the former.

So called "tracheal tugging" has been already referred to as an inspection sign of aneurysmal tumour of the arch, but it was originally described as a palpation one. The difficulty with regard to it is that with the finger and thumb applied to the lower border of the cricoid cartilage, an impulse, distinct enough to count the pulse-rate by, may be felt in cases in which there is only some amount of dilatation of the arch and no true aneurysm. By making this sign an inspection one we get rid of its minor developments, which are of doubtful import and may only lead us into error.

PERCUSSION.

I have discussed at such length the percussion changes concerning the lungs which arise in the thorax as a result of intrathoracic tumour, that I must be brief here and speak only of such dull areas as the tumour (neoplasmic or aneurysmal) itself may occasion. The most typical area of dulness may be designated a "mediastinal dulness" and is situated at the level of the manubrium sterni and characterised by its *crossing the median line and reaching to neither costo-acromial angle.* Such dull area may or may not be united to the cardiac dulness by a neck of varying breadth and length, and it may barely cross the median line on one side while extending for a considerable distance on the other side. The lower border of a mediastinal dull area is usually convex downwards, whether or not there be a neck uniting it with the cardiac dulness. An aneurysmal sac is specially apt to extend to the right of the sternum, while such a sac springing from the transverse part of the arch may get to the left of the bone, and the more so the further from the valves it has its origin, but the less likely, on the other hand, is it then to displace the lung and reach the surface. An aneurysmal sac low down to the right of the sternum may cause a dull area entirely to the right of the sternum, lower down but at a varying level. It rarely happens that an aneurysmal sac *per se* causes a dull area behind, to the left side of the spine. In the case of neoplasm I have found such an area only when the ribs themselves were the seat of growth. The lungs may in that case escape involvement, and the parietal growth may not acquire such thickness as to annul the lung resonance.

AUSCULTATION.

There is, I think, a curiously widely spread belief that murmur is almost invariable, at least very common, over aneurysmal tumour. This is, of course, very far from being the case. Directing our attention to the physiological sounds of the heart first of all, their departure from the normal is often in the opposite direction, so that a frequent combination indeed is a practically absent first sound and an extremely loud second sound. During systole the auscultator is aware rather of an impulse—jog or push—than of sound—murmur or sound in the technical sense; of such valuable impression I presume the fashionable double or flexible stethoscope of to-day can give no indication.

In many of the cases referred to in which the first sound is indubitably absent, systolic murmur is present, though very feeble and short. The second sound, on the contrary, is of great loudness and intensity—and as we have found on palpation the hand often receives a corresponding shock. The late Dr. James Warburton Begbie called special attention to this sign of aneurysm in 1863 in a paper which Sir Dyce Duckworth has preserved for us in his Sydenham Society "Memoirs" of Begbie.

We know that there are minor degrees of accentuation of the aortic second sound commonly met with, over simply dilated aortas, and, as so often happens with regard to clinical signs, it is sometimes hard to draw the line between such accentuations and that which denotes aneurysm to the practised observer. The impression given to me by the true aneurysmal-accentuation is that of *extreme tension of the valves*, the result of the greatest force, indeed, that could be borne without actual rupture of their structure. I have no hesitation in giving such accentuation the first place among the auscultatory signs of intrathoracic aneurysm involving the ascending arch.

An interesting diagnostic point is the absence of this sign in aneurysms of the arch *that do not involve the ascending part*. An aneurysm of the posterior part of the arch separated from the valves by a non-dilated portion does not produce this sign, but it will be obvious how likely it is that the commencement of the aorta, being atheromatous, will be dilated, and, as a result, there will be a minor degree of accentuation of the aortic second sound. I have already referred to two cases having as the chief symptom paroxysms of dyspnœa, apparently not due to cardiac disease, in which the absence of accentuation of the aortic second sound seemed to negative aneurysm of the first part of the arch, the cases proving post mortem to be cases of aneurysm limited to the posterior part of the arch. The weak point of the sign, strong as it is when well developed, is the gradual transition from the *minor* accentuation of dilated aorta to the *major* accentuation of true saccular aneurysm.

Murmurs.

While I contend that the most valuable auscultatory sign of aneurysm is unquestionably accentuation of the aortic second sound, I admit, of course, that murmurs are very common. The most common murmur is the systolic, but such a murmur is of extremely frequent occurrence in many conditions other than aneurysm, and so its diagnostic value *per se* is small. Among its many causes, may be enumerated actual aortic stenosis, a dilated aorta with the orifice actually larger than normal, degrees of valve-change from slight general thickening to the marked projection of an inflammatory nodule or rigid valve, a thrombus attached to a diseased cusp, and so on. Diastolic murmur when present in aneurysm is often the merest appendage to a greatly accentuated second sound. Even when such a murmur is loud and well conducted down the sternum, the accentuated second sound may still remain to point to the nature of the disturbing process in the valve function—i.e., enlargement of the orifice, *not* diminution of the valve surface. Of cases of aneurysm, involving even the first part of the arch, it must be admitted that in a certain proportion the second sound has ceased, although the presumption is strong that at one time it had been not only present with the murmur that finally replaced it, but had been actually accentuated. In these cases there is extreme dilatation of the orifice, such as to render the valves incapable of so closing as to result in a sound.

In the case, again, of double murmur—even with accentuated second sound—the risk of overlooking aneurysm proper and regarding the case as one of simple dilated atheromatous aorta is considerable. Moreover, pathogically a dilated aorta and a diffuse aneurysm—so-called—run into one another. I draw the distinguishing line for practical purposes at the production of *pressure symptoms* in the case of true aneurysm. I have occasionally had confidence in the diagnosis of simple dilatation of the aorta strengthened by the carotids and subclavians retaining their characteristic exaggeration of pulsation, while in the case of aneurysm these vessels are apt to have their pulsation interfered with. As far as the double murmur of combined aortic *stenosis* and incompetence is concerned, *general* diminution of visible arterial pulsation is of value in diagnosis. Moreover, in its case the second sound tends towards diminution, *not* increase. Local causes, especially interference with the orifice of one or more of the large arteries by a patch of atheromatous disease, may, of course, likewise occasion diminution in pulsation of one or more of the great arteries of the neck.

As a general rule the statement may be accepted that a diastolic murmur audible over an aneurysm of the arch is evidence of incompetence of the valves, and an accompanying accentuation of the second sound is corroborative thereof. There is no incompatibility between accentuation of aortic second sound and diastolic murmur—rather should marked accentuation of the sound lead to careful seeking for the slight murmur that gives evidence of commencing leakage.

So much for the question of the auscultatory phenomena of aneurysmal intrathoracic tumours.

Murmur with Intrathoracic Tumour: Illustrative Case.

The presence of murmur has been regarded as a diagnostic point in favour of aneurysm rather than neoplasm. The rule may be accepted, but there is such an amount of exception that its value is greatly diminished. One of the best examples of murmur in a case of intrathoracic tumour I have met with may be related in some little detail, inasmuch as it illustrates other features of the disease, and I have not yet related a clinical case in any detail. It was the case of a married woman, aged 26, who, when admitted to the Manchester Royal Infirmary on July 17th, 1890, had been five months ill. Paroxysms of cough and slight hæmoptysis had been the early symptoms, curiously relieved after a miscarriage. Dyspnœa and cardiac palpitation soon, however, supervened, and she had a peculiar desire to vomit or retch with a large flow of saliva (a symptom I have recently met with in intrathoracic aneurysm also), "large quantities of clear neutral fluid" being brought up. Loss of weight and strength were progressive. There were no distended veins on the front of the chest. The whole heart seemed to be thrust forwards in systole. The left side of the chest was dull all over with the exception of a trace of resonance in the supraclavicular region. The intercostal depressions showed no levelling, and though the dulness was so extensive it did not transgress the middle line in front. The left side was immobile and vocal fremitus absent over it. There was practically respiratory silence on the left side. Over the right side there was vesicular breath sound with a few rhonchi. The heart sounds to the left of the sternum were at first normal, with the exception of accentuation of the second sound of the pulmonary artery. Over the sternum and the whole of the right side of the chest a loud systolic murmur was audible. There was no laryngeal palsy and the voice was clear. The pupils were normal. The urine was normal. Looseness of the bowels was a troublesome symptom. On July 22nd pain on the left side was complained of, and it continued more or less to the end. The temperature throughout was elevated, the fever being of remittent, irregular type. On Sept. 11th a systolic murmur became audible over the apex of the heart. On the 16th there was œdema of the feet, and the intercostal depressions on the left side were less marked. On the 22nd the intercostal depressions were becoming obliterated on the left side, while the dulness extended to the right border of the sternum, and pulsation was visible to the right of this bone. Profuse perspirations occurred, and the left side of the chest became expanded. A small quantity of pus was withdrawn from the left side of the chest. The patient died on Sept. 27th. Post mortem: The left side of the chest was expanded. The left pleural cavity was obliterated over the posterior two-thirds of the upper lobe and the posterior half of the lower lobe. The anterior and inferior portions of this pleura contained pus and blood-clot. Left lung consolidated, its lower lobe compressed. The visceral pleura showed apertures through which pus exuded. Lobes of lung adherent. Lung of firm consistence, grey colour, riddled with small, irregular cavities, with ragged walls and filled with pus. In the upper lobe near the hilus there was a mass of reddish-grey tissue continuous with a growth of the posterior mediastinum, the size of an orange, between the aorta behind and the right and left bronchi in front, and reaching as high as the lower end of the trachea and as low as the origin of the sixth intercostal artery. On the left side a process of tumour surrounded the left bronchus, the walls of which were formed of tumour

tissue: a No. 12 catheter passed through it. The growth extended half an inch to the right of the vertebral column. On section the growth was found of soft consistence and pale greyish-white colour with pink softer centre. The pericardium contained a large quantity of yellow fluid and flakes of lymph. Its upper posterior third showed nodular growth. Heart thin-walled and dilated. No valve disease. Microscopical examination showed the growth to be a lymphosarcoma.

Published reports of cases referred to in the lecture.—THE LANCET, Oct. 27th, 1888, Case of Excavated Tumour of the Lung. Medical Chronicle, December, 1890, Two Cases of Intrathoracic Tumour. Ibid., April, 1901, On a Sign of Intrathoracic Tumour involving the Posterior Mediastinum. THE LANCET, Feb. 17th, 1894, Clinical Lecture on a Case of Tumour of the Lung.

An Address
ON
SOME EARLY SIGNS AND SYMPTOMS IN NERVOUS DISEASE.

Delivered before the Harveian Society of London on Nov. 23rd, 1911,

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GENTLEMEN,—I am desirous of bringing before you to-night certain difficulties which have confronted me in the course of practice in reference to the diagnosis of nervous disease. It is often exceedingly difficult to determine whether a patient whose case is submitted to one's judgment is suffering from real structural organic disease or is the victim of functional disorder. I am bound to say that with increasing experience I find that I am much less inclined to make a diagnosis of functional disorder than I was a few years ago, and no doubt one reason for this is the increased importance which we have learnt to attach to certain symptoms, and the discovery of the weight which ought to be given to certain physical signs, previously undiscovered or regarded as unimportant. Another difficulty that occurs is, after the real organic nature of the ailment is recognised, the determination of its nature. I am afraid that there is a tendency to regard "disseminated sclerosis" as the dumping ground into which neurologists are rather inclined to shoot everything that is indefinite but organic, and perhaps the cases I am about to relate may not help to remove the impression. Yet I think most neurologists are aware of this danger and are becoming more alive to the possibility of being able, sooner or later, to subdivide the cases which we regard as examples of this disease, and perhaps to classify some of them under a different heading.

DISSEMINATED SCLEROSIS.

I remember a few years ago a patient whose case was very instructive. She was brought to see me on account of some difficulty which she had recently experienced in walking quickly. She was a young good-looking girl, and as she walked across my room nothing very obvious was noticeable in her gait except perhaps a little difficulty in preventing the toes of one foot from catching the ground. Vision was good; there was no nystagmus, no diplopia, no difficulty in using the hands, no trouble with the sphincters. I may mention also that there was a history of "emotional disturbance," and I confess that I thought the case was a functional one. However, I refused to commit myself until I had made an examination of the patient in bed. I made this examination the next day and found that there was well-marked ankle clonus on the side on which I had detected a little peculiarity in the action of the foot, and there was distinct and unmistakeable extensor response from each sole. It was then obvious that the case was an organic one, and I may add that in a few months' time it was clear that it was in every respect a characteristic one of disseminated sclerosis.

SPINAL CARIES.

Spinal caries is also a condition to have in mind in reference to any patient complaining of difficulty in walking. I always remember a case which impressed me very much at the time—that of a young girl who was a nurse at a cottage hospital in the country. She complained of difficulty in walking and of difficulty in using her left hand. The condition was regarded as hysterical, and she was urged to go on with her work. She did so until it was no longer possible, and she was then admitted as a patient to Queen-square. There were marked weakness of the legs, exaggerated knee-jerks, and ankle clonus. It was before the importance of the plantar reflex was realised. There was no distinct impairment of sensation except in one arm. Both arms were very weak, and there was much thickening about the cervical spine. The girl rapidly became worse and died a few days after admission. There was extensive disease of the spinal column and pressure myelitis.

We all know how difficult it is to get away from a diagnosis once made. In this case the idea of hysteria had apparently dominated the minds of those who saw the patient in the early stage and had continued to do so even after signs were present which should have altered this view. Two points in such a case should be mentioned: 1. That cervical caries is not always easy of detection. No curvature is usually present, only thickening about the cervical spine. 2. That practically complete motor paralysis may be present in such a case without any marked change in sensation.

SUBACUTE COMBINED SCLEROSIS.

There is a disease which has been described within the last few years under the name of subacute combined sclerosis. An early sign in this disease may be a peculiarity in walking, which resembles somewhat the walk in tabes. Yet in many such cases examination shows that the knee-jerks are active—at least in the early stage—and the somewhat anomalous gait, combined, it may be, with what may be called a slightly hilarious frame of mind, may easily mislead one into thinking the condition a functional one. And with reference to the peculiar mental state occasionally present in this disease as well as in disseminated sclerosis, it should never be forgotten that not infrequently we have a combination of hysteria with organic disease—what someone has called a hysterical picture painted on an organic background. A case of which I have published full details elsewhere illustrates this. The patient was a woman aged 60, sent to me by Dr. J. Corbet Fletcher on account of difficulty in walking. She came into the room with a somewhat high-stepping, ataxic, spastic gait; she chattered and laughed about her walking, made light of it, and apparently looked upon it as a joke. She refused to take it seriously and submitted to examination somewhat deprecatingly. She looked pale and distinctly anæmic. She had exaggerated knee-jerks and ankle clonus, and in the course of a few weeks became worse and, at Dr. Fletcher's request, was admitted to Queen-square. She was recognisable as a sufferer from the disease when I saw her first; she presented the complete picture in a few weeks and the clinical course was quite characteristic. She died within six months of her first symptoms and her spinal cord showed the characteristic changes. Yet when I first saw her the condition was one which might easily have been regarded as functional, and only functional, but for the comparatively slight signs of structural change that were present.

TABES WITH GASTRIC CRISES.

A few years ago I was consulted by a tall, well-built man, the brother of a nurse whom I knew, on account of two or three recent attacks of sickness. He described them as "bilious attacks." They came on quite suddenly, usually in the night, and the sickness persisted for several days. There was no severe abdominal pain, except in the paroxysm of vomiting, and the attack passed off without leaving anything but some weakness behind. There was no headache, and migraine, which at first occurred to me, was excluded. On examination, however, I noticed that he had small pupils, and these I found were inactive to light. There was no impairment of vision. His knee-jerks could not be obtained, and he had occasional shooting pains. There was no ataxy. It was then, of course, evident that one had to deal with a case of tabes with gastric crises, and the subsequent progress of the case—difficulty in walking, Charcot's disease of the ankle, and perforating ulcers of the big toes—confirmed the

diagnosis. In my experience cases of tabes with gastric crises are rarely ataxic, and not infrequently the gastric crises cease to recur, and the patient, although often broken down in health, is not necessarily the victim of a progressive disease. The patient whose case I have described is now, after 18 years, alive, and only to be recognised as a tabetic on very careful examination. Yet but for the presence of the Argyll Robertson pupils and the absent knee-jerks in the early stage, the true nature of the disease might easily have escaped notice.

I have been much struck by the ease with which such cases may be mistaken for abdominal conditions. A few years ago I saw in consultation with Dr. E. S. Scott, of Hampstead, a patient who some years before in America had been the subject of repeated attacks of sickness and vomiting with abdominal pains. He had first an abdominal operation which was followed by a few months of freedom from the attacks; on their recurrence, however, a second operation was done, also followed by temporary relief. What the operation was it was impossible to say, but he had two distinct large abdominal scars. The attacks had recurred when Dr. Scott saw him, and he found on examination that he had Argyll Robertson pupils and absent knee-jerks, and I could only confirm the view he had adopted that the case was one of tabes with gastric crises, and that two unnecessary abdominal operations had been carried out.

It was only a few weeks after this experience that I was asked to see at Moorfields by my colleague, Mr. G. Coats, a man who came there on account of failing vision. His previous history showed that he had had three abdominal operations at a London hospital on account, as he said, of "gastric ulcers." He certainly had three abdominal scars. His condition was one of tabes with optic atrophy, and there was little room for doubt that the three operations which had been carried out with the view of relieving abdominal symptoms were really prompted by the severity of the presumably unrecognised gastric crises from which he suffered.

ACUTE VISUAL DISSEMINATED SCLEROSIS.

There is a considerable class of cases of disease—the nervous nature of which later becomes obvious—in which the early symptoms are either visual or ocular, and are therefore of such a nature as to lead the patients to seek advice of an ophthalmic surgeon, either at a hospital or in private. A very striking case of this character was referred to me at Moorfields some months ago by Mr. W. T. Holmes Spicer. The patient was a girl, aged 21, who came to Moorfields on account of loss of sight. The history was that for about six weeks she had suffered with headache and vomiting and with great difficulty in walking on account of weakness in the legs. She was free from headache and sickness when she came, but her vision was reduced to perception of light. The reflexes were all normal, and no change in the optic discs was to be noticed. I gave my opinion that the case was one of intracranial tumour. I thought it was probably frontal and that the optic nerves were being directly pressed upon, and that this was probably the reason why there was no optic neuritis. I may briefly summarise the sequel, for we were able to watch it, as I had her admitted to Queen-square. The vision gradually improved until it became nearly normal. This was accompanied by a gradual paling of the discs. The walking power improved slightly, but the girl remained spastic with some ataxy, the knee-jerks were increased in activity, ankle clonus was present with plantar response of the extensor type, and it was then evident that the case was one of acute disseminated sclerosis. I have seen two other cases in which sudden loss of vision—naturally enough suspected to be hysterical—was the first sign in what turned out to be cases of disseminated sclerosis. In those two there was at first no associated weakness of the limbs or any change in the reflexes.

GRAVES'S DISEASE.

I am sure that slight cases of Graves's disease are apt to be missed. In some early ones exophthalmos is not complained of and is frequently not noticeable. In some cases it may be unilateral, and unless one is aware that unilateral exophthalmos is not infrequent in this disease the true significance of the signs and symptoms may not be recognised. Goitre also is by no means constant. It is in my experience especially apt to be absent in men with Graves's disease, and I remember one man with the most striking exophthalmos I have ever seen, and another who lost an eye through ulceration, and in neither case was there any goitre to be detected. The cases of Graves's disease in which the true nature of the illness is apt to escape detection are those in which the patients' symptoms are vaguely neurotic, in which goitre and exophthalmos are not noticeable, yet examination reveals a rapid heart, and inquiry elicits a history of wasting, of severe attacks of diarrhœa, and of considerable cardiac and abdominal discomfort. I believe such a combination of signs and symptoms justifies a diagnosis of Graves's disease.

And might I just add a word as to treatment and its effect in this ailment? Nothing to me has been more striking than—I will not say the curability of this disease—but the tendency to improvement. I always give belladonna in good doses, and improvement, often most striking, is the almost invariable rule. Although I personally place considerable reliance upon the drug, I have not implicit faith in it, for I have known patients in whom it failed to effect improvement become quite well without it. And I believe that given fairly good conditions the great majority of cases of this disease tend to improvement, and I have never yet seen a case in which I have thought it necessary to advise operation.

Such are a few of the points which I wished to bring before you, and I trust they may have excited your interest and may lead to discussion.

VENEREAL DISEASE: ITS PRESENT AND FUTURE.[1]

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AND
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THE problem of venereal disease, and that of feeble-mindedness, are the two most important medico-social problems of our time, and inasmuch as venereal disease augments the ranks of the feeble-minded, the two questions are closely allied. Of the ravages of venereal disease the public know nothing and consequently care nothing, while those who do know seldom care to break the professional silence, which accords with popular prejudice and apathy. In attempting to deal with this subject, while each of us is, strictly speaking, responsible for his own section, we are, nevertheless, at entire unity as regards the principles and methods by which this problem has to be grappled.

What is venereal disease? What is the present state of affairs? How are we to deal with it? These are the questions to which we invite your attention.

Soft chancre, syphilis, and gonorrhœa—these are the chief forms of disease. The chief importance of soft chancre is its possible confusion with syphilis. Though soft chancre is not a slight or negligible malady, yet both in respect of the gravity of their effects and of the numbers of persons affected, gonorrhœa and syphilis are by far the most important. Their importance is not only individual, but national, since the former affects the procreative powers of both women and men, whilst the latter may and, if neglected, always does result in the introduction into the world of children who are diseased from the very start.

Gonorrhœa is popularly regarded as a mild and not very shameful disease. Medical opinion, however, is doubtful whether, to the individual affected, it is not worse than syphilis. It may be fatal to the victim—more frequently to women than men; its complications and consequences are serious and very common; having no specific remedy of approved efficiency, it is apt, unless treated very early and very thoroughly, to become a chronic disease of indeterminate duration and perpetual inconvenience. Its infectiveness is equally indeterminate. In adults it is only acquired by sexual intercourse. A young man contracting it, and believing himself cured, may then give it to his young wife. Apart from the danger to her person, about 50 per cent. of such infected women are sterile. The majority of all young men get this disease before the age of 30, and

[1] A paper read at the Annual Congress of the Royal Institute of Public Health, held in Dublin, August, 1911.

very many marry while still infectious. In addition to the sterility which they may inflict on their wives they may be themselves sterile by reason of their own disease. The result is disastrous both to wives, husbands, and birth-rate.

Syphilis is only like gonorrhœa in that it is at first, as a rule, locally situate in the genitals of either sex. In the primary condition the local sore alone is infectious. But after a few weeks the blood stream becomes involved and the secondary stage begins. The skin and mucous membranes develop pocks and patches; mouth and throat are invaded, and the infectivity becomes general. Cups which the patient uses, pipes he smokes, cab-whistles, anything which he puts to his lips, may convey the infection to others; for this disease, unlike gonorrhœa, can be inoculated on any part of the body. If untreated he or she may remain a source of infection for about three years. After this the disease becomes latent, ceasing to be infectious to others; but for himself in this tertiary stage no part or organ of his body is free from the chance of invasion or destruction; and at the last he is liable to those diseases which are called para-syphilitic, tabes and general paralysis. Mercury has, indeed, a specific therapeutic effect on the disease, but complete cure by mercury, except under very early and prolonged treatment, is rare. For years after infection it is transmissible to wife and unborn children, who in their turn are liable to the same ills and may even transmit them to the third generation.

The early manifestations of syphilis fill the out-patient departments of general hospitals; the later stages fill the infirmaries and asylums with senseless wrecks of humanity. It is the great-pox. Small-pox we fight tooth and nail, but the great-pox, which is far more disastrous to the nation's life, is left unheeded and unchecked. As for the children of syphilitic parents, it may be said that the first child always dies, either before birth or in the first year (95 per cent.); of all children more than 50 per cent. die before their second year, while most of the remainder are marked with the disease. So we may say gonorrhœa kills the tree before it sprouts, syphilis blights and stunts its growth.

Such is a very brief outline of venereal disease, a rough sketch without colour; every medical man will be able to fill in the colour from his own experience.

The task of estimating the present position, and of suggesting how to deal with it, falls naturally into two divisions, military and civil. As regards the military side, we are in possession of statistics, and the plan of campaign is definite. On the civil side, we have no statistics and no plan of action. First, then, we will take the matter in its more definite and restricted form, returning later to the more general and more difficult side of the question.

Military Section.

The only figures on which we can rely are those furnished by the army, which are to be found in the various volumes of the Army Medical Department Reports from the year 1860 to the present date. The most obvious fact to be gathered from these figures is that the amount of disease now present is about one-eighth of what it was 50 years ago, though in the "eighties" of last century these ailments were distinctly more prevalent than they had been in the years immediately preceding. Since the year 1894 there has been a continuous rapid fall, interrupted only once (1908), when the return of a large number of men from South Africa caused a slight increase in prevalence. The amount of syphilis is now one-seventh of what it was in 1894.

The same phenomena are apparent in the curves showing the incidence of venereal disease in the army of India. The period of absolute maximum prevalence was somewhat later in this case, but the continuous fall commenced much about the same time, and has continued up to the present day.

If we look now at foreign nations, here also our information is mainly confined to military sources. In the French and German armies there has also been a marked decrease in the last 30 or 40 years. Thus in the German army between 1880 and 1888 the admission-rate per 1000 for syphilis alone was 10·2, this being somewhat higher than the average for the "seventies" (This high rate was possibly due to industrial conditions common to both countries.) It has now (1907) fallen to 4·7. The decrease of late years has undoubtedly been due to the tighter screwing up of the military machinery.

The armies of Italy and Austria both show a distinct increase. Thus in Italy, whilst the admissions for syphilis were 8·3 per 1000 in 1884–85, they were 13·3 in 1904–05, and have been in the neighbourhood of that figure for the past 20 years. In the army of Austria there has been a little variation, but the figures have been continuously higher than in the other armies of Central Europe.

The American army, which approaches most closely to ours as regards conditions of service and nationality of its component parts, has shown a steady increase in the number of admissions ever since the commencement of the war with Spain. This is undoubtedly to be attributed to the fact that the annexation of Cuba and the Philippines brought the soldier into contact with races of a lower moral tone than his own countrymen.

If we compare all armies together we note at once a great disparity in the total prevalence of diseases of this class. In the Army Medical Department Report for 1910 a table is given showing the different rates of prevalence in the armies:—

		Per 1000.			Per 1000.
Germany ...	1905–06	19·8	Russia	1906	62·7
France	1906	28·6	United States ...	1907	167·8
Austria	1907	54·2	United Kingdom	1907	63·4

It is interesting to inquire into the causes of the above disparity. The armies of Great Britain and the United States differ from those of the continental nations in the fact that the service is voluntary, while the period over which it extends is comparatively long. Thus the German soldier serves two years with the colours, whereas the British infantry private serves for seven years. The term of enlistment in the American army is longer still and the age at which men enlist considerably higher. Voluntary service necessitates a much higher rate of pay than universal service and the granting of more leisure to the individual soldier. At the same time, the longer period available for instruction permits of some relaxation in the course of training demanded of the soldier. As a consequence, the British private as well as the enlisted man of the United States army has not got his nose held so firmly to the military grindstone as their congeners in the service of the German Emperor or the French Republic. The case was well put by a German officer when discussing the question with an English *confrère*: "When we have finished with our young men in the evening," he said, "they are not in a condition to think of anything but their beds and a good night's rest."

There is one more social condition in which the British soldier differs markedly from those of France and Germany. The German soldier serves his time in or near the town or village in which he lived before enlistment. The British private, once he has left his regimental depôt, probably never again serves in his own part of the country except by accident. The former has, therefore, a certain amount of female society ready to his hand. The latter is left to pick up what society of this nature he wants from that most readily available on the streets of a garrison town.

I cannot help feeling that the blame rests greatly on the shoulders of the civilian population. In England it is by no means an unknown thing for a soldier to be refused refreshment at a public bar because he happens to wear the King's uniform. Such an event in Germany is inconceivable, and there the consequences to any individual guilty of such an outrage would be extremely serious. In this country the insult to the national uniform does not appear to affect even the renewal of the licence. Matters have improved, doubtless, since the South African war, and the extended manœuvres of late years have made the people of the country-side better acquainted with the soldier, the excellence of whose behaviour on these occasions has been repeatedly testified to by local magistrates. The more intimate acquaintance with military affairs which, it may be confidently hoped, will result from the present Territorial scheme should also have a good effect.

The soldier in the ranks is at a very impressionable age; his character is in 99 cases out of 100 what his associations make it, and his behaviour in an equal number that which he thinks people expect of him. When civilians, of social status somewhat superior to the private, learn to look on the wearing of His Majesty's uniform as the honour that it is, and pay the wearer the respect that he deserves for being ready to give his life in defence of their purses, then the soldier will respond by behaving in a manner befitting that respect. The enormous majority do it now, and have always

done it, with very little encouragement from the civil population. With regard to the minority who do not, one may say to the nation at large in the words of Mr. Kipling:—

On your own heads, in your own hands, the sin and the saving lies.

There is yet another distinction in the conditions under which English and American soldiers on the one hand, and those of the Continent on the other, live, and that is concerned with the regulation of prostitution. As is well known, compulsory registration and periodical examination of prostitutes have been until recently nearly universal on the Continent. In these islands it was once tried and relinquished; in America it has been attempted on a few occasions but never persisted in.

It is quite open to advocates of repressive measures to argue that the great preponderance of venereal diseases in the two armies of Great Britain and the United States is due to the absence of such laws in those countries. There is only one point, however, which they must at the outset make good, and that is to prove that the incidence of venereal diseases amongst the civilian population of London bears the same relation to that amongst the civilians of Berlin and Paris as the admissions for the same class of ailments in the British army bear to those in the German and French armies. If repressive measures are efficacious they must protect the civilian as well as the soldier. If they do not protect the former, then a low rate of incidence in the latter must be due to some other causes than regulation. The question as to the incidence of disease in the civil population will be dealt with in the later part of the paper.

The most definite fact of which we are in possession is that the admission rate for venereal disease in our army has fallen greatly in the past 25 years, that for syphilis having decreased by four-fifths. An investigation of the causes of this fall, which has affected the entire force both at home and abroad, may throw some light on the prospects of future reduction, and also perhaps indicate the lines on which we should work with a view to attaining that end.

In the first place, then, the reduction is in no way connected with repressive measures. These were in force under the name of the Contagious Diseases Acts in 14 selected stations, in greater or less severity, from 1864 to 1886, in which last year, in deference largely to popular agitation, they were repealed. During the earlier part of that period their enforcement synchronised with a decided fall in the admissions in the protected stations, whilst those from the unprotected stations remained practically stationary. The initial fall in the protected stations did not, however, continue, and for the ten years prior to repeal in 1886 there was a steady increase in all stations, protected and unprotected.

It is open to advocates of the system to urge that the opening fall was due to the rigid enforcement of the Contagious Diseases Acts, whilst the subsequent rise was the result of a lax enforcement of the regulations, due to their unpopularity with the general public. This does not explain the simultaneous rise in the unprotected stations, though it might be suggested that during this period a general increase in these diseases occurred, which regulation was able to check in the case of the protected stations, but not entirely to prevent. This last argument of course weakens the position of those who hold that repressive measures can absolutely prevent disease. It is difficult on either line of argument to explain the steady fall throughout the army which began almost in the year of repeal, and has continued ever since. In India again the enforcement of regulation did not prevent a steady rise, whilst the discontinuance of this system has not interfered with the subsequent fall.

The evidence, then, points clearly in my mind to the fact that, whatever other effects regulation of prostitution may have, the stopping of venereal disease is not one of them, and whatever the results may be of repeal, it is not incompatible at least with a diminution of admissions from this cause. Continental military medical officers have come pretty generally to the same conclusion, more especially in France, where it is recognised that clandestine prostitution, which avoids regulation, practised by waitresses at low-class restaurants, servant girls, and others, is the predominant cause of disease.

The true explanation of the diminution in the admission-rate of amount of venereal disease in the army lies, I believe, in an improved moral tone amongst the men, accompanied by a decided increase in temperance. This last is, in my opinion, the most important factor, but I wish to emphasise the point that by temperance I do not mean total abstinence or the signing of a pledge. The temperance that needs to be fortified by some adventitious aid such as the wearing of a badge is often the sign of a nature so weak that if it is bolstered up in one direction it is apt to collapse in another. The temperance to which I refer is that which enables a man to take his beer in the quantities that are suitable to him, that enables him not only to know when to stop, but also actually to stop at that point. That there has been a great increase in this true temperance in the army is beyond all doubt, and I repeat that it is to this cause that we must attribute the present improvement.

Other causes have coöperated to a certain extent, and amongst these one must include improved methods of treatment and administration. Every man in the army has a record kept of his ailments on what is termed his medical history sheet, and we are thus enabled to keep track of the men who have at any time suffered from any particular disease. In addition, any man who contracts syphilis has a separate record in the form of a syphilis sheet. On this very full particulars of all symptoms and treatment are entered, and the document accompanies the man wherever he goes, so that any medical officer under whose care he comes can tell precisely the stage at which the disease has arrived and the treatment previously adopted. In addition, a special register is kept (the syphilis record) in which the names of all men under treatment from the disease are entered, so that at any moment any medical officer can ascertain the number of men in the station actually under treatment and their identity. The record is not closed until a man has undergone a two years' course of treatment and been free of symptoms for a year. These periods can be extended by the medical officer if he thinks the course desirable.

Improved methods of treatment, which are at present on trial, may enable us to shorten the length of time under treatment, but so far no modification has been made in this direction. The number of admissions to hospital is undoubtedly affected to a certain extent by the adoption of out-door treatment in cases where the symptoms are slight and not obvious to outer view. This applies, however, only to syphilis, and mainly to the secondary manifestations of the disease. The other forms are unaffected, and there the apparent improvement is an actual fact.

For the future we must look forward to strengthening the soldier's moral character by education, and affording his physical energies free outlet in some form of sport. A great deal has been done in the direction of providing rational evening amusements, more especially in India in the Garrison Soldiers' Homes which now exist in most large stations in that country.

It is sometimes suggested that disciplinary measures should be used to punish men who contract venereal disease, such as depriving them of a portion of their pay while in hospital, in addition to the habitual hospital stoppage. The measure has a plausible appearance at first sight, but, like many other similar administrative measures, it would merely defeat its own object by leading to concealment of disease. With the young man who has contracted disease, every effort should be made to encourage him to seek early treatment. There is nothing so dangerous as delay, and any prospect of punishment may tend to lead to this. With the hardened sinner the case is, perhaps, different, and it might be permissible to deal somewhat severely with the man who repeatedly incapacitates himself from duty by contracting fresh disease. Most culpable of all, of course, is the individual who, whilst under out-patient treatment for syphilis, contracts some other form of venereal disease. On the whole, however, it is better to err on the side of mercy than severity in this matter.

In some services it is the rule to provide men with facilities for personal ablution after connexion, and in the United States small "venereal prophylactic kits" are issued. These consist of small packages containing antiseptic solution and ointment and a little cotton-wool. This system was practised largely in the Philippines with success. The issue was preceded by a lecture in which the dangers associated with irregular intercourse were pointed out, and continence was shown to be not only harmless but positively beneficial. Finally, the method of use of the prophylactic kit was described. The obvious line of argument that such a lecture gives rise to in the soldier's mind must be something of the

following nature: "If intercourse is not a necessity, and if, as my officer says, I shall be a better and healthier man without it, why does he go out of his way to show me how I may indulge in it with impunity?" It is no duty of any authority to assist men to be vicious with impunity; such measures are degrading to the officers who have to advertise them and lowering to the men to whom they are addressed.

Civil Section.

When now one turns from the military aspect to the civil there is a complete change. There are no statistics, and if there were we should be at a loss how to deal with the patients, since they do not, as in the army, come under direct control. Yet we must at least try to make some reasonable estimate of the incidence of venereal disease on the civil population, and to suggest the principles and methods by which to combat it.

Now, can we, from the figures which we do possess, draw any conclusion as to our present position? In the Army the figures stand at a quarter of what they were 25 years ago and in the Navy at about half. But the special conditions of the services as regards age and sex make it clearly impossible to argue from these returns to the civil population. The German army, for instance, shows a very low and still decreasing figure—far lower than ours; yet Dr. Blaschko tells us that the civil figures are high, higher than ours, and still on the increase. The army returns, therefore, do not help us.

Then there are the returns of the Registrar-General. Deaths from venereal disease in these returns show in 25 years a decrease of 33 per cent., as also do the deaths from the same cause in infants under one year. This would be gratifying; but death certificates, while true as far as they go, do not always give the whole truth, and sorrowing relatives are probably becoming more and not less sensitive to the contents of these papers, while the doctor is reasonably anxious not to hurt their feelings unnecessarily. So that we should do well to receive these figures with caution.

But there is another class of return which we may, I think, consider of good value—namely, the numbers of recruits annually rejected from the army for venereal disease. This is, indeed, an army return; but it may be considered a fair index of the state of affairs in the young adult civil population. Taking now these returns since 1863, the first thing which strikes one forcibly is the great and steady decrease in syphilis, from the appalling figure of 16 per 1000 to 1·5. The second thing is the steady persistency of other venereal diseases at the level of about 2 per 1000 for the last 40 years, rising in the last five years to 3·5, and still apparently increasing. By these figures, therefore, we should conclude a decrease of all venereal disease to a quarter of its former bulk, the whole decrease having occurred in syphilis.

Syphilis then, from being a deadly pestilence, has become of manageable dimensions, while the inroads of gonorrhœa are increasing. As Sir J. Hutchinson says, this is not a time for panic; but, in our view, it is a time for vigorous and well-considered action. Even if we suppose that syphilis has decreased all round in this proportion, which is very doubtful, the conditions still are serious enough, as we shall see.

Let us go for a moment to Berlin, Paris, and New York. Berlin is a city of 2·1 million persons. Of these about 670,000 are adult males. On a given date in 1900 142 per 10,000 adult males were under treatment. About 4/5ths of the total were recent cases. Of these recent cases 1/6th were syphilis and 5/6ths were other venereal diseases. Their average treatment is given at about 45 days, a liberal estimate as it appears to me. The female incidence is between one-half and one-third of the male, according to the best authorities. This, when worked out, gives us a figure of 85,000 fresh cases of venereal disease annually in Berlin, or 1/25th of the whole population.

Paris is a city of 2¾ millions. There it would appear that about 17,000 persons are annually infected with syphilis, and if the same proportion to other venereal diseases obtains there as in Berlin, we get an annual total of over 100,000 for Parisian venereal disease, or 1/27th of the total population.

New York is a city of 4½ million inhabitants. Dr. Morrow holds that there are "over 200,000 infected persons walking the streets of New York," and Bierhof believes this an underestimate. If we consider this expression to represent the number annually infected, the proportion of the population attacked is about the same as in Berlin or Paris. Here also about 1/6th of the numbers are due to syphilis.

In all these cities about 1/12th of the adult male population are infected annually, and about 1/30th of the adult females. Roughly 1/25th of the whole inhabitants. The significance of such figures may be appreciated when Dr. Blaschko gives as his opinion that in Berlin every man who reaches the age of 30 has (on an average) had gonorrhœa twice, and every fourth or fifth man has had syphilis.

How can we compare London with Berlin? Here again, the recruiting figures come to our assistance. British recruits show—in regard to venereal diseases—a figure at present of 5 per 1000, while those of Germany show about 7½ per 1000. (These are in each case the latest available figures.) Of course, the comparison must show in our favour, because of the far-reaching difference between voluntary and compulsory enlistment; but we shall take these figures at their face-value, since we wish our estimate to be conservative. Let us assume, then, that in Germany the proportion of venereal disease is half again as great as in Britain. London is 3½ times the size of Berlin. Allowing the full deduction of one-third, we reach the figure of approximately 200,000 fresh cases of venereal disease annually in London.

A peculiar interest attaches to the fact that the proportion of disease, and also the proportional number of prostitutes, increase with the size of the town. In German towns other than Berlin of over 100,000 people, the proportion of disease is only 70 per cent. of that of Berlin; in towns of 30,000 and over, 40 per cent. of the Berlin proportion, and so on. Again, in New York there is said to be 1 prostitute to every 57 of the population, while for the smaller towns in the States, of say 30,000, the proportion falls to 1 in 400. It is a question of demand and supply; the demand by a given number of men is greater in the large towns than in the small. Thus there is a close correlation between the number of such women and the amount of disease, the proportion of each rising with the size of the town.

The point of these remarks is this. The large towns of Great Britain, other than London, of over 60,000 inhabitants contain between them about 15 millions of people, or about twice the population of London. Allowing them half the London incidence we shall get another 200,000 per annum: 400,000 cases thus account for 22½ millions, or half the whole population of the United Kingdom. The smaller towns and country, the other half, may be expected to contribute about 100,000. Thus, we should reach a total annual toll to venereal disease in the United Kingdom of half a million.

These are not statistics; they are only reasoned computations, and, as such, are open to reasoned criticism. Rough as they are, they will give you some idea of the calamitous quantity of these diseases, of which I have already described the disastrous quality.

(To be continued.)

TREATMENT OF GRAVES'S DISEASE WITH THE MILK OF THYROIDLESS GOATS.

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IN two previous communications[1] the results following this treatment have been recorded; it is now proposed to add further cases and to draw some general conclusions. As to the already recorded cases, the second is now well. The third is extremely important. It was found by careful observation that the dried blood from a thyroidless goat caused diarrhœa, when it was of course stopped; after that no specific treatment was given. The patient became gradually worse; much œdema of the legs came on, and in September, 1911, she died from cardiac failure; in all probability the thyroidless milk treatment was of no benefit in this case. In the fifth case at the time of the last report (December, 1908) the supply of thyroidless milk had stopped, and a few days after this, and apparently in consequence of it, the patient was much worse, more tremulous, weaker, and liable to attacks of pain in the region of the heart, with shortness of breath, attacks which the patient had not suffered from since she first came under treatment nine months previously.

[1] THE LANCET, Jan. 25th, 1908, p. 227; and April 10th, 1909, p. 1040.

She was therefore admitted to hospital, and was there treated with thyroidectin, grains 5, three times a day. She improved under this treatment and left. During the spring and summer of 1909 the patient took the goats' milk, and as the supply was limited she also had X rays applied to the goitre. In the autumn thyroidectin was also given. The patient was now readmitted to hospital. She was much better than when in hospital before; the goitre was much smaller, presumably in consequence of the X rays, and the tumour could be distinguished into a hard central oval mass and two soft, lateral lobes. She remained in hospital a month. After that the X ray treatment was continued for four months, sometimes once, sometimes twice, a week. Notwithstanding the insertion of thicknesses of towel between the lamp and skin some redness was caused. Latterly the patient had to leave the neighbourhood. She writes that the goitre has increased in size.

CASE 10.—The patient was seen in October, 1909. She was better, but the eyes were still prominent; the goitre was firmer.

CASE 11.—The patient was presented with a thyroidless goat, and during the summers of 1910 and 1911 took its milk. She is much better and can ride a bicycle.

To the foregoing the following cases may be added:—

CASE 16.—The patient, a male, aged about 35, under the care of a medical friend, came under treatment in 1908. During the winter 1908–09 he was treated with rodagen and thyroidectin, but no improvement occurred; on the contrary, the patient became somewhat worse. It was therefore decided to try a course of rest in bed. Up to this time the patient had been going daily to business, but now for five weeks he rested in bed, and at the same time took the milk from a thyroidless goat. He improved under this treatment, but the pulse still continued fast. He then went to the seaside and discontinued the milk. Here he improved. Now (July, 1911) the patient is much better and attending regularly to business. He has much faith in rodagen, which he therefore still continues to take.

CASE 17.—The patient was a young single woman, under the care of a medical friend. Symptoms commenced obscurely about six years ago. In the spring of 1909 the patient was seriously ill, the main symptoms being a large goitre and attacks of dyspnœa. The patient went to the seaside, and was treated with the milk from a thyroidless goat for 20 weeks. She improved very much. Later the milk treatment was resumed. When last heard of the patient was so much better that she was about to be married.

CASE 18.—The patient was a young woman, suffering from severe Graves's disease; a sister had previously died from the same complaint. For six months during the summer of 1910 the patient took the milk from a thyroidless goat, but there was no benefit apparent, and in the autumn she died. This was a very severe case, and one in which a bad prognosis had been given early.

CASE 19.—The patient was a single young woman, suffering from Graves's disease of moderate severity. Enlargement of the thyroid first noticed five years ago; the Graves's disease was at its worst about 18 months ago. The patient went into the country, where she had the milk from three thyroidless goats, and was much better at the end of the summer.

Remarks.—The effect (if any) of the treatment of Graves's disease with the milk from thyroidless goats or preparations made from it must depend in a considerable degree on the dosage. Clearly a sufficient dose must be given. One of the preparations is said to be made by mixing the dried milk with an equal quantity of sugar of milk, which is added as a preservative; one ounce of dried milk would correspond with about four ounces of the whole milk. If, then, one-drachm doses of the mixed powder were given, each dose would correspond to two drachms of fresh milk; and if the doses were ordered three times a day they would correspond to six drachms, or possibly one ounce, of the milk a day. But when the fresh milk is given it is usual for the patient to take the whole yield of one goat, which may be a pint or a quart a day; sometimes a litre (35 ounces) is prescribed. In one of the cases above recorded the patient was taking at one period about two quarts of the milk a day; if this is anything like the right dose (and it certainly did no harm) three drachms a day of the powder would be much too small. Further, to give the powder on the scale the fresh milk is given would cost about 33*s.* a day.

It is thought that the symptoms of Graves's disease are due to excess of thyroid secretion in the circulation. Some experiments were made on this view. Rats were given doses of thyroideum siccum half a grain twice or thrice a day, and were fed, some on the milk of normal goats and some on that of thyroidless goats. All the rats died from thyroid poisoning, but the rats fed on the normal milk lived longer than those fed on the thyroidless milk.[2] This difference cannot be accounted for by any difference in the amount of calcium in the milk, because Mr. Cecil Revis found in an analysis he kindly made for me that the amount of calcium was practically the same in the two.

The part that calcium plays in the results of complete removal of both thyroid and parathyroids is remarkable. Dogs and cats fed in the ordinary way almost always die within a week of the operation with symptoms of tetany; if, however, they are fed on milk only, and given lactate of calcium in addition, they will in many cases recover. I have now two dogs and one cat which have been living in good health without either thyroid or parathyroid for months, but they are being fed almost exclusively on milk. On this account calcium lactate has been recommended in the treatment of Graves's disease. There is no objection to this, but it may be pointed out that these patients are often taking a considerable amount of milk, and that ten grains of lactate of calcium only contain the same amount of calcium as there is in two ounces of cow's milk.

The tremors of Graves's disease are certainly suggestive of the tremors which occur after total excision of thyroid and parathyroids, and as calcium is of immense importance in the treatment of these it seems advisable to give it in Graves's disease. The best way to do so is by giving milk, either cow's milk or goat's milk, but there is no strong evidence that the milk of a thyroidless goat is better than that of a normal goat. Moreover, the theory on which the "anti-thyroid" treatment is based is not above criticism; removal of the thyroid gland in goats must tend to produce, indeed sometimes it does actually produce, myxœdema. This tendency should cause an antimyxœdema body to be formed; this would be a pro-thyroid body and tend to make Graves's disease worse. Again, Graves's disease is not unfrequently followed by myxœdema, and in some cases the symptoms of the two diseases coexist. It seems, therefore, probable that in long-standing cases we may have to treat not hyperthyroidism itself, but its permanent secondary effects combined very possibly with a certain amount of hypothyroidism.

Dr. John Rogers, of New York, has prepared a specific serum for the treatment of thyroidism, to which condition he attributes the symptoms of Graves's disease, and he gives a report of 42 cases in which the serum was used.[3] A satisfactory case of the treatment with the milk of a thyroidless goat is recorded by Sir Thomas Myles.[4] Similar results have been obtained by Dr. J. R. Gilmour, of Scalebor Park,[5] and another satisfactory case is reported from Scotland.[6]

Devonshire-place, W.

ENURESIS AND THYROID EXTRACT.[7]

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IN 1909 Dr. Leonard Williams published some striking cases in which thyroid extract had proved beneficial in cases of nocturnal enuresis. In his paper[8] he states, "We have seen in all 25 cases; of these only one has failed to respond to the thyroid treatment." Stimulated by these results, I commenced to treat some cases with this preparation. In all 28 cases were treated at the Victoria Hospital for Children, unselected and consecutive, and a record kept of pulse, temperature, weight, and number of nights during which enuresis occurred. The children attended hospital once weekly, and, as far as possible, no change was made in their mode of living while the thyroid extract was being administered. Adenoids were not removed, although this has been done in several cases since, and no anthelmintic was ordered

[2] Proceedings of the Royal Society of Medicine, Pathological Section, February, 1911.
[3] Transactions of the Association of American Physicians, vol. xxi., 1906.
[4] THE LANCET, Feb. 1st, 1908, p. 292.
[5] Journal of Mental Science, vol. lv., p. 668, 1909.
[6] Brit. Med. Jour., March 11th, 1911.
[7] From an M.B. thesis, Cambridge, 1911.
[8] THE LANCET, May 1st, 1909, p. 1245.

in cases harbouring threadworms. When the mothers had been in the habit of "lifting" the children on retiring themselves, they were instructed to continue the practice, but where it was not done, this method of treatment was not recommended. Of the 28 cases, 16 showed a marked improvement or were cured, and 12 did not improve at all.

For purposes of comparison the cases have been divided into two groups—A, those with improvement; B, those without improvement. In both groups the figures are too small to allow the slight variations in age (at which treatment was commenced) or sex to be of value. The remarkable preponderance of females over males, 19 to 9, seems to be usual, as of the last 89 cases of enuresis attending hospital, 61 were females.

The most striking feature of Group A was the number of backward children it contained; 12 out of 16, compared with 2 out of 12 in Group B. The mental condition was necessarily founded on the report of the mother or school teacher, and was ascertained in all cases before treatment was commenced.

The cases which appear to react to this form of treatment better than all others are those in which the enuresis has persisted since birth, and in which the patients are also backward. There were 5 of these cases, all of which showed marked improvement. Seven cases with enuresis from birth were stated to be quite satisfactory as to the mental condition, and only one of these improved. Of the 16 cases in which the enuresis started during childhood, 6 out of the 10 improved were backward compared with 2 out of 6 not improved. The duration of the acquired enuresis was of no importance in prognosis.

In 7 cases in Group A hypertrophy of tonsils and adenoids was present, and 4 had undergone operation for this condition. In Group B 4 children were similarly affected, and one child had had them removed. In no case could any connexion be traced between operation and enuresis. In no case could the enuresis be ascribed to the genitalia, whilst threadworms had been noticed in 3 cases of those improving and in two cases amongst those who received no benefit by treatment. In 3 cases the enuresis could be traced to a definite exciting cause, an operation for hernia, scarlet fever, and enteric fever respectively. The first of the cases (No. 2) was cured, but the other two (Nos. 13 and 14) did not respond really well to the treatment.

An attempt was made to obtain data for controlling the effects of the thyroid extract from observations on the pulse, temperature, and weight. The pulse-rate did not give any definite evidence of overdose until diarrhœa commenced, and showed wide variations in uncomplicated cases. Had the children been under observation in hospital where the pulse could have been recorded twice daily, thyroidism would probably have been detected by the increased pulse-rate before the onset of diarrhœa made it obvious, but a weekly attendance and the likelihood that the accompanying excitement will disturb the pulse-rate seem to render the pulse an untrustworthy guide, and to explain the differences noticed for which no definite cause could be otherwise assigned.

The temperatures were taken in the rectum and varied between 98° and 100° F. before treatment commenced; all cases except five showed an average rise of about 1° while under treatment, but there was no distinctive feature about the behaviour of the temperature in either group.

The initial weights showed more variation—according to the table given by Holt[9] the percentage of children below normal was equal in both groups, but of the cases showing a weight of 6 lb. or more below the average Group A contained 50 per cent., compared with 30 per cent. in Group B. The children, with one exception, gained weight while taking thyroid extract, and no reason could be found to account for the exception.

The initial dose was ¼ or ½ grain daily and the rate of increase varied much as the work was experimental; often the dose was increased every 14 days. In some cases which showed improvement, but in which the condition had become stationary, the same dose was continued for a month or more. The accompanying table gives the rate of improvement and the doses administered each week to the children in Group A. Nos. 13, 14, and 16 can only just be called improved; six cases—Nos. 1, 2, 3, 5, 9, and 10—also suffered from diurnal enuresis, and this condition was cured in every case.

[9] Diseases of Infancy and Childhood fourth edition, p. 20

As it is most important to ascertain if the improvement following the administration of thyroid extract is permanent a note was sent to the parents of all the cases in this group inquiring into the condition of the child. Replies were received in ten cases, and together with a few brief explanatory remarks are given below. When a period of time is given the interval between the cessation of treatment and the receipt of the reply is indicated.

Remarks upon the cases.—1. Three months. No recurrence.—2. Six weeks. No recurrence; dose gradually reduced after twelfth week.—4. Eight months. "Never more than twice weekly and often less."—5. Quite cured: enuresis gradually ceased.—6. After the twelfth week the child attended for 14 days, taking the same dose with no variation in the enuresis. Chorea then developed and the treatment with thyroid extract was discontinued.—8. Six months. Enuresis only occasionally, about once a month.—9. Treatment was stopped for diarrhœa. The patient's mother reported to me at the end of the first and second months following cessation of treatment that enuresis had occurred six times during the first month and four times during the second.—10. Five months. The patient only wets the bed when her mother "forgets to lift her."—11. Seven months. The mother expressed her regret that she had ceased to attend, and reported that the boy still wetted the bed on an average twice weekly.—12. Six months. Has only wetted the bed about half a dozen times in all.—13. Although included in the table this patient was eventually cured by atropine. During the last three weeks the child took 4½ grains of thyroid daily with the result shown. Immediate improvement took place when liq. atropinæ was given, and after five weeks the enuresis ceased. This child was not at all backward, and although the case is included in the table to show that some benefit accrued from thyroid extract the real improvement is attributable to the atropine.—14. This patient continued to attend at irregular intervals for nearly two months after this, and was at one time taking 2 grains in 24 hours. The enuresis still occurred on two or three nights per week, and when I saw the child with scarlet fever a year after treatment had first commenced the condition was unaltered.—15. Attended another three months at intervals of 14 days, taking the same dose with the same result. The patient then discharged herself, but three months' later was reported as only wetting the bed one night a week or less.

A table of the unsuccessful cases is not given, as the treatment followed exactly the same lines and lasted on an average five weeks, except 3 cases which extended over 12 weeks or longer. No improvement of any sort could be detected. Diarrhœa caused the treatment to be abandoned in 4 cases, and the occurrence of this complication, five times in 28 cases, was the only difficulty encountered; it soon ceased when thyroid extract was not given, but it indicates the necessity of using small doses on commencing treatment and careful observation afterwards. Three of the patients, aged 5, 8, and 11 years respectively, were taking 1 grain, and one, aged 9 years, 1½ grains in 24 hours. The fifth case, a boy, aged 4½ years, appeared to be extremely susceptible, as he developed diarrhœa on a half-grain dose daily. The weight of all these children was within a pound or two of the normal, and none of them had been classed as backward. Case 13 in the table was also probably an example of overdose. When in the ninth week improvement commenced, the dose was rapidly increased, and was followed by a relapse till finally the last stage was as bad as the first. Dr. Leonard Williams quotes a somewhat similar case.

In the unsuccessful cases the treatment was abandoned when a dose of 2 grains in 24 hours failed to produce even slight improvement, as it seemed that any case which would improve showed signs of so doing before this amount was reached.

It cannot be asserted that the results obtained were nearly as satisfactory as previous accounts have led us to expect, but when we consider that two cases were cured, that nearly 60 per cent. of the cases showed marked improvement, that of these all except one had suffered from enuresis every night in the week and many for a considerable period, it is evident that thyroid extract has taken a definite place in the treatment of enuresis, and in certain cases may be exhibited with more confidence than any other drug with the exception of belladonna.

Table showing Results in 16 Cases of Enuresis Treated by Thyroid Extract.

Case.	Years of age.	Duration of enuresis.	Number of nights per week in which enuresis occurred before treatment.	After treatment commenced—	Week of treatment. 1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.	12th.	13th.
1	3	Since birth.	7	Enuresis occurred ...	0	0	0	0	1	0	0	—	—	—	—	—	—
				Dose of thyroid in 24 hours (in grains)... ...	¼	¼	¼	¼	¼	¼	¼	—	—	—	—	—	—
2	4½	10 months.	7	Enuresis	4	4	5	7	5	2	1	2	0	0	0	0	—
				Dose	½	½	½	1	1	1½	1½	1½	1½	1½	1½	1½	—
3	7	3 years.	7	Enuresis	5	2	2	1	1	2	Ceased attending. No reply to card.						
				Dose	¼	¼	¼	½	½	¾							
4	6	3 months.	7	Enuresis	2	2	1	2	1	0	1	1	Ceased attending.				
				Dose	½	½	½	½	†	¾	¾	¾					
5	10	Since birth.	7	Enuresis	2	1	1	4	4	2	2	1	2	2	1	Ceased attending.	
				Dose	½	½	½	½	½	1	1	1	1	2	2		
6	6	Since birth.	7	Enuresis	4	0	0	3	2	3	1	1	1	2	2	2	2*
				Dose	½	½	½	½	1	1	1½	1½	1½	1	1	1	1
7	9	3 years.	7	Enuresis	2	0	0	Ceased attending. No reply to card.									
				Dose	½	½	½										
8	8½	Since birth.	7	Enuresis	2	1	0	1	1	0	1	0	Ceased attending.				
				Dose	¼	¼	½	½	½	½	½	½					
9	8	1 year.	3-4	Enuresis	3	1	0	1	0	Diarrhœa; treatment stopped.							
				Dose	½	1	1	1	1½								
10	5½	Since birth.	7	Enuresis	4	4	2	2	Ceased attending.								
				Dose	¼	¼	¾	¾									
11	6	Since birth.	7	Enuresis	4	3	2	Ceased attending.									
				Dose	¼	¼	¼										
12	11	2½ years.	7	Enuresis	3	1	1	1	1	1	2	2	Ceased attending.				
				Dose	½	½	½	½	½	1	1	1½					
13	7	1 year.	7	Enuresis	7	7	7	5	6	7	4	3	3	3	4	6	7
				Dose	½	½	¾	1	1	1	1½	2	2	3	3	4½	4½
14	12	7 years.	7	Enuresis	7	7	7	6	5	2	3	Attended at very irregular intervals after this.					
				Dose	½	½	¾	¾	¾	1	1						
15	9	10 months.	7	Enuresis	3	2	3	3	2	2	1	1	2	1	1	1†	—
				Dose	½	½	½	¾	¾	1	1	1	1	1½	1½	1½	—
16	12	3 years.	7	Enuresis	3	3	4	3	2	Ceased attending. No reply to card.							
				Dose	½	1	1	1½	1½								

* Developed chorea. † See No. 15 under "Remarks upon the cases."

The dose, it must be noted, was much smaller than that given in Dr. Leonard Williams's series of cases, but five cases of diarrhœa in a total of 28 could hardly be coincidence. That the diarrhœa ceased when the thyroid was withheld and that only one case, that of a boy 11 years of age, occurred during the hot weather (1910) reasonably prove the thyroid was the most probable cause.

When the child is backward, slow at school, or displays other signs of mental lethargy, and especially if the weight be markedly below the average, the use of this preparation holds out a very fair prospect of success. Definite and permanent improvement appears to occur, even if the cure is not absolute, for not one of the replies received indicates serious relapse.

The dosage employed was doubtless rather small, but the onset of diarrhœa in two of the early cases rendered me chary of administering the drug in large doses to out-patients, and its occurrence in three more cases confirmed me in this, but possibly with a more rapid—i.e., weekly—increase of dose more speedy results would have been obtained.

As indicated above, both pulse-rate and temperature are untrustworthy, when only taken once weekly, in providing danger-signals of thyroidism, again an argument in favour of caution; but where the patient is under constant observation, as in hospital, the dose might be rapidly increased with safety, especially in the case of the undersized, backward child.

Eight children in the second group were treated with atropine, and of these 5 showed marked improvement. I have had little experience of the effect of thyroid extract in cases in which belladonna has failed, 2 only, both encountered after drawing up this series of cases, and both up to the average standard mentally and physically.

In the days before thyroid extract had been suggested as a cure for nocturnal enuresis, I saw some cases in which the improvement caused by atropine in backward children was as marked as the cases of this series treated by thyroid extract, and it seems probable that if an equal number of unselected cases were treated with atropine alone the results would be as good, if not better, and that the greater percentage of unsuccessful cases would occur amongst the type of child commonly called "backward," the type in which thyroid extract is most successful.

THE USE OF ROSENBACH TUBERCULIN IN SURGICAL TUBERCULOSIS.

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THE treatment of surgical tuberculosis is at present one of the most unsatisfactory tasks of the medical man. Advanced, serious, and extensive disorders, as well as quite recent but easily accessible foci, frequently repay, it is true, radical operations. On the other hand, many local manifestations of tuberculosis—e.g., spinal tuberculosis—cannot be submitted to radical operations at all, others only by the sacrifice of functions or of appearance or by mutilation. In recent cases when the symptoms are slight it is difficult for a medical man to decide on such operations. He is uncertain whether the sacrifice will bring about even local cure, let alone complete freedom from tuberculosis. He is therefore bound to have recourse to less radical measures, such as fixation, the congestion method, and general treatment, whilst awaiting any further development which may prove favourable. Naturally this is not the ideal treatment, such as might be sought in an effective chemotherapy. Here some slight progress has been made by the injection of iodoform into tuberculous joints, but for general application in tuberculosis this remedy has not proved any more valuable than the countless other attempted remedies.

During a general clinical and surgical activity of 36 years I have tried chemical agents of every sort against local tuberculosis, without any real success. In the face of the

unsuccessful use of Koch's Alt-tuberculin I had no leaning for a long time towards immune therapy—that is, the use of tuberculin. At last, I did indeed come to treatment by tuberculin, but using a new tuberculin. A study of the biochemical reciprocal effects of bacteria and plants led me to submit a culture of tubercle bacilli to the action of a trichophytonmyces. From this resulted the preparation of a new tuberculin, in which the poisonous constituents are destroyed and the immunising constituents preserved.[1] The firm of Kalle and Co., A.G., Biebrich-on-the-Rhine, has undertaken the manufacture of this new tuberculin and under my control has delivered large quantities to hospitals and clinics for experimental purposes, the quality of which has been uniformly unexceptionable.

This tuberculin is used in two ways: the first is by means of subcutaneous introduction into the circulation for the treatment of inaccessible local tuberculosis. It is then, like other tuberculins, retained in the foci by elective combination. It here produces inflammatory exudation with accumulations of leucocytes, absorption of tuberculous tissue, and thus a pronounced curative process. The second method of administration is by means of direct injection into the diseased foci—e.g., joints, tendon sheaths, lupus, &c. In this case the tuberculin produces the same process, but much more intensely. The inflammatory exudation and the leucocytic infiltration is as intense here as in acute cellulitis. The soft parts become very red, are hot to the touch, hard, painful, and there is extensive swelling. Any hollow spaces existing—e.g., joints—are extensively filled with fluid. At the same time general symptoms are observed, such as indisposition and increase of temperature. All these symptoms disappear at once without doing any harm and leave behind a striking improvement of the tuberculous affection. Where the tissue has not yet suffered any vital damage from tuberculosis—that is, where there is no ulceration, granulation, caseation, &c.—it is often possible that a few injections completely cure joints and tendon sheaths, &c., in particular where tuberculous infection is recent.

On the other hand, parts where ulceration, granulation, caseation, and necrosis are already present become inflamed, so that suppuration accompanied by indisposition and fever ensue, and closed parts—e.g., joints—open and discharge this pus. Even then, if the treatment is continued, a cure with contraction is possible by the gradual expulsion of substances which are not capable of absorption, but, as a rule, the cure must be completed by operation, scraping, thermocauterisation, removal of affected bones, articular resection, &c. Even in lupus it is necessary, after the affection has been diminished and softened by the injections, to remove the affected parts by operation.

I have treated a number of cases of surgical tuberculosis with Rosenbach's tuberculin, and last year I reported three of them,[2] but at that time under reserve of further observations, so as to convince myself that the results were permanent and the treatment satisfactory. At present my earliest cases have been under observation from two to three and a half years, and subsequent tests with this specific are being carried out in many clinics and medical institutions.[3] For this reason I feel it a duty to publish the record of my experiences. In order to facilitate a right judgment of its merits, and further to assist those medical men who might wish to apply this treatment in forming an idea of the method of administration, where and how it should be applied, its value and what is not to be expected of it, I will first make a few general remarks.

The treatment of tuberculous disorders by tuberculin belongs in no sense to chemotherapy, that is to say, it in no way relies on a poisoning of the tubercle bacilli by chemical substances, as, for example, the treatment of syphilis depends on poisoning of the spirochætæ by mercury, iodide of potassium, or salvarsan. It would be of the highest importance if an analogous remedy could be found for tuberculosis. It has indeed been sought by medical men from the earliest times, but without success. While for a long time a very effective specific treatment of syphilis by various chemical substances has been possible, no chemical specific has ever been found which could stand comparison with those specifics used in the treatment of syphilis, so that up to to-day there seems no hope of any specific chemotherapy of tuberculosis, and until such a specific is found Koch's great discovery of the antigen treatment is of supreme importance.

This treatment by means of tuberculin is therefore a part of the therapy of immunity, but among the methods of this therapy it stands in a peculiar position. The treatment of acute infectious diseases depends largely on the method of so-called passive immunisation by sera of immunised animals, because this is the only way in which sufficient quantities of antitoxin substances can be quickly introduced into the affected body. On the other hand, as a prophylactic agent the more effective and more permanent active immunisation process has been exploited; its greatest achievement is Jenner's vaccination against small-pox. In acute infectious diseases, if infection has already taken place, active immunisation has only been successful in rabies, where it has time to develop on account of the long period of incubation. As a matter of fact, this also, strictly speaking, is a question of prophylaxis, for if the rabies has already declared itself or is imminent, no cure can be obtained by this method. In the treatment of tuberculosis, however, the demand is that an affection of long standing shall be successfully treated by active immunisation, the tuberculin cure. It is assumed that owing to the chronic condition of the disease and its localisation the organism has still sufficient power of biochemical function to react to the stimulus of antigen and to form antitoxin substances. The answer to the question whether this assumption has any real foundation can be only decided by clinical experiment. To a large extent this experiment has already taken place in the application of Koch's Alt-tuberculin, and in spite of early failure results have been achieved in the second tuberculin period so far positive that in certain circumstances the disease can be satisfactorily influenced. Even in cases of pulmonary tuberculosis reported in my paper[4] a quite favourable effect of Rosenbach's tuberculin cannot be denied. The cases of surgical tuberculosis to be reported are, however, still better adapted to demonstrate the influence of this tuberculin. It is not claimed even in these cases that the treatment with Rosenbach's tuberculin goes beyond the therapeutics of immunity, and in order to appreciate the results it is necessary clearly to see how far and in what cases the therapy of immunity is affected and what are its limitations.

Particular weight must be laid on the following three factors of the action of the immunised body. The first refers to the effect on the disease-producing microbes in the immunised organism. It has been proved by experiment that these microbes, if introduced into animals immunised against the disease, can be supported in deadly doses, whilst the microbes are themselves considerably affected and to a great extent destroyed, but not completely killed and extirpated. This fact has been experimentally demonstrated in animals for the bacilli of cholera, typhoid, pyocyaneus, and anthrax among others. As these bacilli cannot live in the animal as long as the immunity lasts, recurrence of the disease is not to be apprehended. This, however, is not true of all microbes, and in particular of the tubercle bacillus, which is known to have the power of existing in living tissue for years or a whole lifetime.

The second factor which we have to consider is the fact that the immunity only lasts for a definite time. This period is certainly in the case of Jenner's inoculation against small-pox a very long one, but in other diseases it is relatively short, so that if, on the one hand, the microbes remain alive in the body, and on the other hand the immunity disappears too soon, the danger at once arises of recurrence of tuberculosis. The case, however, is not so unsatisfactory as it might appear. The extraordinary vital tenacity of the tubercle bacillus is bound up with special conditions, such as, for example, are found in cases of facial lupus, while in other places complete disappearance is very frequent. I would draw attention to frequent chance post-mortem results in cases of cured pulmonary tuberculosis and to the frequent cures of articular, spinal, and peritoneal tuberculosis which follow without treatment or only by fixation, opening, congestion, &c. For this reason I believe that the cures to be reported, brought about by the activity of Rosenbach's tuberculin, are now, after the lapse of one to three years, to

[1] Deutsche Medicinische Wochenschrift, No. 33, 1910.
[2] Loc. cit.
[3] Dr. Ludwig Seyberth, Beiträge zur Klinischen Chirurgie von P. v. Bruns, vol. lxxiv., p. 744.
[4] Loc. cit.

be regarded as permanent. A permanent cure of lupus generally necessitates a longer treatment. I shall return to this subject.

The third factor—a very important one—of treatment by production of immunity is the fact that the healing power of this treatment is stronger and more certain the more recent and less developed the stage of the affection and the weaker in proportion to its long standing and development. Treatment with Rosenbach's tuberculin is contra-indicated in the last stages of phthisis, in serious affections before this state, and in cachectic cases with severe surgical tuberculosis. Nevertheless, from time to time hopeless cases have shown a transitory improvement, and very serious cases have been permanently relieved and even cured. In recent cases surprising results may be observed such as have hitherto never been known. Besides the reported methods of useing Rosenbach's tuberculin the medical man in charge of the case must note that this tuberculin, when introduced into the tract of fistulæ and open cavities, only produces superficial inflammation, and is expelled with the secretion without doing good.

To produce a cure the injection must be made into the walls of open fistulæ and cavities, after surgical treatment of the latter.

Diagnosis of tuberculosis with Rosenbach's tuberculin.—If after subcutaneous injection of 0·2 c.c. in the upper arm, for instance, there is no cutaneous reaction, this injection is to be repeated on the following day with 0·3 c.c., and perhaps even with 0·5 c.c. on the third day. Cutaneous reaction denotes a positive result. From time to time symptoms of irritation appear at the site of injection in patients unaffected with tuberculosis. These symptoms, however, are different from the typical cutaneous reaction in cases of tuberculosis.

Report of Clinical Observations, referring in all to 47 Cases.

1. *Tuberculosis of the large joints.*—Treatment: Local treatment was particularly successful. Injection into the cavities of the joints produced sure and rapid effect. When the case particularly indicated such treatment (in cases of tuberculous affection together with the articular affection), the subcutaneous treatment was adopted with the local or by itself. It was also often adopted at the beginning of the treatment of a joint in order to alleviate the first reaction in the joint. Dose: The initial dose, except in peculiarly sensitive cases, was almost always 0·2 c.c. Rosenbach's tuberculin. This was so even in the case of a child of 1 year 9 months. On repetition the doses were increased by 0·1 c.c. If the reaction was strong the doses were not increased so often. The time for the repetition of the injection depended on the reaction, the condition of the patient, and the quantity of the dose. Small doses with slight reaction were often repeated on the following day because they were too small. Other doses producing a perceptible reaction were only repeated on the third to the seventh day, and others producing intense reaction were only repeated after eight to ten days. In the hip-joint the last big doses were only repeated after two weeks. Often the patient for other reasons wished the doses repeated at long intervals. This is, of course, inexpedient. As, however, the effect of the injections persists for months treatment may be of value with long intervals. When the reactions left off or became weaker in spite of increased doses the treatment was for the time regarded as at an end.

Of 4 cases of tuberculosis of the elbow 2 were cured after a few injections with very satisfactory functional results. The permanency of the cure was demonstrated 1 year 9 months and 1 year 5 months after the beginning of the treatment. In 2 cases abscesses were formed. These were cured by resection. I must here lay stress on the fact that abscesses following on injections of Rosenbach's tuberculin must not be regarded as failure but as success, because in this way an operation is at once indicated and long and fruitless conservative treatment is frequently avoided.

Of 5 cases of tuberculosis of the knee-joint 4 were cured, and in 3 cases with very good movement, in 1 case less so. The permanence of the cure was demonstrated in 2 cases 1 year 4½ months, in 1 case 1 year six months, and in the fourth case 1 year 1 month after the beginning of the treatment. The fifth case (subchondral osteitis) was treated by resection and cured. Of 3 cases of tuberculosis of the hip-joint 2 were cured, in 1 with good movement, in the other limited. The permanence of the cure was demonstrated 1 year 9 months and 10 months 20 days after the beginning of the treatment. One case was successfully treated by resection. Of 3 cases of tuberculosis in the foot 1 was cured by the injections, and the permanence of the cure was demonstrated ten months after the beginning of the treatment. Two cases developed abscesses and were treated by resection.

Of 16 cases of articular tuberculosis 9 were cured by treatment with Rosenbach's tuberculin; in 7 cases purulent inflammation resulted and they were cured by resection.

2. *Tuberculosis of the spine.*—Spinal tuberculosis was treated by subcutaneous injections. There is no certain criterion for the cure of spinal tuberculosis. Nevertheless, three of the seven cases treated were certainly cured, the permanence of this cure being demonstrated in the first case 1 year 8 months, in the second 3 years 3 months, and in the third 3 years 7 months after the beginning of the treatment. In the latter case a bilateral purulent burrowing abscess was completely cured. It is very probable that three of the other cases were cured, and in any case improved. In one case of tuberculosis from infancy tuberculous meningitis supervened four months after the end of the treatment and the patient died.

3. *Tuberculosis of the tendon sheaths.*—Tuberculous bursæ were treated like the joints with local injections into the cavities and in the vicinity of the abscesses when formed. Three cases were cured with complete power of function, once without and twice with abscess and suppuration. The permanence of the cure was demonstrated 1 year 5 months and 1 year 7 months after the beginning of the treatment.

4. *Glandular tuberculosis.*—In 2 cases the tuberculin was introduced by subcutaneous injections. In each case the affection was diminished, once with induration and calcification, the other case with suppuration and abscess, once extirpation, once scraping. The permanence of the cure was established 1 year 1½ months and 1 year 3 months after the beginning of the treatment. Local injection first into a gland and after the extirpation of the gland into the induration remaining caused abscess, suppuration, and cure. The permanence of the cure was established 6 months and 1 year 3 months after beginning of the treatment.

5. *Recurrence of tuberculosis, fistula, and fistulous abscess in the soft parts.*—In two cases there was a recurrence of affection after operations on the bone. The first case was fistulous, the second closed. They were cured by injections into the tissue, the bone lying free at the bottom being in one case removed. The three other cases concerned fistulous subcutaneous abscesses. They were cured by injections into the walls, in 2 cases with scraping. The permanence of the cure was established 9½ months, 1 year 6½ months after the beginning of the treatment.

6. *Lupus.*—Treatment: Local injection into the cutis under the part affected. Dose increased and intervals between injections as in the treatment of the joints. During the treatment the injections should be made uniformly in all parts affected by lupus. The local reaction varies from moderate to severe, with secretion, similar to acute cellulitis, which disappears very quickly. After several operations the lupus is diminished, improved, and softened. Beside local reaction there are general symptoms of fever, indisposition, and loss of appetite. In course of time the reaction decreases in spite of increased doses. It is at this time that operation must be made. When the extent of the affection is reduced and the position allows it the remaining lupus areas should be cut out and either sutured or grafted or else scraped and cauterised. In cases of recurrence the injections and operation on the same principle are repeated and the last remnant cut out. Recently I have used another method. After the cure produced sooner or later I have made trial injections, my intention being in the case of reaction to proceed with renewed injections as a precaution against recurrence. Of 11 cases of lupus, in 10 subjects 4 were cured by a single injection treatment followed by operation. The permanence of the cure was established 7 months, 11 months, 1 year 9 months, and 2 years afterwards. Three patients after being twice treated by injection were cured by subsequent operation. In these cases the cure was established as permanent after 1½, 4, and 9 months. Three serious cases were cured after being treated several

times by injection and operation. In these cases the treatment was long (1 year 2 months to 1 year 6 months); one patient is still under treatment. When the patients last presented themselves the cure had lasted 3 months, and in two cases 3½ months.

7. *Peritoneal tuberculosis.*—A boy, aged 9½ years, had been suffering for 2½ months from peritoneal tuberculosis, and was in a very bad state. He underwent a treatment lasting two months with 34 injections (23·2 c.c. Rosenbach's tuberculin). The permanence of the cure was established 11 months after the beginning of the treatment. Increase of weight in that time 6·5 kilogrammes.

8. *Intestinal tuberculosis.*—A boy, aged 9 years, suffering from intestinal tuberculosis was treated with 44 injections (24·1 c c. Rosenbach's tuberculin). 1 year 10 months after the beginning of the treatment complete and permanent recovery was proved. Increase of weight in this time 7·75 kilogrammes.

Göttingen.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF TREPHINING IN ACUTE GLAUCOMA.

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IN the issue of THE LANCET for Oct. 21st last (p. 1136) Mr. Sydney Stephenson describes a successful case of trephining in acute glaucoma. In the treatment of chronic glaucoma this operation is becoming more into favour and its value better known. In acute cases it is still on its trial, hence the necessity for recording cases in which its use has proved of benefit.

The patient in the present case was a single woman, aged 51 years. I saw her first in consultation in May, 1910, when she was suffering from a fairly severe attack of congestive glaucoma of the right eye. Under appropriate treatment the attack subsided, and though warned to keep herself under observation this she failed to do. On the evening of Sept. 27th I was asked by her medical attendant to see her again, and I found the patient suffering from a more intense form of glaucoma. The pain radiated mostly down the side of the neck and right shoulder-joint. The ocular symptoms were unmistakeable—semi-dilated, inactive pupil, no anterior chamber, hazy media, dilated conjunctival vessels, and plus tension with tenderness on digital pressure. The patient was immediately removed to a nursing home. Two leeches were applied to the temple, two powders of 2 grains of calomel were administered at two-hourly intervals, and a sleeping powder of trional and compound ipecacuanha was ordered. Locally dionin and eserine were instilled every hour. These measures gave marked relief, the action of the calomel being particularly copious. The bowel contents were evacuating for the ensuing 24 hours although the patient had denied any possibility of their being confined. So much for the reliability of the patient's statements. As the patient was a chronic bronchitic with marked atheroma administration of a general anæsthetic was to be avoided if possible. It was therefore decided to attempt the operation under the local use of cocaine, which seemed more feasible now that the ocular tension was a trifle lowered. Further, as the iris was lying close against the posterior surface of the cornea, the ordinary operation of iridectomy would have presented great difficulties which would not have been lessened by the hyperæsthesia of the eye.

Cocaine and adrenalin having been instilled, a flap of conjunctiva was raised and the trephine was applied over the neighbourhood of the limbus. Until the instrument came down on the ciliary nerves no pain was complained of, but when this stage was reached solid crystals of cocaine had from time to time to be placed in the cut of the trephine. As soon as the disc of sclera was removed the bottom of the wound was found to be blocked by the iris and a spatula was very gently introduced, but not without causing the patient to experience some pain, and its base was pushed back into the anterior chamber which allowed the aqueous to be slowly evacuated. This step in the procedure of allowing the aqueous to slowly leak away is an important detail when the intraocular pressure is accompanied by high arterial pressure.

Before the operation the blood pressure had been taken, and was ascertained to be 149 mm. Hg. The conjunctival flap was replaced and the wound dressed. The patient was given another trional and compound ipecacuanha powder, and she obtained a good night's rest. The tension of the eye next day was normal, and for the next three days it progressed satisfactorily. On the fourth day a slight ciliary injection came on, which was treated successfully by a weak solution of atropine for three days. The subsequent progress of the case was eminently satisfactory in every way, and when the patient was seen three weeks after the operation the vision was the same as it had been when first examined. The trephine hole was patent and acting, so as to cause the tension to be quite normal, and a total absence of pain had marked the progress of the case from the date of the operation.

The following are some of the points of interest in this case. 1. The untrustworthiness of a patient's statements as to the condition of the bowels. In this case their evacuation after calomel lasted over 24 hours, and on this a large responsibility rested for the onset of the eye condition. 2. The risks which a patient runs of being lulled into a sense of false security by the sole use of drug treatment. 3. The valuable means which the operation puts into our hands for overcoming the very great technical difficulties associated with operative interference in these acute attacks. 4. The importance of ascertaining the blood pressure immediately before operating, as on its finding depends the rate at which it is prudent to evacuate the aqueous.

Manchester.

A CASE OF HERPES FOLLOWING SPINA BIFIDA.

BY C. STEWART WINK, M.R.C.S. ENG., L.R.C.P. LOND.

THE patient was a full-term female child, born on July 4th, 1911, and labour had been normal. On examination a raw area of the size of a five-shilling piece was found in the lumbo-sacral region. This was covered by a glistening membrane on the deep surface of which the structures of the spinal cord could be seen. On the 12th (eight days after birth) a crop of herpes appeared on the right side immediately below the last rib and extending from the spine posteriorly to the midline anteriorly and limited to one nerve area. On the 14th another crop appeared in the corresponding position on the left side. The temperature remained normal throughout, but the child became more and more cyanosed and died on the 25th.

I can find no record of herpes associated so closely with spina bifida.

Halstead.

MIDDLESEX HOSPITAL.—In the annual report of this institution, which was adopted at a meeting of the Board of Governors held on Nov. 30th, it was stated that by an extensive scheme of reorganisation the capacity of the general wards of the hospital had been increased from 318 to 330 beds. The Prince Francis of Teck Memorial Fund amounted to £28,240, including recent contributions of £2000 from the directors of the Savoy Hotel, being the proceeds of a fancy-dress ball, and £1000 from Sir Charles Wyndham. The Barnato-Joel Memorial was now nearing completion, and the wards would be opened in the New Year. The capacity of the Cancer Charity would then be 90 beds, which would be reserved for incurable patients. Visits had been paid to the new laboratories by three official representatives of bodies about to erect similar laboratories; one of these was from London, one from New York, and one from Rome. The report also stated that the male cancer patients have been transferred from the Greenhow ward on the top floor of the north-west wing to the Cancer Charity, and that the Greenhow ward had been altered and equipped for the accommodation of female medical cases. This ward will in future be called "Queen Alexandra" ward.

Medical Societies.

HARVEIAN SOCIETY OF LONDON.

Some Early Signs and Symptoms in Nervous Disease.—Syphilitic Affections of Bones in Childhood.

A MEETING of this society was held on Nov. 23rd, Mr. J. ERNEST LANE, the President, being in the chair.

Dr. JAMES TAYLOR read a paper on Some Early Signs and Symptoms in Nervous Disease, which is printed on p. 1614 of this issue of THE LANCET.—The paper was discussed by the PRESIDENT, Dr. D. W. CARMALT-JONES, Mr. CAMPBELL WILLIAMS, and Dr. G. A. SUTHERLAND.

Mr. DUNCAN C. L. FITZWILLIAMS read a paper on Syphilitic Affections of Bones met with in Childhood, illustrated with lantern slides of the various conditions. He first laid stress on the fact that all syphilis was really acquired either before, during, or after birth, and that the only difference between young and old syphilitics was the difference in the want of resistance in the young, so that all the manifestations might be found jumbled up together. The different bone lesions detailed were epiphysitis (perichondritis), dactylitis, periostitis, local diffuse myelitis, and osteomyelitis. The appearances and differential diagnosis of each were entered into with the appropriate treatment. Mr. Fitzwilliams had not found many indications for "606" in children, as they were very tolerant of mercury and reacted with marvellous rapidity in the great majority of cases; he mentioned certain cases, however, in which "606" was beneficial.—The paper was discussed by the PRESIDENT, Mr. WILLIAMS, and Dr. SUTHERLAND.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

The Position of the Stomach as a Guide to Pyloric or Duodenal Difficulty.—Vaccine-therapy.

A MEETING of this society was held on Nov. 29th, Mr. J. M. COTTERILL, the President, being in the chair.

Dr. WILLIAM RUSSELL contributed a paper, illustrated with numerous lantern slides, on the Position of the Stomach as a Guide to Pyloric or Duodenal Difficulty. He said that eight years ago he had submitted a communication to the society on the subject of hyperchlorhydria in which he had dealt with the symptoms, probable nature, and treatment of the condition. Last year he had published a paper which again dealt with the subject, and he had only time now to state that hyperchlorhydria had generally come to be accepted as a definite clinical entity. He added that it was also a generally recognised fact that gastric hyperacidity was often associated with gastric ulcer; that, in fact, gastric ulcer was probably nearly always due to such hyperacidity. It seemed to him to be equally true that pyloric and duodenal ulcer were usually associated with this over-secretion—that, in fact, it was an important factor in their etiology. It was unnecessary that he should enlarge upon the question of duodenal ulcer, but stated that in his experience the perforation of acute duodenal ulcer was as rare as was the perforation of acute gastric ulcer. There was abundant operative evidence that such ulcers had healed; there was also much clinical evidence that, in favourable circumstances, they healed at least as readily as did gastric ulcers. It was important to recognise that ulcer in the stomach and duodenum was not necessarily always of equal severity; that in some cases there was certainly a considerable depth of tissue destruction, whilst in others the loss was probably much less deep, and that in the latter the process of healing must be more easily and more quickly effected. In all acute ulceration in these regions, the ideal before the clinician ought to be to obtain rapid healing. How this could best be obtained needed not to be discussed, but the axiom stated must be kept prominently in view. The reason was that where rapid healing was effected no appreciably bad results remained; whilst if healing was slow there was not only prolonged suffering, but there followed so much thickening and induration that the stomach outlet or the narrow channel beyond it became greatly diminished in calibre, with the result that the gastric contents were unduly retained. Dr. Russell had seen one case where the difficulty in the duodenum followed upon operation for perforation of a duodenal ulcer. A puckered scar either at the pylorus or in the duodenum led to difficulty in the emptying of the stomach, and this difficulty in course of time led to the changes in the position of the stomach to which he sought specially to direct attention. It seemed to him to be essential to the correct understanding of such cases as he was dealing with to keep distinctly in view the question of ulcer from the question of mechanical obstacle to the outgoing of the gastric contents. No doubt they often overlapped, but it was by realising these two distinct factors that they could hope to attain to completeness of differential diagnosis. A few years ago he had submitted to the society a paper on Congenital Pyloric Stenosis in the Adult in which it was shown that this congenital narrowing led to difficulty in the emptying of the stomach; since then he had seen one example of a pylorus situated so high up in the abdomen that it suggested the conclusion that the stomach must have always worked at a great disadvantage, and that it was no matter for surprise that the symptoms of such difficulty should have become prominent under the strain of work in early adult life. The difficulty in the emptying of the stomach was, of course, the cause of the retention of gastric contents; and it was the retention that was the cause of the symptoms. The most evident result of a difficulty to the outgoing of gastric contents was, of course, "dilatation" of the viscus. So much was universally known, but the term was much too general and vague for the purposes of differential diagnosis in this region. There was a dilatation of the fundus, there was ptosis of the body of the viscus, there was ptosis of its inferior border, and there was overlying of the pylorus by the distended anterior wall of the stomach being carried far to the right of its normal position. In all these, with the exception of the first and last, the position of the axis of the viscus in relation to its outlet was so altered that under the most favourable conditions it could with difficulty be completely emptied. Dr. Russell could not attempt to deal with more than one of these—namely, the position of what for clinical purposes he called the right border of the stomach. The methods by which the position of the stomach was determined were: visible peristalsis, percussion, succussion, and auscultatory succussion. The position of abnormal stomachs could be determined without X ray examination, although such examination was interesting and confirmatory in certain instances.

Dr. D. CHALMERS WATSON said that he doubted much if hyperchlorhydria was really a clinical entity. A single examination of the gastric contents might show an excess of acid, while at another time there might be no excess. He considered that combined percussion and auscultation was in many cases valueless, or at least of comparatively little value. There were such enormous variations in the size and position of the stomach under normal conditions that one ought to be exceedingly chary in drawing conclusions.

Dr. J. S. FOWLER asked if Dr. Russell had observed any case of dilatation of the stomach in children between the ages of 3 and 10 years, and if these were due to congenital obstruction of the pylorus. He thought the symptoms were characteristic. In one case he had found a healed tuberculous ulcer at the mouth of the duodenum. In another child, aged 6 years, there was such a degree of dilatation of the stomach that it extended into the pelvis, and the condition had persisted during three years.

Dr. G. LOVELL GULLAND said that he could reproduce an exact series of such cases as those of Dr. Russell, with, however, no question as to the presence of pyloric or duodenal stenosis in them. Hyperchlorhydria was a clinical entity, though perhaps not a disease. He agreed as to the value of percussion and auscultation in estimating the size of the stomach, and said that radiologists were not so sanguine as to the results of bismuth meals in showing the size of the stomach as was Dr. Chalmers Watson.

Professor F. M. CAIRD said that the contour of the stomach as determined clinically was often not the same as that found on opening the abdomen, but it had to be remembered that in the latter condition the organ was empty and contracted. The position of the pylorus was, however, very important, and very frequently it was found in the middle line. He thought that the position of the stomach should be determined when the patient was sitting or standing

up as well as when he was lying down. Patients were often the first to discover a neoplasm in this locality by bending forwards.

Dr. W. T. RITCHIE asked if any benefit had resulted from an examination of the stomach after inflation. Personally he preferred the simple, and to him more accurate, method of determining the size of the stomach by percussion. He also put in a word in favour of the bismuth meal in determining the size and position of the stomach. He could not rely on the results of auscultation and percussion when compared with the examination by the fluorescent screen.

Mr. H. J. STILES said that, judging from what was seen in congenital stenosis in children, he invariably found the antrum pylori passing well to the right and covering over the pylorus. He asked if as much had been described by the radiographer, and consequently he laid as much stress on the method of estimation as performed by Dr. Russell. When a stomach was filled with a bismuth meal and the patient stood up the observer did not get the true position of that viscus. It mattered not whether the patient had an obstruction at the pylorus or not, but the real test was whether he could empty the stomach. The condition might be merely atony of the stomach with dilatation, yet it required operation quite as much as if stenosis were present. In all cases, however, he thought it was necessary to close the pyloric orifice.

Dr. RUSSELL, in reply, said that a physical difficulty in the stomach emptying itself had to be overcome by physical means. None of the speakers had seemed to realise that he was describing a new method of mapping out the stomach. Percussion as one means was most valuable, for by its use one could always determine the fundus. The method he had worked out was succussion; it was only obtained if there were air and semi-fluid contents in the stomach. By means of the succussion wave one could absolutely determine the lower and right border as well as the fundus of the stomach. He had wished to direct attention to the importance of the displacement of the stomach to the right of the middle line—when the condition could not be corrected—and that this displacement was an important guide as to diagnosis and to treatment. If this displacement could not be rectified then the patient continued to suffer discomfort, and only surgical interference could benefit him.

Dr. JAMES RITCHIE introduced a discussion on Vaccine Therapy. At the outset it was pointed out that bacterial intoxications must be differentiated from the true infections, that the general bodily disturbances characteristic of the latter were non-specific, and that nothing was known of the underlying processes. In the true infections, while the escape of bacilli into the body was common, the bacterial multiplication causing the disease was essentially focal in character. The recovery from infections probably depended on some mechanism in the body being stimulated by the passage into the circulation of living bacteria or of autolysed products. The activity of this mechanism was reflected in the appearances of anti-bacterial substances in the serum which probably played an executive part in bringing to an end the multiplication of bacteria in a disease focus. The most important of these substances were bactericidal bodies and opsonins, and from the standpoint of the most common human infections the latter probably deserved most attention. The composition and standardisation of ordinary and anti-tubercular vaccines were described by the speaker. It was pointed out that vaccines contained protoplasmic material analogous to that passing into the body from a focus of infection. The injection of such a vaccine into an animal caused the development of resistance to subsequent infection with living organisms, and this resistance depended on the activity of the mechanism already referred to. Thus, if a vaccine be used prophylactically, the body fluids as a whole were rendered relatively inimical to bacterial life, so that if living bacteria subsequently gained admission they found themselves in a hostile environment. The therapeutic use of a vaccine rested essentially on the fact that bacterial multiplication was focal. Thus the injection of a vaccine might stimulate the body so that the local focus was sufficiently flooded with antibodies to kill off the invading bacteria. The sequence of events after a vaccine was introduced was discussed. Where the development of antibodies could be followed with the greatest accuracy they were found not to appear until after from 36–48 hours. During this preparatory period, which corresponded to the "negative" phase, the body might be more than usually susceptible to invasion. The object of a successful vaccination was the establishment of free antibody formation usually referred to as the "positive" phase. The essential difficulty underlying vaccination procedures was that the resources of the antagonistic mechanism of the body were, where bacterial protoplasm was concerned, exceedingly limited. The condition contrasted with what was seen in immunisation against an extracellular toxin, such as that of the diphtheria bacillus, where in an animal an immunity against many thousand times the minimum lethal dose would be easily attained. The question arose of how the effects of vaccination procedures were to be judged of so that the treatment might be followed by the maximum of good and by the avoidance of harm. It was recognised that the estimation of the opsonic index constituted the only serological method at present available for following the course of a difficult immunisation, but the laborious nature of the procedure, the impossibility of an opsonist maintaining his training without daily practice, and the question of the validity of the interpretation of opsonic results, contribute to make its use at present almost impracticable. It lies with the clinician to define with the most laborious care the signs and symptoms of the successful and unsuccessful reaction in the case of each infection. The results obtained by vaccine-therapy were then discussed. On the prophylactic side the success of antityphoid inoculation was pointed out, and it was insisted that all persons likely to be exposed to typhoid infection abroad should undergo the treatment. The difficulties of estimating the results of the therapeutic uses of vaccines were discussed. At present judgment must be based on statistical inquiries in a series of cases treated by the method as compared with a series untreated. In certain diseases some data of this kind were at present in existence. In cases where these were not available the unsatisfactory method of opinion based on limited experience was alone available. The only circumstance in which weight might be really attached to such a judgment was where a sudden improvement took place as the result of vaccination either in a chronic disease after previous treatment had failed or in an acute illness of fatal import. Certain of the results were then discussed in detail. In chronic suppurative conditions there was universal agreement that good results had been obtained, the only qualification being that the success in the treatment of acne had not been of such a striking character. Good results had also been obtained in gonorrhœal arthritis and in gonorrhœal vulvo-vaginitis in children. In the latter the success of the vaccine treatment as compared with ordinary methods was noteworthy. In tuberculosis statistics were given supporting the prevalent view that tuberculin inoculations had definitely improved the results obtained by sanatorium treatment. With regard to tuberculous glands, where caseation had not occurred, vaccine-therapy was likely to have good results, and success also attended the treatment of cases recurring after operation, of persistent sinuses, and of mixed infections. Where, however, caseation or abscess formation had occurred, these must be treated on ordinary surgical lines. In tuberculosis of bones and joints, a plea was put forward for the more extended application of tuberculin in early synovial tubercle during periods when surgical treatment by rest was being carried out, it being pointed out that in this form of tuberculosis caseation was relatively a late phenomenon. Attention was directed to the success which had attended the vaccine treatment of old-standing, semi-quiescent tuberculosis in whatever site it occurred, and it was pointed out that many apparently desperate cases of this kind had yielded in surprising fashion. In non-tubercular infections of the urinary tract good results had been obtained, especially in subacute coli infections and even in many chronic cases. Here, however, while the symptoms might disappear bacilluria frequently persisted. Passing to acute diseases, it was shown that striking success had attended vaccine-therapy in pneumonia, erysipelas, and typhoid fever. In summing up, Dr. Ritchie stated that the application of vaccine-therapy was limited—first, by the limitation of the capacity for antibacterial response in the human body; secondly, by the existence of individual peculiarities of disease manifestations; and thirdly, by the fact that they were still in the dark as to the

means to be adopted for bringing out the highest degree of antibacterial response. The essential condition favourable to the action of a vaccine was that the body fluids containing antibacterial substances must have free access to the focus of infection. The impossibility of fulfilling this condition explained the difficulties arising in tuberculosis where the bacilli were interned in caseous deposits. It also explained the difficulty of attacking bacilli which were multiplying on free surfaces of the body, as happened, for instance, in typhoid carriers. In certain cases the access of antibodies to the bacteria could be favoured by associated procedures, such as the relief of tension, &c. In this new therapeutic procedure practice was in advance of scientific knowledge, but the success attending the treatment of such conditions as furunculosis suggested that with further knowledge regarding the pathology of infection a similar success might attend the treatment of other diseases. The present situation was not final, and a definite case had been made out for further work. An essential condition was that every vaccine procedure must be looked upon as of the nature of a scientific experiment, often of a tedious character. It was essential that anyone applying the method should obtain a mastery of the underlying principles. One of the most important of these was that no hard-and-fast rules relating to dosage or interspacing of doses could be laid down. Vaccine-therapy more than any therapeutic method recently introduced had suffered from the indiscriminate use of its weapons by those who had taken no trouble to acquire a knowledge of their characters. While further specialisation in medicine was to be regretted, it might be laid down that in all serious cases where vaccination was applied special knowledge was necessary, if the best interests of the patient were consulted. There had been a tendency in certain quarters to apply vaccine treatment to disease whether or not there was any scientific ground for supposing that the condition was of bacterial origin. The empiricism of such procedures was to be utterly deprecated, and would discredit not so much vaccine-therapy as the whole practice of medicine.—Owing to the lateness of the hour the discussion was delayed until the next meeting.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Pregnant Myomatous Uterus.—Cæsarean Section.

A MEETING of this section was held on Nov. 17th, Dr. A. J. HORNE, the President, being in the chair.

Dr. GIBBON FITZGIBBON showed a specimen of Pregnant Myomatous Uterus. A woman, aged 38, married about six months, was sent to him complaining of severe abdominal and pelvic pains. From the history it was obvious that she was pregnant. She had not menstruated for almost three months. A tumour was felt extending half-way to the umbilicus, and another tumour completely filled the hollow of the sacrum. He opened the abdomen with the object of doing a myomectomy, but the tumour on the posterior wall of the uterus had so extensive a base that he thought the risk of myomectomy would be too great. Practically the whole uterus was taken out. There was a fibroid in the anterior part of the fundus, also a couple of pedunculated fibroids at each cornu of the uterus.—Dr. E. H. TWEEDY asked what Dr. FitzGibbon considered to be the cause of the pain, as myoma of the pregnant uterus did not usually give rise to pain. In his opinion it would have been possible to remove all the myoma without injury to the uterus. A point that occurred to him was, should the woman not have been allowed to go to full term?—Mr. J. S. SHEILL asked what actuated Dr. FitzGibbon in deciding to do hysterectomy at once.—Dr. H. JELLETT said that the point that arose in his mind was, not so much why the case was operated on as whether it might not have been better to take out three of the tumours and leave the patient the uterus.—Dr. FITZGIBBON, in reply, said that he thought the cause of the pain was peritonitis. The large fibroid in Douglas's pouch was slightly adherent, which might possibly have given rise to the pain. He did not see the possibility of the patient going to full time; but perhaps it might as well have been permitted with the chance of ending up with Cæsarean section. The fibroid of the posterior wall of the uterus was low down, and he did not see how it could have been enucleated safely. As the patient had particularly impressed on him that she did not want to take any risks for the sake of having a family he only felt justified in adopting the course he did.

After the PRESIDENT had read his address,

Dr. C. YELVERTON PEARSON contributed a paper on Four Successful Cases of Cæsarean Section, with Observations.—Sir WILLIAM SMYLY remarked that it was curious that they had not a greater number of Cæsarean sections in Ireland. In Glasgow they had them every fortnight or even oftener. This he attributed to the fact that Irish women nursed their children, whereas the Scottish did not.—Dr. FITZGIBBON said he thought that the first case reported by Dr. Pearson answered the question which he had asked when showing his specimen that evening. It was obvious in his case that labour could not take place past the fibroid, but perhaps it might have been left so and a section done later, as was done in Dr. Pearson's case. The point in favour of operating before labour started he agreed with. He thought the separation from the uterine wall was advantageous, as the bleeding from the mother was not increased, whereas the bleeding from the child would be diminished.—Mr. SHEILL said, with reference to the douching of the uterus in the case of uterine inertia, he thought it would be impossible to use the douche sufficiently hot to be of any value.—Dr. B. A. H. SOLOMONS said that at extra-peritoneal Cæsarean section he was struck with the advantage of only opening up the lower uterine segment, as the abdominal cavity seemed to be shut off from any septic infection.—Dr. TWEEDY said that those who had not had the chance of seeing the extra-peritoneal Cæsarean section condemned it, whilst those who had seen it became enthusiastic about it. It was an operation that could be done at an advanced stage of labour, after the membranes had ruptured, and when a case was so far advanced that classical Cæsarean section was considered unsuitable.—Dr. SMITH said that Dr. Pearson's method of performing the operation before labour came on appeared to be the ideal one. He fully agreed with Dr. Pearson in not sterilising the patients on whom he did Cæsarean section.—Dr. JELLETT said that it appeared to be fairly well established that, under favourable conditions, Cæsarean section undoubtedly stood, but that it should always, if possible, be performed before labour came on. He found in operating on cases where the patient was not in labour, while the uterus was in an absolutely atonic condition when out, as soon as it was replaced in the abdomen contraction immediately started.—Dr. GIBSON said that he had done the operation eight times, and all the cases had done well. It was, he thought, of importance that, before commencing, the patient should have an intramuscular injection of ergot. He did not see why extra-peritoneal Cæsarean section was so called, because the peritoneum was opened although sutured. Personally he never did the operation, and he did not see the advantage of it.—The PRESIDENT said that in the first case reported it was found that a large posterior myoma blocked delivery. He remembered a similar case where the patient got into labour, and as it advanced the tumour was pulled up and the woman delivered herself. It was a case in which Cæsarean section might have been done. In a case like the second one mentioned—contracted pelvis—it was always found that before labour set in the membrane was ruptured, consequently in such cases the moment the membrane ruptured a Cæsarean section ought to be done. It appeared to him the simplest operation that one could do.—Dr. WILLIAM PEARSON, who read the paper in the absence of the author, replied from the surgical point of view. In his opinion, hæmorrhage from the placenta was as likely to occur in one form of operation as in the other, and if an abdominal tumour were present it would decide which should be undertaken. From the point of view of the surgeon he would be inclined to say that the safer and better operation was the old one of opening the abdominal cavity, bringing the uterus outside.

SCOTTISH OTOLOGICAL AND LARYNGOLOGICAL SOCIETY.—A meeting of this society was held at the Royal Infirmary, Edinburgh, on Nov. 25th, Dr. J. Malcolm Farquharson being in the chair.—Dr. Farquharson showed a man, aged 72, suffering from Epithelioma of the Laryngo-pharynx, with a large growth in the right pyriform fossa, the chief interest of which lay in the

laryngeal appearance. Though there were no laryngeal symptoms there were marked redness and swelling of the left ventricular band entirely concealing the left cord, which had partly disappeared on sedative treatment. He thought the laryngeal condition due to torsion from the growth.—Dr. Farquharson also reported a case of Primary Nasal Syphilis in the floor of the vestibule of the right nostril. Fourteen days after an injection of "606" Wassermann's reaction, which had been positive, was negative, and at the end of six weeks all œdema and induration had disappeared.—Dr. G. T. Guild showed a woman on whom, eight years ago, he had performed Thyrotomy for Severe Dyspnœa in a case of Lupus of the Larynx. The result was most satisfactory.—Mr. W. G. Porter showed: 1. A case of Suspected Inflammation of the Mastoid Process illustrating the diagnostic value of a skiagram. The discharge from the ear had ceased, but œdema and tenderness over the mastoid remained; the temperature was 100° F., and leucocyte count 16,800. A skiagram of the mastoid was taken, but before it was developed the mastoid cells were opened and were found healthy. On development the skiagram showed a condition in accord with that found on operation. The general opinion in the discussion was that, while skiagraphy was of service, chief reliance should be placed on the clinical phenomena. 2. A woman with Varix involving the Soft Palate, the Left Tonsil, and the Left Pharyngeal Wall. The condition had been present for 16 years at least and caused a choking sensation, especially on stooping. The opinion of the members was asked as to treatment. Dr. A. Brown Kelly, Dr. J. W. Downie, and Dr. Farquharson referred to similar cases. Dr. Farquharson recommended electrolysis and carbon-dioxide snow, which was supported by Dr. W. Milligan. Surgical interference was deemed inadvisable. 3. A case of Chronic Pneumococcal Ulceration of the Pharynx, Tonsils, and Tongue in a boy who, when first seen in January, had small superficial ulcers and small opalescent patches not unlike mucous patches on both tonsils, even in the pharyngeal wall. The cervical glands were enlarged. Active antisyphilitic treatment failed, the ulceration continuing to spread. A swab from the throat on two separate occasions, with a month's interval, gave a pure culture of pneumococci. Twelve doses of pneumococcal vaccine were injected, and local antiseptic treatment was continued, but the disease remained uninfluenced. In September he was sent to the country. The ulceration rapidly healed and there was now no sign of recurrence.—Dr. A. Logan Turner showed: 1. A woman, aged 31, who had had a discharge from her right ear for three years, and on whom he had operated for chronic middle-ear and labyrinthine suppuration complicated by sigmoid sinus thrombosis and septic lepto-meningitis. On admission the tests pointed to involvement of the labyrinth as well as of the middle ear. Lumbar puncture gave exit to cerebro-spinal fluid under very considerable pressure, but it was not turbid. The radical mastoid operation was followed immediately by double vestibulotomy, and the internal auditory meatus was opened, permitting the escape of cerebro-spinal fluid. Three days later the internal jugular was tied and the lateral sinus opened. The fluid from the sinus gave a diplococcus resembling pneumococcus and bacillus proteus; the cerebro-spinal fluid streptococcus pyogenes and staphylococcus albus; and that from the mastoid bacillus proteus and streptococcus pyogenes. Vaccines of the streptococcus and of the bacillus proteus were given on alternate evenings—ten doses in all. The patient improved, but again relapsed, the symptoms of meningitis reappearing. Lumbar puncture was performed on several occasions, and as the streptococcus had disappeared from the spinal fluid a staphylococcus vaccine was given daily. After six weeks the patient made a complete recovery. Dr. Adam, Dr. Milligan, Dr. J. Stoddart Barr, and Dr. W. S. Syme discussed the case. 2. A man, aged 53, one year and eight months after Thyrotomy for Epithelioma of the Right Vocal Cord and the Anterior Third of the Left. The man could only speak in a whisper, but there was no sign of recurrence. 3. A boy, aged 7, from whose right bronchus Dr. Turner had removed a toy metal pipe by direct upper bronchoscopy under chloroform.—Dr. Milligan showed a large pebble which he had removed from the bronchus of a man by a similar method.—Dr. Logan Turner and Dr. J. S. Fraser showed (1) a patient with Ulceration of the Palate with pus and granulations in the right nasal cavity; and (2) a patient with a large Swelling of the Left Ary-epiglottidean Fold, with signs of congenital syphilis. In both cases von Pirquet's reaction was positive and Wassermann's was negative, but the condition in both was thought to be specific.—Dr. Fraser gave a lantern demonstration of Injury to the Ear in two cases of Fracture of the Base of the Skull.—Dr. Fraser and Dr. J. K. Milne Dickie contributed an analysis of 123 consecutive cases in which operations were performed for the relief of the mastoid, labyrinthine, and intracranial complications of suppurative middle-ear disease. The analysis of these 123 cases was very full and interesting and gave rise to a prolonged discussion. Dr. Fraser and Dr. Dickie were specially thanked.—Dr. J. Kerr Love showed: (1) a Brain and stereograms illustrating a case of Temporo-sphenoidal Abscess; and (2) stereograms of a case of Malignant Disease of the Auricle, Parotid Gland, and Pterygoid Fossa.—Dr. Logan Turner and Mr. Porter gave an interesting demonstration of skiagrams of cases of Naso-antral (Choanal) Polypus, cases of Dental Cyst, and a case of Mucocele of the Frontal Sinus. They also showed Stereoscopic Views of the Skull.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 24th, Mr. H. Littlewood, the President, being in the chair.—Dr. C. Oldfield read a paper on the Treatment of Uterine Displacements. He maintained that not one of the uterine displacements of itself produced symptoms, and therefore that treatment should not be directed to rectifying the position of the uterus, but to curing the accompanying condition which produced the symptoms. The reasons given for holding the opinion that *backward* displacement of itself causes no symptoms were: 1. To find backward displacements without symptoms was a common clinical experience. 2. When symptoms did accompany this position of the uterus some pathological lesion could usually be found on careful physical examination to explain the symptoms. 3. In some cases where no pathological lesion could be found, the patient could be cured without disturbing the position of the uterus, e.g., dysmenorrhœa and sterility. In other cases where no pathological lesion was made out, exploration of the pelvis by the abdomen revealed a cause, such as general adhesions of the pelvic viscera with chronic inflammatory disease of the appendages. Sometimes no lesion of any kind was found even on exploration, but most of these cases, if not all, belonged to the class generally called "neurotic." The inferences drawn from these observations were: 1. That the use of the pessary in the treatment of conditions where the uterus was found lying in a backward position must be very limited. 2. That a suspension or other operation for *uncomplicated* backward displacement was unnecessary and may be harmful. The results of operations for "prolapse" were given. During the five years from March 1st, 1906, to March 1st, 1911, there were 98 operations, with no deaths; 45 came for examination recently, and of these 3 showed recurrence, 2 of small cystocele without symptoms, and 1 (an old woman, 66 years of age) with complete recurrence. Twenty-three others, in reply to letters of inquiry, complained of no recurrence.—Dr. Leonard A. Rowden showed five cases of Rodent Ulcer treated in the following ways: (1) Entirely by radium; (2) entirely by "secondary" radiations; (3) chiefly by "secondary" radiations and partly by radium; (4) and (5) by "primary" radiations and radium combined. Complete recovery occurred in all cases except in (3), in which only a very small area still remained unhealed.—Mr. H. Secker Walker showed two cases of Chronic Glaucoma treated by Herbert's operation, and explained the details of the operation, pointing out that there was no subsequent disfigurement of the eye, that it was useful in both acute and chronic cases and was probably the most trustworthy of any of the glaucoma operations at present before the profession.—Mr. J. F. Dobson showed a specimen of Tuberculosis of the Kidney.—The President showed a female patient, aged 47 years, whom he had successfully operated on for gangrenous pancreatitis. Her symptoms were very severe pain in the right hypochondrium with vomiting. At the operation multiple fat-necroses were seen, and also a sloughing condition of the head of the pancreas. Some small sloughs were removed and a drainage-tube was inserted into the sloughing area. 130 gall-stones were removed from the gall-bladder, which was drained. The urine gave the pancreatic reaction.—Dr. W. H. Maxwell Telling and Dr. D. Wilson showed a patient, aged 27, with Spondylitis Deformans. The onset

had been an insidious one five years previously, with increasing stiffness and pain in the spine. There had also been a certain amount of stiffness in various joints. At the present moment the upper part of the spine was quite rigid and slightly flexed at the cervico-dorsal junction. There were well-marked chronic fibro-arthritic changes in the right knee.—Dr. Oldfield showed a case of Pubo-sacral Hernia, in which the uterus and bladder were in normal position. The patient had had complete "procidentia" for 20 years or more. A year previously carcinoma of the cervix developed, and the broad ligaments became infiltrated with growth, from the contraction of which the uterus and bladder had become drawn up into their normal position.—Mr. H. Collinson showed a uterus containing large Degenerating Fibromyomata. The patient was four months pregnant, and the uterine walls were of extreme thinness. Abdominal hysterectomy was performed, with recovery.—Other cases and specimens were shown by Dr. A. G. Barrs, Mr. W. Gough, Mr. H. J. Roper, and Dr. T. Wardrop Griffith.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 24th, Dr. A. Freeland Fergus, the President, being in the chair.—Dr. J. Goodwin Tomkinson showed a case of Nævus Verrucosus and several cases of Lupus Erythematosus under treatment with solid carbon dioxide; a case of Multiple Keloid and cases of Extensive Rodent Ulcer under treatment with X rays; cases of Lupus Vulgaris under the combined treatment of X rays and cauterisation; and several children whose scalps had undergone complete X ray epilation for Tinea Tonsurans and now exhibited complete re-growth of healthy hair. He considered X ray epilation a perfectly safe method in the hands of a careful operator, and the only dependable one in the treatment of tinea tonsurans.—Dr. John Brownlee made a few remarks on Spinal Affections following Enteric Fever, and recorded an interesting case. The patient had developed, when aged 15, a lateral curve of the spine, but had been practically well and able for hard machine work until, at the age of 32, he contracted enteric fever. This attack was very severe, the temperature not reaching normal till the thirty-fifth day. A month later he developed thrombosis of the left leg. During convalescence from this symptoms suggesting syringomyelia developed; the sensation of pain was practically absent from the middle of the thighs downwards; heat and cold could not be distinguished; plantar reflexes were much exaggerated, and ankle clonus and Babinski's sign were present. These symptoms became worse, until the disturbance of heat sensation and loss of pain sense were present up to the lower costal margin; the sensation of touch, however, was nowhere lost. From this point he made a very slow but uninterrupted recovery, and at the end of 21 months was able for a hard day's work, and had heat and pain sensation present all over the body, though these sensations were delayed over the dorsa of the feet and the lower third of the legs.—Dr. Archibald Young described three unusual cases of Dislocation of the Metatarsus at the Lisfranc Joint. In two cases the whole metatarsus was displaced outwards, and in one of these there was also moderate dorsal displacement. Both showed some comminution of bone at the joint between the cuneiforms and base of second metatarsal. In both an accident had caused violent adduction of the tarsus, while the anterior part of the foot was fixed. In the third case the first metatarsal was displaced inwards, while the second, third, and fourth metatarsals were displaced outwards and on to the dorsum, and showed some comminution of their bases. The patient had fallen from a height, and the injury resulting suggested that the tarsus had acted as a wedge, the apex of which was formed by the internal cuneiform. In all three cases the diagnosis was easy; reduction was accomplished without difficulty under an anæsthetic; the foot was fixed in plaster for three weeks, and the anatomical and functional results were entirely satisfactory.—Dr. Alexander MacLennan described an Anatomical Method of Enlarging the "Gridiron" Incision, with special reference to removal of the retro-cæcal appendix. After splitting the external oblique, the rectus sheath was to be cut transversely at a level corresponding to the insertion of the fibres of the internal oblique which arise from the crest of the ilium, a finger's breadth above the anterior superior spine. The split was continued outwards to the iliac crest. Further enlargement was obtained by cutting the origin of the internal oblique and transversalis muscles from the crest. In this way the upper part retained the ilio-hypogastric for its innervation, and the lower retained the ilio-inguinal. The fascia and peritoneum were cut on the same line. Thus an extensive view could be obtained of the ascending colon and the appendix hidden in its mesentery. The outer layer of the colic mesentery was then divided by scissors and the appendix removed. The closure was accurate and easy. The method was illustrated by drawings by Dr. William Mackie.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 1st, Mr. W. McAdam Eccles, the President, being in the chair.—Dr. Seymour Taylor read a paper on Unrecognised Diphtheria. He said that in diagnosis of doubtful cases one might easily arrive at a wrong conclusion, especially in diphtheria, in which there was no rash or exanthem to guide one, and the false membrane might be situated so as to be invisible, or it might even be absent. The difficulty, therefore, arose chiefly in those cases of diphtheria with simple sore-throat without any of the confirmatory concomitant signs of false membrane, enlarged cervical glands, or of albuminuria. The following illustrative cases were related. 1. A man complained of choking and difficulty in swallowing. He had a nasal intonation, absence of knee-jerks, and palate reflex. No history of sore-throat could be obtained, until after persistent inquiry it was found that he had had a mild sore-throat three months previously. This was called to mind by a ship-mate who had suffered from a similar affection, and at the same time—namely, when both were engaged in cleaning out some part of the ship from decomposing refuse. 2. A woman complained of weariness and dyspnœa. She had paralysis of the right side of the face; no patellar and no palate reflexes. A history of sore throat could not at first be obtained. Later it transpired that both she and another woman had had sore throats shortly after the clearing of an obstructed and offensive drain. Other similar illustrative cases of mild and neglected sore throats followed by palsy of muscles and other signs of toxic peripheral neuritis were given. Attention was drawn to the clinical fact that the chief danger of overlooked diphtheria was the possibility of subsequent paralysis of the heart muscle, and cases were described bearing on this fact. It was urged that a skilled bacteriologist paid by the State should be available so that every case of suspicious sore throat could command his services. Swabs should be taken, not only from the fauces, but also from the inferior nasal meatus, and it was concluded by Dr. Taylor that a patient could not be certified as free from diphtheria unless and until two separate swabbings at one week's interval had been made and showed an entire absence of the Klebs-Loeffler bacillus.—Dr. Julius Bernstein dealt with the bacteriological aspects of diphtheria. He considered the most serious difficulty arose from the existence of healthy carrier cases, who might harbour virulent organisms to the possible danger of the community.—The President said that Dr. Taylor's paper raised questions of great importance. He would be interested to hear opinions on certain points. How soon after possible infection could the bacillus be found? What was the best area from which to take a swab? Were there such organisms as "pseudo-diphtheritic bacilli"? What was the longest time true diphtheria bacilli had remained in the throat of a carrier?—Dr. F. G. Crookshank said the practitioner's first duty, if he suspected diphtheria, was to give antitoxin. The medical man who first gave antitoxin safeguarded *his* patient; he who took a swab and waited safeguarded himself only.—The discussion was continued by Dr. G. C. Crichton, Dr. A. Ogier Ward, Mr. B. M. Bond, Dr. E. A. Saunders, Dr. Rickman Lloyd, Dr. Grainger Stewart, Inspector-General R. Bentham, and Dr. F. E. Fry.—Dr. Taylor replied.

CLASS FOR MOTHERCRAFT, BRIGHTON.—The Brighton education committee at its meeting on Nov. 28th approved of a new class for mothercraft at the evening schools. This step has been found necessary owing to the fact that the rearing and bringing up of infants is so little understood among many of the working classes; and further, in consequence of the infantile mortality which is much greater than it ought to be in the town.

Reviews and Notices of Books.

Die Experimentelle Bakteriologie und die Infektionskrankheiten, mit besonderer Berücksichtigung der Immunitätslehre. (*Experimental Bacteriology and Infectious Diseases, with Special Reference to the Theory of Immunity.*) By Dr. W. KOLLE, Professor of Hygiene and Bacteriology in the University of Berne, &c., and Dr. H. HETSCH, Staff-Surgeon in the Berlin War Office. Third enlarged edition. In two volumes. Vol. I., pp. 1–496; Vol. II., pp. 496–968. Berlin and Vienna: Urban and Schwarzenberg. 1911. Price each vol., 30 marks; bound, 34 marks.

PERHAPS the most concise general title for the contents of these two large volumes would be "A Treatise on Microparasitology," as will appear from the following summary of their contents.

The first 14 chapters, or lectures as they are here called, deal with the general principles of infective diseases, especially those due to bacteria. Thus after an introduction on the use of the microscope, we are initiated into the morphology and biological characters of the bacteria. The means of destroying them, the mechanism of infection, the methods of resistance afforded by antitoxins, agglutinins, and so forth, are next discussed, as well as the nature of anaphylaxis, and the general principles of serum diagnosis and treatment. The different infective diseases of man and animals are then considered in turn, anthrax, cholera, and typhoid fever each having a chapter to itself, and one being devoted to paratyphoid infections and flesh poisoning. Bacillary dysentery is dealt with in Chapter XIX., and the one following is devoted to bacterium coli commune and intestinal bacteria. Plague, staphylococcal disorders, Mediterranean fever, and epidemic cerebro-spinal meningitis are next discussed in separate lectures, followed by gonococcal, streptococcal, and pneumococcal affections. Chapters devoted to tetanus, malignant œdema, influenza, leprosy, actinomycosis, and glanders bring the first volume to a conclusion.

The second volume opens with lectures on diphtheria and on tuberculosis, followed by others on botulism, on soft chancre and Ducrey's bacillus, and on affections due to bacillus pyocyaneus. The three next lectures are devoted to a series of epizoötics—chicken cholera, hog cholera, swine fever, and swine erysipelas—bringing the established bacterial diseases to an end. Chapter XLII. deals with spirochætæ and the maladies due to them, syphilis being dealt with separately in the following chapter. A discussion of the general characters of protozoa occupies Chapter XLIV., and amœbic dysentery is dealt with in Chapter XLV. The next 40 pages are occupied with a single lecture on diseases due to flagellates, including the various trypanoses and kala-azar. After a short section on coccidial disease we are introduced to the subject of malaria in Lecture XLVIII. and to the piroplasmoses in Lecture XLIX. The following five chapters are devoted to diseases due to undiscovered organisms—rabies, foot-and-mouth disease, rinderpest, small-pox, and yellow fever; and Lecture LV. to the hyphomycetes and blastomycetes. Three sections are concerned with animal parasites belonging to the metazoa—ankylostoma, trichina, and filaria; and the last lecture deals shortly with other diseases of unknown causation, such as measles, scarlet fever, rheumatism, and so forth. An appendix reviews methods of cultivation, staining, and microscopical preparations in general. There is a fairly adequate index.

Detailed criticism of so large a book is impossible. However, its very comprehensiveness suggests the question why a few parasites are omitted when so many are included. Of human parasites there remain only the tape-worms and a few round worms, a few words on which would have made the work a complete treatise on parasitology. For the general treatment of the subject dealt with we have nothing but praise; the descriptions are clear and adequate, and the illustrations are numerous and for the most part excellent, many of them being in colours. The authors' views are throughout sane and moderate, and due weight is given to clinical phenomena as opposed to laboratory methods, as, for example, in the advice as to vaccine treatment and estimations of the opsonic index. Here and there we have thought the treatment of some subjects rather slight, as, for instance, that of the nature of fever and of the incubation period in infective diseases, in which latter something more is almost certainly involved than mere multiplication of the bacteria. The account of intestinal bacteria and their influence on health is also scarcely adequate; no mention of Herter's work is made. The advantage of using the term "lectures" instead of chapters is not clear, since a lecture is conventionally a discourse of about an hour's length, whereas in this book the sections vary from one of two pages on Ducrey's bacillus to one of some 50 pages on tuberculosis. In the latter we are struck by the very slight weight attributed to hereditary disposition in this disease, a factor which the authors merely hold to be "not entirely to be disregarded." We note that the spirochætæ are not here classified with the protozoa, as was done by many of the earlier writers on these organisms. In this section it is worth noting that Vincent's angina is attributed to the action of the bacillus fusiformis alone, the accompanying spirochætæ being regarded as non-pathogenic. Of minor slips we notice one sentence (alle Bemühungen ..... erfüllen) repeated word for word on pages 271 and 278, and it is a little surprising to find Homer mentioned in a list of "old Roman writers." But it is an ungrateful task to pick holes in a work of such merit. We observe that the book has already been translated into French, Italian, Spanish, and Russian, and as we know of none in our own tongue equally comprehensive and valuable we hope that it may also appear in English or American garb. Meanwhile, we advise any of our readers who wish to purchase the book to secure the bound edition, as the attempt to read the ill-sewn paper-covered volumes which fall to pieces directly they are opened is productive of acute mental exasperation.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. No. 49. *Dysentery and Liver Abscess in Bombay.* By Major E. D. W. GREIG, M.D. Edin., D.Sc., I.M.S., and Captain R. T. WELLS, M.A., M.B. Glasg., I.M.S. Calcutta: Superintendent Government Printing, India. 1911. Pp. 78. Price 2 rupees, or 3*s.*

THIS volume of the Scientific Memoirs contains an admirable account of some of the factors in the causation of dysentery in India. It includes, amongst other points, the systematic working out of the material sent to the laboratory—viz., stools, pus from liver abscesses, and blood for Widal reaction; the examination of the various strains of the bacillus dysenteriæ isolated and the investigation of the amœbæ found in the liver pus and stools. During this investigation it was found that whenever there were a number of cases of dysentery associated with amœbæ in Bombay the number of cases of bacillary dysentery was small. Thus two tables are given showing the total number of cases of dysentery examined amongst the civil and military population, European and Indian, and the presence or absence of amœbæ or dysentery bacilli in the stools. The results were as follows: of 164 cases of dysentery examined amongst the Europeans, in 83 cases amœbæ were found, but the bacillus in only 3 cases; in similar manner,

amongst 390 cases among the Indians there were 198 cases of amœbæ and only 10 of bacteria.

The general conclusions arrived at are that the incidence of bacillary dysentery in Bombay is low, and that the disease is more frequently associated with amœbæ; that the latter can be cultivated from the stools and pus of liver abscesses; that the amœbæ showed a marked seasonal variation; and that their greatest prevalence corresponds to the season of greatest prevalence of dysentery in Bombay.

The authors also find that the amœbæ cultivated from the stools of dysentery cases and pus of liver abscess cases are not entamœba histolytica or coli, but are probably the same (or similar) forms of amœbæ as those cultivated by Noc from dysentery and liver abscess cases in Cochin China. Two of the most important points determined are:—Firstly, that a moderate leucocytosis, with little alteration in the relative percentages, may occur in slight cases of amœbic dysentery, or in cases where at the time of examination no symptoms of dysentery exist. This, associated with rise of temperature, may indicate an early hepatic invasion by amœbæ, which will, sooner or later, culminate in the grave complication of abscess of the liver. Secondly, it is pointed out that the administration of ipecacuanha, as shown by Major Leonard Rogers, I.M.S., will in this class of cases reduce the temperature and leucocyte curves to normal, and prevent the formation of liver abscess. This administration of ipecacuanha was urged years ago by the late Professor W. Maclean, at Netley, in the treatment of acute hyperæmia of the liver.

This number is certainly in its teachings one of the most fruitful of the Memoirs that have yet appeared, and is worthy of perusal by all who are accustomed to meet cases of dysentery.

The Mechanical Factors of Digestion. By WALTER B. CANNON, A.M., M.D., Professor of Physiology, Harvard University. Illustrated. London: Edward Arnold. 1911. Pp. 227. Price 10*s.* 6*d.* net.

THIS is the first of a series of "International Medical Monographs" which are to be issued by Dr. Leonard Hill and Dr. William Bulloch acting as general editors. This monograph is, we think, most appropriately dedicated to the memory of the late Professor Bowditch, of Harvard University—a charming personality—under whose inspiration the researches recorded in it were begun. The monographs are intended to deal with subjects of immediate interest, and to be by first-hand authorities who have been engaged in extending the confines of knowledge. All readers of the *American Journal of Physiology* are conversant with Professor Cannon's studies on the mechanical factors of digestion as revealed by means of the Roentgen rays—a department of physiology which he has initiated and extended as well as adorned by the discovery of many new facts. Every medical man will be interested in the book because it deals in a masterly manner with a subject which is of the first importance in practical medicine.

Hitherto of the two general and intimately related factors of digestion—the chemical and mechanical—the former has been more assiduously studied. It would be difficult to cite a better example of the practical rewards to be obtained from the application of a new method than that obtained by the combined use of the bismuth method and the X rays. The sensitiveness of the alimentary canal to operative procedure has been one of the chief difficulties in past investigations of the digestive process. The stomach and intestines are energetically active during digestion and are prone to cease their activities suddenly when the abdomen is opened, a change aptly likened by Meltzer, of New York, to the hush that falls upon a company when a stranger appears at the door. Even Johannes Müller stated that he had never seen clearly the peristaltic movements of the stomach. Now the writing, if not on the wall, can be seen on a fluorescent screen.

The author treats in succession the Movements of Mastication and Deglutition. The pressure exerted by the molars as determined by a spring dynamometer may be as high as 270 pounds. In this connexion we do not find a reference to the observations of Alfonso Borrelli in his work "De Motu Animalium." The author found no evidence of the contraction of the œsophagus in three sections in the act of deglutition as described by Kronecker and Meltzer. The Nervous Control of Deglutition is next dealt with. This is a wide subject, and the author gives an excellent summary as well as a criticism of previous work. He states that the general conclusion that the entire œsophagus is put out of action by section of the vagi must be modified. The part of the tube composed of smooth muscle is capable of quite perfect peristaltic activity without the aid of extrinsic nerves. In the bibliography appended to this section we failed to notice a reference to Ranvier's work on the structure of this "food-carrying" tube. The author passes on to consider the Conditions affecting the Activities of the Cardia—a sphincter which normally is chiefly responsible for the pleasant security which keeps us unconscious of the nauseating odour and highly disagreeable taste of the gastric contents. Intracardiac acidity has a marked effect on the closure of the cardia. Its effect in stopping rhythmical regurgitations of fluid from the stomach into the œsophagus can be recorded graphically. The "acid closure of the cardia" is obviously of practical importance.

The Movements of the Stomach are next considered, and a full account is given of the function of this organ acting as a reservoir, and of mixing and propelling the food, as performed by different parts of the organ—the double function that is cited in every text-book on physiology. What was not revealed to the eyes of Johannes Müller can now, thanks to the bismuth and X ray method, be made visible to every student of medicine. He can see the continued uninterrupted peristalsis until the stomach is swept clear of its contents—2300 waves passed over the pylorus during a single digestive period in a cat, and all the cat had had to eat was 15 grammes of bread! In discussing the Effects of Stomach Movements on the Contents the author states that during a single digestive period the body of the stomach may contract from a large conical sac, many centimetres in circumference, to a narrow tube little larger than a loop of intestine, and that during this alteration the pressure remains practically uniform. The left and right half of the stomach have quite distinct functions—peristaltic waves are present in the right and absent in the left half. Next the Stomach Movements in Relation to Salivary Digestion and Gastro-enterostomy are considered.

The chapter on the Passage of Different Foodstuffs from the Stomach, a subject popularised by Beaumont, is one that must interest all physiologists. The wound of Alexis St. Martin helped humanity indeed. Proteins take much longer than certain carbohydrates to pass the pylorus—a circumstance which can be explained by the remarkable mechanism of the pyloric sphincter and its "acid control," which is next dealt with, and is regarded by the author as "one of the most remarkable automatisms in the body." The pylorus is truly a "janitor justus," and makes the relation between gastric and intestinal digestive processes orderly and progressive. The account of the whole mechanism reads more like a romance than the story of a prosaic every-day humble function. The Movements of the Small Intestine—itself the very centre of the essential

activities on which the body depends for nourishment—are discussed in an attractive fashion. The Movements of the Large Intestine as they can be seen and observed in carnivores and herbivores are described. Zoologists will be grateful for this clear study. From another point of view the author makes this emphatic and practical statement, applicable to all men and often—too often—neglected by women: "The importance of responding as soon as the desire to defæcate arises is shown by the observation that the rectum accommodates itself to the presence of a fæcal accumulation, and then does not produce the desire. If the signal is not soon obeyed it ceases to be given."

We have said enough to show how attractively and practically the author has dealt with a subject of primary importance. The old physicians spoke of the "primæ viæ" without knowing much of the potentialities of their walls. On the whole they were right, and Professor Cannon has arisen to justify their faith. Student and practitioner alike can here read and follow the weighty truths as revealed by one who knows fully and writes well. The practitioner will see at once the importance of the practical application of the teaching. We thank the author and the editors for their work, and in congratulating the latter on their first "issue" hope that they will continue in their well-directed discrimination.

Thoughts of a Catholic Anatomist. By THOMAS DWIGHT, M.D., LL.D., Parkman Professor of Anatomy at Harvard. London: Longmans, Green, and Co. 1911. Pp. 243. Price 3*s.* 6*d.* net.

THIS is a rare book in the sense that any writing which reveals a thinking man's most carefully weighed and yet most intimately sacred thoughts must be rare. Few men have so painfully and so conscientiously cross-examined themselves as Dwight has, and fewer still have undertaken the criticism of their own thoughts armed with so deep a religious conviction and so sound a scientific knowledge. Being a Catholic, and having a real and fervent belief in all the tenets of his religion, he viewed with dismay a host of modern tendencies the very conception of which came so gradually and so naturally into the lives of younger men that they are passing to-day uncriticised.

To many of this generation has come a tacit acceptance that the great struggle of "science" and religion is done with; that evolution is beyond dispute; that its happenings are so certain that it has become almost as much an object of "faith" to them as religion itself is to others. This easy acceptance was never given by Dwight; for the younger men the struggle might seem ended, but to him, as he lived through all the phases of its progress, no such mental peace ever came. His early anatomical career was nurtured on the "archetype," which from being at first a fascinating idea ultimately became a horrid nightmare to him. Such a spectre did it develop into at the hands of Owen that the new views of Darwin, which seemed so definitely to slay and bury it once and for all, were hailed with delight; and Dwight confesses that he could have "danced on its grave." He watched the Darwinian views take root and grow; he marked every incident of the great struggle, and the common acceptance of a final victory; and he realised that the ghost that was laid was as nothing compared to the fiend which had issued from its grave. The archetype was a puzzle and a nuisance; but the new views were aiming a death-blow at "the only things that matter." Dwight watched the course of public opinion, he saw the pendulum swing over till any and every dogma issued in the name of the new science was eagerly swallowed whole and accepted as final, without any investigation of its merits or its truth. He saw with dismay the last phase, in which he charges the scientific world with having given dangerous and unproven theories to masses too weak to weigh and too ready to believe; and with having created a disastrous and widespread disregard of religion and morality.

For him there was no explaining away of deeply rooted belief by "the slang which in biology is allowed to pass for argument," and no acceptance of the findings of all those hasty investigators who so eagerly overhauled the body of man in search of traces of the monkey. With some of them he joined battle, and by long and patient researches into the numerical variations of the spinal column he destroyed all belief in the too readily accepted teaching of Rosenberg that the vertebral column of man was progressively tending to shorten by the forward migration of the pelvic girdle. Man, with his reason, his knowledge of right and wrong, and above all his soul, could never in Dwight's judgment be imagined as a glorified higher ape; that he had once been something higher, and not something lower, was the only possible solution of the problem of his origin.

The book in which these thoughts are given to the world is one that the reviewer feels it wrong to submit to any critical analysis, for there is in it the impression that it is the well-considered outcome of very deep, and often very painful mental struggles. The thoughts of Thomas Dwight, though they may not be submitted to the dissection of the critical reviewer, are those that must interest, and do good to, everyone who is engaged on any branch of the great study of mankind.

Transactions of the Medico-Legal Society for the Year 1910-1911. Edited by DIGBY COTES-PREEDY, M.A., LL.M. Cantab., L.S.A. Lond., Vice-President of the Society, of the Inner Temple and Oxford Circuit; Barrister-at-Law. Vol. VIII. London: Charles Griffin and Co. Pp. 184.

THE annual report of the Medico-Legal Society contains, as usual, some excellent papers and notes of discussions upon various topics of the nature indicated by its title. They are topics which, outside the walls of the society's meeting-place, bring individual members of the two professions of medicine and law into conflict quite as often as into association, and, moreover, are generally of public as well as of professional interest. Indeed, members of the Legislature might usefully join the society and learn from those whose knowledge of their subject is derived from personal observation and practical experience how much there is that needs consideration and revision in many Acts of Parliament that are left to remain from year to year unamended. For example, at a meeting recorded in the present volume a great deal might have been learnt from experiences related by Dr. R. J. Collie and others as to the disastrous effects produced in some instances by the Workmen's Compensation Act. The fact that in every year a very large number of workmen receive compensation for genuine accidents and for conditions undeniably existing and arising out of those accidents, and that the relief thus afforded is very valuable to its recipients, does not excuse the fact that in other instances fraud is perpetrated freely, and that the State does nothing to prevent or to punish a form of criminality for the creation of which it is responsible.

Legislators to whom we have specially referred will find equally instructive matter for their perusal in two or three of the other papers before us—Can the Abuse of Drugs be Prevented by Law? (Mr. Wippell Gadd) and Secret Remedies and Patent Medicines (Dr. F. W. Tunnicliffe) may be mentioned. The undignified antiquity of some of the Acts which we find governing us when we look into such a question as the stamp duties on medicinal compounds would alone suggest the need for reconsideration of the whole topic in the light of modern scientific knowledge and of modern interest in the public welfare. The history of the

law and practice connected with the ancient office of coroner has recently been the subject of direct inquiry for the information of Parliament, but there has been no legislative sequel to the departmental committee's report, and the lights and sidelights thrown on the subject by Dr. Wynn Westcott and Dr. F. J. Waldo are therefore still of potential value to anyone who wishes to master a subject which we all hope to see dealt with by the Government before long.

"Blood-tests" is the title of a paper which should be found instructive by advocates practising in criminal courts in which these are the subject of evidence, and the presidential address of Sir John Tweedy upon the "Deterrent Influence of Social and Legal Restrictions on the Medical Thought and Practice" again deals with a topic of public as well as of professional and medico-ethical interest.

Handbuch der Technik und Methodik der Immunitätsforschung. Herausgegeben von Professor Dr. R. KRAUS in Wien, und Dr. C. LEVADITI in Paris. Erster Ergänzungsband. Mit 14 Tafeln, 8 Kurven, and 17 teils farbigen Abbildungen im Text. Jena: Gustav Fischer. 1911. Pp. 664. Price, paper, M.24; bound, M.26.50.

RESEARCH in connexion with the complex problems of immunity is proceeding with remarkable activity in all civilised countries. The two volumes of Professor Kraus and Dr. Levaditi's well-known handbook gave as exhaustive an account of the practical aspects of the subject at the time they were published as was practicable. The editors state in their preface to this, the first supplementary volume, that it is their intention to issue yearly similar volumes. The size of this one gives some indication of the amount of work which has been done upon various aspects of immunity and affords the best demonstration of the necessity for such publications, since the matters dealt with are all of importance and have all been the subject of noteworthy work. It contains 25 separate articles, some dealing with more or less abstruse problems in connexion with various details of the immunity reactions, others with more directly practical questions, such as the use of specific serums and vaccines. We briefly refer to some of them.

Dr. M. von Eisler describes some of the new methods of obtaining more virulent toxins from the tetanus bacillus, and the use of serums obtained therefrom. Dr. R. Doerr gives an account of dysentery toxin and antitoxin. He states that it is generally accepted that only the Shiga-Kruse variety is to be regarded as toxic, and that the nature of the corresponding serum is antitoxic. Dr. Salimbeni discusses cholera toxins and antitoxins, and describes the results obtained with serum treatment in the Russian epidemic of 1908–1909. The subject of meningococcus serum is fully dealt with by Dr. St. Baecher, and the uses and results of the various forms are described. Professor Sobernheim deals with the preparation and mode of employment of anthrax serum. Dr. B. Schick contributes an interesting article on the intracutaneous estimation of diphtheria antitoxin, a method by which much smaller quantities of antitoxin may be titrated.

Dr. C. Levaditi, one of the editors, contributes an important review of phagocytosis and the opsonins, and describes the technique of the preparation and use of vaccines after Wright's methods. Professor C. von Pirquet gives an interesting summary of the various local tuberculin reactions. The complex question of anaphylaxis with its recent developments is discussed at considerable length in two separate articles, the first by Dr. A. Besredka, the second by Dr. A. Biedl and Dr. R. Kraus. Several of the articles are devoted to a consideration of various phases of the problems of immunity in tuberculosis. Professor Paul Römer discusses the action of the bovovaccine of Behring and of similar attempts to induce immunity, and Dr. E. Löwenstein describes fully many of the modifications of tuberculin, and gives details as to the results obtained with them. He also contributes an article on antibodies in tuberculosis, in which their nature and diagnostic applications are considered. The various serums that have been introduced for the treatment of tuberculous disease are also described and discussed. Professor H. Vallée deals with the results of cutaneous and conjunctival reactions with tuberculin in cattle. Other articles are devoted to the diagnosis of glanders, the treatment of rabies, the exciting cause of vaccinia, and the serum reactions from malignant tumours. There is also an important description of the technique of the investigation of acute poliomyelitis by Dr. K. Landsteiner.

Each article has a full bibliography attached to it, and many of them are illustrated by diagrams or plates. The book is a valuable addition to the literature of immunity and is indispensable for a fully-equipped bacteriological laboratory.

LIBRARY TABLE.

Medical Education and Infant-feeding: An Impeachment and a Suggested Remedy. By D. HASTINGS YOUNG, M.B., Ch.M. Edin. London: George Routledge and Sons, Limited. 1911. Pp. 120. Price 2*s.* 6*d.*—This little book directs attention to a matter which certainly deserves the earnest consideration of the General Medical Council, the Colleges, the Universities, and other bodies concerned in the education of the rising generation of medical practitioners. No one, we imagine, would deny that among the most urgent questions in medical progress at the present moment is that of infant mortality. Queen's College, Belfast, is the only medical school that demands and makes compulsory a course of instruction in infant dietetics. At the present moment all public ordinances as to the management of infants rest in the hands of medical men, and the public medical service, splendidly served as it is, is none the less composed of medical men without extensive clinical experience. Dr. Hastings Young calls attention to the position which results. There can be no doubt that the methods of infant feeding require unification, as Dr. Sidney Davies, medical officer of health of Woolwich, has pointed out. There is no uniformity between the directions given by one authority and possibly by another situated geographically next door to it. This causes endless confusion and want of confidence. Dr. Hastings Young suggests that Dr. Truby King's method for preparing modified or so-called humanised milk, which has been extensively used in New Zealand, should be universally adopted. This, to our mind, is quite an unpractical suggestion. The method is not a good one, and is even more complicated than the original method of Professor Frankland. Infants must be treated individually, for they are individuals, however generic in their behaviour. Nothing can replace the human mammary gland; the next best thing to it is the human mind intelligently trained. We take it, however, that Dr. Hastings Young is not suggesting that the overloaded curriculum of the student should have added to it the chemistry of infant feeding as a compulsory subject. The lesson of his book is that in clinical lectures dietetics should be given a regular place, and that examiners should take the subject into consideration.

Practical Physiological Chemistry. By PHILIP B. HAWK, M.S., Ph.D. Third edition, revised and enlarged. London: J. and A. Churchill. Pp. 440. Price 16*s.* net.—This is an eminently practical book which should be of great service to the laboratory student. It has run rapidly into three editions, the first having been issued in 1907 the

second in 1909, and the third recently. The favourable reception which has been accorded to the book speaks well for it. The pages show care in regard to revision and in the choice of trustworthy analytical methods. There are two full-page plates of absorption spectra in colours, four additional full-page colour plates illustrating microscopical preparations, and 127 figures, of which 12 are in colours. The plan of the book assumes that the student possesses some knowledge of chemistry and physiology, as otherwise he would find the opening chapter on enzymes difficult to follow, but it is just the chapter for the student about to attack practical considerations, and an account of enzymes usefully precedes the sections on carbohydrates, salivary digestion, and the decomposition, synthesis, classification, and properties of the protein. Gastric digestion follows in proper sequence, then discussion of the fats, pancreatic digestion, bile, and putrefaction products. Excellent practical chapters on fæces, blood, milk, and urine find their places afterwards in logical order. Footnotes throughout the pages serve the purpose of recording most recent experimental work, and of giving further analytical details, as, for example, the preparation of test reagents and hints on laboratory procedure. The book is an excellent presentation of the subject, is up-to-date, and clear in its directions.

Makers of Mischief. By STANLEY PORTAL HYATT. London: T. Werner Laurie. 1911. Pp. 275. Price 6*s.*—Mr. Hyatt, whose vigorous style, well-drawn characters, and power of depicting a scene in a few words please readers who may not always be at one with him in all his opinions, has given us another novel with South Africa for its setting. The "makers of mischief" are certain political agents of a foreign power whose machinations, in order to get concessions of land, stir up strife between white men and the natives. The story, which opens in the year 1888, takes the reader back to the time when a large part of what is now British South Africa was entirely in the hands of savages, and it tells how an experienced English hunter, together with his less experienced cousin, cross the almost waterless Kalahari desert in search of a rumoured rare animal, while another young Englishman is left to guard the camp and its treasures during the absence of the hunting party. The stirring adventures of the travellers across the desert, the surprises which awaited them at the end of their journey, the attack on the camp, and the subsequent happenings in the land of the Matabele, will be followed with sustained interest from the first to the last chapter.

MEDICINE AND THE LAW.

An Action arising out of the Sale of a Medical Practice.

IN an action recently tried by Mr. Justice Scrutton sitting without a jury, points of law were raised of some interest, in addition to the questions of fact usually at issue, where the value of a medical practice is questioned after a sale has taken place. The plaintiff, the widow of a medical man, claimed for the balance of the price agreed to be paid by the defendant to her for her introduction to the practice of her late husband and to patients whom he had attended, for board and lodging and for furniture, and also damages for the breach of an agreement to take a lease of the house in which the practice was carried on and which was the plaintiff's property. The defendant denied the items of the claim, and counterclaimed for damages for misrepresentation as to the character of the practice, for £60 as fees for medical attendance on the plaintiff's family, and for breach of the agreement to introduce him to patients. The plaintiff, in her reply as to the sum of £60 for attendance, pleaded an immemorial custom of the medical profession to attend members of the profession, their wives and families without charging for so doing, and in the alternative alleged that the charges were excessive. The legal points referred to arose out of the fact that the affairs of the deceased were in the hands of the Official Receiver, and that the widow had not taken out letters of administration, the defendant's case being that if any money was due from him in respect of the value of the practice it must be for the sale of the goodwill, the price of which should go to the estate. Considerable argument took place with regard to the question of goodwill in the case of a medical practice as distinct from a trade or business, and a number of cases bearing upon the subject were cited. The defendant did not deny that he had had board and lodging in the plaintiff's house and that she had introduced him to some patients. He had also written a letter to the plaintiff thanking her for what she had done, and had expressed his "profound gratitude and respect." Evidence was given as to the customs in connexion with the sales of practices, and with regard to the medical attendance of the defendant upon the plaintiff's children and upon a servant. There had been serious illness among the children. Upon the question whether the payment for the practice was due to the plaintiff or to the estate, it was argued on behalf of the plaintiff that the agreement was personal between her and the defendant. She occupied the house, which was her own, and she was able to introduce him. Mr. Justice Scrutton, in giving judgment, reviewed the facts as outlined above, and upon the question of goodwill said that in the case of a medical man a successor was ready to pay a sum calculated upon the past profits of his practice, and that this appeared to be paid in respect, firstly, of an unreasonable propensity in human beings to continue going to the old house, which gave that house a certain value, and secondly, in respect of the fact that if people were told that the incomer was the successor of the previous occupant of the practice, who had treated them, they would be induced to employ that successor. He considered that the plaintiff had sold the right to carry on the practice in the old house, which, in fact, was hers, and also that she had in the second place sold the right to say "I am Dr. ——'s successor." The first right was personal to the plaintiff and had nothing to do with the estate; as to the second he had some difficulty in deciding, but though inclined to think that it belonged to the estate it had been included with the first in one contract by the widow, and he held that she could sue on that contract, although the estate might afterwards claim its share from her. He therefore decided in favour of the plaintiff as to the claim for the balance of the purchase price. As to the introductions, he referred to the letter mentioned above and refused to find that there had been a breach of contract or misrepresentation. With regard to board and lodging he held that the sum of £2 per week was a fair charge. As to the question of charges for medical attendance on the plaintiff's children and servant, he found that there was not a binding custom but a very general practice not to charge the widow and children of a deceased medical man for attendance shortly after his death. In ordinary circumstances, where medical advice was sought and nothing was said as to payment, there was an implied contract to pay ordinary charges. In a case where a practice of not charging existed, if a medical practitioner intended to charge he should say so, and then the patient would have the opportunity of seeking another medical attendant. In the case before him the defendant would have realised if this had been done that the plaintiff would have been recommending him to her late husband's patients, and at the same time calling in another medical man to treat her own family, which would obviously have been prejudicial to himself. With regard to the servant, he was of the opinion that the defendant attended her without intending to make her mistress liable, and that he must seek payment from the servant herself. He gave judgment for the plaintiff on the claim for a sum to be calculated upon his findings, and also for the plaintiff upon the counterclaim.

A full report of the legal argument will be found in the *Times*, to which we have been indebted.

MANCHESTER SURGICAL AID SOCIETY.—According to the annual report of this society 559 applications were dealt with last year, as against 483 in 1910. The society provides necessary surgical appliances for applicants too poor to buy them. As in the case of most hospital and allied societies the year closed with an overdraft on the bank.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, NOV. 28TH.

Penal Cases.

THE Council took up the consideration of penal cases.

The first case to be decided was that (adjourned from May 24th, 1911), of Arthur William Wilson, registered as of 102, Tufnell Park-road, N., M.B., Mast. Surg. 1887, Univ. Edin., who had been summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That you have knowingly and wilfully on various occasions assisted one Arthur Jacobs, of Jacobs and Clark, 156, High-street, Camden Town, a person not registered as a dentist, in carrying on practice as a dentist by administering anæsthetics on his behalf to persons coming to him for treatment. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants were the Society of British Dentists.

At the conclusion of the proceedings on May 24th, 1911, the following decision of the Council was announced by the President:—

Arthur William Wilson: I have to inform you that the facts alleged against you in the notice of inquiry have been proved to the satisfaction of the Council. The Council has not proceeded to pronounce judgment on the facts proved; but has postponed it to the next session of the Council, when you will be required to attend and to produce evidence as to your good conduct in the interval from persons in the neighbourhood familiar with your practice.

Mr. Wilson appeared in person and was accompanied by his solicitor, Mr. Lees.

Mr. LEES submitted to the Council a statutory declaration from Mr. Wilson to the effect that the latter had not, since the last session of the Council, assisted any unregistered person in any way, and that he had faithfully observed in the letter and spirit the undertaking that he gave to the Council.

Communications were read from medical men and other persons of position testifying to the good conduct of Mr. Wilson.

The PRESIDENT, in announcing the decision of the Council, said: Mr. Arthur William Wilson, I have to inform you that the Council, having taken account of the evidence you have produced and the assurances you have given, have not seen fit to direct the Registrar to erase from the Medical Register the name of Arthur William Wilson.

The next cases to be considered were those (adjourned from May 26th) of James Robertson Wallace, now registered as of 68, Jermyn-street, London, S.W., M.B., Mast. Surg. 1885, Univ. Edin., and Charles Edward Trimble, now registered as of 68, Bute-street, Treherbert, Glamorgan, Lic. R. Coll. Phys. Edin. 1898, Lic. R. Coll. Surg. 1898, Lic. Fac. Phys. Surg. Glasg. 1898, who had severally been summoned to appear before the Council on the following charge, as formulated by the Council's solicitor:—

That you have associated yourself in your professional capacity with an institution, termed the Sandow Curative Institute, which systematically advertises for the purpose of procuring patients who are to receive, either by correspondence or by attendance at the said institute, treatment for disease under the personal direction of Eugen Sandow, who is not a registered medical practitioner, and that you have approved of and acquiesced in such advertising. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants were the British Medical Association.

At the conclusion of the proceedings on May 26th, 1911, the following decision of the Council was announced by the President:—

Mr. James Robertson Wallace: I have to inform you that the facts alleged against you in the notice of inquiry have been proved to the satisfaction of the Council, but that the Council, in order to give you an opportunity to reconsider your position, has postponed judgment in your case till the next session, when you will be required to be present and to produce evidence as to your conduct in the interval.

Mr. Charles Edward Trimble: I have to inform you that the facts alleged against you in the notice of inquiry have been proved to the satisfaction of the Council, but that the Council, in order to give you an opportunity to reconsider your position, has postponed judgment in your case till the next session, when you will be required to be present and to produce evidence as to your conduct in the interval.

The case of Mr. Trimble was first considered. He appeared in person and submitted a statutory declaration to the effect that he had had no connexion whatever with the Sandow Institute since he appeared before the General Medical Council in May last. He had given up his post there in April last, and had had absolutely nothing to do with the institute since. A testimonial as to character from a medical practitioner was read.

The PRESIDENT announced the decision of the Council as follows: Mr. Charles Edward Trimble, I have to inform you that having regard to the evidence you have produced and to your conduct since the last session of the Council, the Council does not see fit to direct the Registrar to erase your name from the Medical Register.

The Council then considered the case of Mr. James Robertson Wallace. Mr. Wallace appeared in person and was represented by Lord Robert Cecil, K.C., and Mr. A. Neilson, instructed by Mr. G. Lewis, solicitor.

The complainants were represented by Mr. Smith Whitaker.

Lord ROBERT CECIL at the outset took objection to a statutory declaration lodged by the complainants on the ground that it was dated Nov. 23rd. He submitted that it did not comply with the Standing Orders of the Council, which laid down that seven days' notice of any further facts and evidence should be given to the accused practitioner.

Mr. SMITH WHITAKER said that the complainants submitted this document in reply to the declaration of Mr. Wallace and to the communication of the solicitor to the Council asking whether it was the complainants' desire to submit any evidence to the Council.

The LEGAL ASSESSOR (Mr. BODKIN) ruled that the statutory declaration in question did not comply with the Standing Orders, and that any evidence which it was proposed to tender in connexion with it could not be properly received or considered by the Council. The document had been sent to members of the Council, but as they were acting in a completely judicial capacity any statements or facts in it which had been read by members of the Council would not operate in any way upon their minds, and would be completely disregarded by them in considering the evidence which would be adduced to the Council.

Lord ROBERT CECIL said that his client had sought but had been unable to ascertain from the Council what they desired him to do. He was in a very difficult position. He had to consider exactly what he had to do and what was the objection of the Council to his conduct in the past. Counsel argued that what his client had to avoid was (1) association with an institution which undertook the treatment of disease and which systematically advertised for patients, and (2) the aiding and abetting an unregistered person in the treatment of disease. If he avoided these things he was not guilty. The Sandow Curative Institute now neither systematically nor in any way advertised for the purpose of procuring patients who were to receive treatment for disease under the direction of Mr. Eugen Sandow. Lord Robert Cecil proceeded to read a declaration made by Mr. Wallace, in which he stated that upon this alteration being made in the Sandow Institute he resumed the duties which he had suspended. Since that date he had superintended, advised, and accepted responsibility for the treatment of persons who came to the institute for the course of exercises. No advertisements were now issued. The treatment at the institute was therefore now absolutely under the control of Mr. Wallace, and was given by him as a responsible medical man in pursuance of his judgment as to what was required. He accepted full responsibility for everything that was done under his direction. All the treatment was done under the direct superintendence of a medical man and without advertising. Mr. Wallace had therefore avoided what it was necessary for him to avoid. Lord Robert Cecil intimated, in conclusion, that he would not call Mr. Wallace as a witness as he had no questions to ask him, but he tendered him for cross-examination if required.

After some discussion with the Legal Assessor Mr. Wallace entered the witness-box.

Mr. SMITH WHITAKER: Has there been any change in the practice of the Sandow Institute?

Mr. WALLACE: Yes.

What is it?—I see all the patients and I prescribe the broad lines of treatment on which the exercise is to be given. I take the whole responsibility of the medical treatment of the case.

Does Mr. Sandow see cases now and again?—Now and again.

Does he accept any responsibility?—No, I accept the whole.

Then the whole of the Sandow Institute is carried on under your guidance?—Yes, so far as the medical treatment is concerned.

Mr. SMITH WHITAKER then submitted that although the advertising might be discontinued the profits of the advertising remained. This practitioner had continued in the employment of the institute, his association with which was condemned by the Council.

After deliberation *in camerâ* the PRESIDENT said: Mr. Robertson Wallace, I have to inform you that the Council are not satisfied with the evidence as to your conduct which you produce, and they have accordingly decided to give you a further opportunity of producing more satisfactory evidence regarding your professional conduct. Such evidence, they instruct me to tell you, ought to be testified by medical practitioners or other persons of position who may be acquainted with your practice and conduct in the interval, and for this purpose they are postponing judgment on your case once more until the next session of the Council.

The Council adjourned.

WEDNESDAY, NOV. 29TH.

The Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

Penal Cases.

The Council dealt with charges against medical practitioners.

The first case considered was that of William Dutton Akers, registered as of 67, Sackville-road, Hove, Lic. Soc. Apoth. Lond. 1892, Mem. R. Coll. Surg. Eng. 1898, Lic. R. Coll. Phys. Lond. 1898, who had been summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That you abused your position as a medical man by committing adultery with a Mrs. Geddes, with whom you stood in professional relationship, of which adultery you were found guilty by the decree of the Probate, Divorce and Admiralty Division (Divorce) of the High Court of Justice, dated Dec. 16th, 1910, in the case of Geddes *v.* Geddes and Akers, in which you were the co-respondent, which decree was made absolute on June 26th, 1911. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

There was no complainant in this case, nor did Mr. Akers attend in answer to his notice.

After certain evidence had been submitted the PRESIDENT announced the judgment of the Council as follows: I have to announce that the Council have judged William Dutton Akers to have been guilty of infamous conduct in a professional respect, and have directed the Registrar to erase from the Medical Register the name of William Dutton Akers.

The next case to be considered was that of James Williamson Skelley, registered as of Blaenrhondda, Treherbert, Glamorgan, Lic. R. Coll. Phys. Edin. 1905, Lic. R Coll. Surg. Edin. 1905, Lic. Fac. Phys. Surg. Glasg. 1905, who had been summoned to appear before the Council on the following charge, as formulated by the Council's solicitor:—

That you abused your position as a medical man by committing adultery with a Mrs. Unwin, whom you had been attending professionally, of which adultery you were found guilty by the decree of the Probate, Divorce, and Admiralty Division (Divorce) of the High Court of Justice, dated June 14th, 1911, in the case of Unwin *v.* Unwin and Skelley, in which you were the co-respondent. And that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainant was Mr. Clyde Longman Hayes, a registered medical practitioner.

Mr. Skelley attended, accompanied by Mr. Wing, solicitor. The complainant was represented by Mr. Neal, solicitor.

Evidence was submitted to the Council in relation to the charge. This included accounts for professional work.

Mr. SKELLEY gave evidence on his own behalf and stated that he had become acquainted with Mrs. Unwin prior to her marriage and also before he had attended her professionally.

The PRESIDENT announced the judgment of the Council as follows: James Williamson Skelley, the Council have judged you to have been guilty of infamous conduct in a professional respect, and have directed the Registrar to erase from the Medical Register the name of James Williamson Skelley.

The Council then considered the case of George William Hammond. The Dental Committee reported:—

The said George William Hammond was registered in the Dentists Register on December 31st, 1878, as "in practice before July 22nd, 1878," and his address in the Register for the current year is Dental House Ripon.

The Committee find that the following facts were established by the evidence: That on March 22nd, 1911, the said George William Hammond was convicted at Ripon of the following offence, of attempting to steal certain goods from the Church Lads' Brigade Club Room in Allhallowgate, and that he was sentenced to three months' imprisonment with hard labour.

Mr. Hammond sent a letter stating that he would not be able to be present.

The PRESIDENT announced the judgment of the Council as follows: I have to announce that the Council, having considered the facts found in the report of the Dental Committee, does not direct the Registrar to remove from the Dentists Register the name of Mr. George William Hammond.

The next case to be considered was that of John Edwards, registered as of 1, Chadwell Heath-lane, Chadwell, Essex, Lic. Soc. Apoth. Lond. 1893, who had been summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That you were on Sept. 5th, 1911, convicted at the Central Criminal Court on your own confession of the following misdemeanour—namely, of having unlawfully and knowingly signed a false declaration of your personal knowledge and belief and thereby enabled one Reuben George Rittman to obtain a passport for travel in a foreign country, for which offence you were fined £25.

Mr. Edwards appeared, and was accompanied by Mr. Forrest Fulton, his counsel.

Mr. FORREST FULTON, in addressing the Council on behalf of his client, said that on behalf of Mr. Edwards he desired to express deep regret for what had happened. What Mr. Edwards had done was rather an act of negligence committed in a hasty moment than a deliberate act. What he did was to oblige a man whom he believed to be known to the medical man for whom he was acting. Mr. Edwards was acting in Wandsworth for a medical man who was in bad health, and he was dependent on others for his knowledge of the patients. One night, when the surgery was particularly full, a man entered and asked Mr. Edwards to sign a paper for him. Mr. Edwards was led to believe that this man was the son of some patient of the medical man for whom he was acting. He appended his signature and the man went away. The document in question had not been in use for any lengthened period. It was only when the summons was served upon him that Mr. Edwards remembered vaguely what had occurred.

Mr. EDWARDS went into the witness-box and expressed his great regret.

The PRESIDENT announced the judgment of the Council as follows: Mr. Edwards, I have to inform you that the Council have found your conviction proved; that the Council takes a grave view of the giving of certificates of an irregular character, but that, having taken into consideration all the facts of your case and the assurances that you have given, the Council has not seen fit to direct the Registrar to erase your name from the Medical Register.

The Council adjourned.

THURSDAY, NOV. 30TH.

The Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

The Case of Major Fink.

The Council considered the case of George Herbert Fink, registered as of Queen's Gate Chambers, 52A, Cromwell-road, South Kensington, London, S.W., Lic. Soc. Apoth. Lond. 1882, Mem. R. Coll. Surg. Eng. 1883, who had been summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That you were on Nov. 10th, 1911, convicted at the Central Criminal Court of the following felony—namely, of forging a banker's cheque for £11,000 3*s.* 10*d.* with intent to defraud, and found guilty but insane so as not to be responsible according to law, and thereupon ordered to be kept in custody during His Majesty's pleasure.

Major Fink was not present, nor was he represented.

Mr. HARPER (one of the solicitors to the Council) said that the case was a very sad one. In 1886 it appeared that Major Fink joined the Indian Medical Service and was attached to the Bengal Lancers, and until 1900 he was in service in India and he had worked very hard in malarial and

insanitary districts. He served with distinction on the North-west frontier, for which he received the medal and clasp. In 1900 he was invalided home on furlough and applied for an extension of leave, which was refused. He at once sent in his papers and retired on a pension of less than £300 a year. If he had remained another three years in the service he would have been entitled to a much larger one as a Lieutenant-Colonel, and his wife would also have been entitled to a pension on his death. The precipitate action of sending in those papers rather indicated the state of his mind then. Since then he had been very strange and eccentric, and had an ungovernable temper and committed acts of violence at home. About 1907 he opened a deposit acount with the National Discount Company in the City and placed there £600, which he drew on from time to time, until finally there was only £11 3*s*. 10*d*. standing to his credit, which he wished to draw out. In accordance with their custom the bank gave him a cheque drawn by the National Discount Company to the order of Major Fink upon the Union of London and Smith's Bank for that amount. The next day Major Fink telephoned to the National Discount Company that he had lost the cheque, and it was arranged that he should come to the company the following morning to make arrangements for the issuing of a fresh cheque on the usual indemnity. On the same day the manager of the London branch of the Delhi bank received the cheque altered from £11 3*s*. 10*d*. to £11,000 3*s*. 10*d*., together with a letter requiring cash or cheque for the amount. It was said that the alteration was done cleverly, but not in such a way as to deceive any cashier. They sent the cheque to the National Discount Company, who took the matter up. Major Fink was prosecuted, with the result that he was found to be insane. The family had consulted Dr. Maurice Craig as to the condition of Major Fink. Mr. Harper read a letter from Dr. Maurice Craig, dated Nov. 2nd, 1911, and addressed to the General Medical Council. It was in the following terms:—

As you state, I gave evidence at the Old Bailey regarding the mental state of Major Fink. When I saw him I considered that he was a person of unsound mind, and that he had been for some long period. I further stated that I was perfectly prepared to certify him as such. In fact, if what he did can be called a forgery, it was done during a state of mental confusion. As I daresay you know, what he had done was not likely to deceive anybody. Although he had altered the face of the cheque, he had also written other instructions on the back of it, which showed clearly that he was unsound mentally at the time. He is suffering from delusions of persecutions, his illness having been brought about by active service in India, together with dysentery, malaria, &c. As regards the outlook it is impossible for me to say that he will not recover, as these exhaustion cases often clear up under enforced rest, but I did not form a hopeful view of his case.

It was obvious, Mr. Harper added, that Major Fink had no criminal intent. However, after the finding at the Old Bailey it was necessary that the case should be brought before the Council, but it was not necessary for the Council to pass upon him the stigma of finding that he had committed an act implying infamous conduct.

The PRESIDENT announced the decision of the Council as follows: The Council having regard to all the circumstances of the case does not see fit to direct the Registrar to erase from the Medical Register the name of Mr. George Herbert Fink.

Warning Notice as to Professional Conduct.

The Council then sat *in camerâ* to consider the advisability of issuing a warning notice directing the attention of medical men to the resolutions of the Council regarding "infamous conduct in a professional respect." Afterwards it was announced that the Council had agreed to the following notice:—

GENERAL MEDICAL COUNCIL.

Preliminary.—The General Medical Council consider that in the interests of the medical profession it is advisable to bring to the notice of its members certain resolutions which have from time to time been adopted as expressing the views of the Council upon certain forms of professional misconduct which have been or may be dealt with as amounting to "infamous conduct in a professional respect" within the meaning of Section 29 of the Medical Act of 1858. The Council, however, wish it to be distinctly understood that these resolutions are not exhaustive of the forms of professional misconduct which may be dealt with by the General Medical Council under their disciplinary powers, and that the Council are not in any way precluded from considering and dealing with any form of professional misconduct outside the scope or precise language of the resolutions.

AS TO THE SIGNING OF CERTIFICATES.

Resolution adopted by the General Medical Council on Nov. 30th, 1911:—

Whereas registered medical practitioners are in certain cases bound by law to give, or may be from time to time called upon or requested to give, certificates signed by them in their professional capacity, for subsequent use either in courts of justice or for administrative purposes, And whereas such certificates include, amongst others—

Certificates.—(*a*) Under any statute relating to births, deaths, or disposal of the dead; (*b*) under the Lunacy Acts; (*c*) under the Vaccination Acts; (*d*) under the Factory Acts; (*e*) in relation to children or to excusing school attendance; (*f*) in connexion with sick benefit, insurance, and friendly societies; (*g*) in connexion with workmen's compensation; (*h*) in connexion with naval or merchant shipping; (*i*) for procuring the issue of Foreign Office passports; (*j*) for excusing attendance in courts of justice, in public services, in public offices, or at ordinary employments.

And whereas it has been made to appear from time to time that some registered medical practitioners have given and signed untrue, misleading, or improper certificates of the above-specified or other descriptions,

Now the General Medical Council hereby give notice that any registered medical practitioner who shall be shown to have given any untrue, misleading, or improper certificate, *whether relating to the several matters above specified or otherwise*, is liable to be adjudged by them to be guilty of "infamous conduct in a professional respect" and to have his name erased from the Medical Register under Section 29 of the Medical Act, 1858.

The Council adjourned.

FRIDAY, DEC. 1ST.

The Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was again in the chair.

Apothecaries' Hall, Dublin.

The report as to the final examinations held by the Apothecaries' Hall, Dublin, in July and October, 1911, was considered.

Sir DAVID MCVAIL said that at the last two or three examinations of the Apothecaries' Hall, Dublin, no paper in midwifery had been set. Papers had been set in medicine and surgery. Formerly a paper in midwifery had been set, but it had been dropped. The only examination that was held on this subject now was a clinical one, and one of the examiners said that that was an oral examination as well. It was for the Council to consider whether it was desirable that in one of the three great subjects a written paper should be dropped. The Examination Committee was of opinion that a paper on the subject of midwifery should always form part of the examination. He moved that the report of the Examination Committee should be adopted by the Council and communicated to the Apothecaries' Hall, Dublin.

This motion was agreed to.

Teaching Institutions and the Preliminary Sciences.

A report was received from the Students' Registration Committee on exceptional cases and on the approval of certain recognised teaching institutions. The latter part of the report set forth that applications had been received for the approval by the Council of the following institutions in regard to the preliminary sciences: Cheltenham College; Dulwich College; Epsom College; Eastbourne College; Felsted School; Harrow School; Hymer's College, Hull; King Edward's School, Stourbridge; Malvern College; Repton School; Trent College, Long Eaton; Whitgift Grammar School, Croydon; and the Technical College, Darlington; all of which were recognised by the English Conjoint Board.

It was resolved by the committee—

1. That, satisfactory evidence as to visitation having been received from the chairman, Cheltenham College, Dulwich College, Epsom College, Eastbourne College, Felsted School, Harrow School, King Edward's School (Stourbridge), Malvern College, Repton School, Trent College, and Whitgift Grammar School be added to the list of recognised institutions approved by the Council.
2. That the Technical College, Darlington (day classes), be added to the list of recognised institutions approved by the Council.
3. That the Committee proposes to draw up a form of application for approval by institutions for regular use.

Dr. NORMAN MOORE, in moving that the Council should approve of the resolution of the committee, drew special attention to the third clause in it. It would be of advantage to have a common form of application which would be filled up by every institution which applied for approval.

Dr. MACKAY seconded.

Dr. CATON asked whether the adoption of the resolution by the Council would place the schools mentioned in the same position as a department teaching the particular subjects in a university or medical school, or was the instruction given in these schools to be preliminary to the study of the same subjects and to be followed up in medical schools.

Dr. NORMAN MOORE said that the student who had attended the courses on chemistry and physics or biology in one of these approved schools, and had passed the examination of the qualifying bodies in these subjects, would not be required to pursue a further course in them unless the particular licensing body, such as the University of London, required

further knowledge. Of course the student would have to comply with the requirements of the particular qualifying body whose curriculum he was pursuing.

Sir HENRY MORRIS intimated that in the next session of the Council he would bring forward a suggestion in the form of a motion that the Council should recommend to all the licensing bodies, whether universities or medical schools, that the study which was taken at these approved institutions should not be allowed—even if it extended over two or three years—to count as more than six months of the medical curriculum. He was prepared to move that if the study were taken in these approved institutions, and if the examination were not passed until three months after the student had entered the medical school, the medical curriculum should be four years and nine months. If the examination were not passed until six months after entering a medical school, he would suggest that no part of the time spent on these studies at any recognised *non-medical* institution, be it either technical science school or college, or polytechnic or secondary school, should be allowed to count as any part of the five years' curriculum. The non-approval by the Council of these institutions had retarded the growth of the public and secondary schools in this country in the direction of being places in which instruction in science was given as well as general culture. He wanted to encourage the secondary schools to become something like the *Real-Gymnasia* in Germany. The attitude of the Council hitherto had been to retard such development in the secondary schools in this country. He also added that in any revision of the subjects of the curriculum it would be a good thing to make it necessary to pass an examination in elementary science as well as in general education before entrance at a medical school, and to add to anatomy and physiology of the first two or two and a half years some amount of chemistry and physics in their application to physiology and pathology, for which there would be ample time.

Sir CLIFFORD ALLBUTT remarked that he would be very sorry if students came up to his own University, and having passed the elements of chemistry and physics, would lay these subjects aside without making further advances in them.

Sir C. NIXON thought that there ought to be strict uniformity in connexion with this matter. In the Universities it was laid down that the medical curriculum should extend over five years from the date of registration. So far as he knew, with few exceptions, the Universities had been loyal to the recommendations of the Council. If now recognition was given to the lectures in physics, chemistry, and biology in secondary schools, and this instruction counted for six months out of the first year of medical study, why should Universities be required to have the whole five years? If the recommendations of the Council were followed, it must exact from medical students the full term of the curriculum. He saw the possibility that the universities might claim for their students the same privileges as the Conjoint Board claimed for its students.

The PRESIDENT observed that the Council had not laid down under what conditions the study thus commenced would be reckoned towards the five years' curriculum. That would be dealt with in June.

Dr. NORMAN MOORE: No part of the five years' study can count until the registration examination has been passed.

Dr. MACKAY said that at the last meeting of the Council it granted recognition to secondary schools under defined conditions. These conditions had been fulfilled by the schools, the names of which were now before the Council. What the committee had done was to put these schools as regarded the subjects in question in the same position as medical schools and polytechnics. There were no regulations different from those of medical schools. What the Council had now to do was to say whether it approved of the schools which the committee had placed before it. These schools were amongst the best in the land.

Sir JOHN MOORE: Who are the visitors under this recommendation?

Dr. NORMAN MOORE: What the Council requires is visitation by a licensing body. The licensing body is responsible for the visitation.

Sir THOMAS FRASER: What is the evidence which the committee had before it as to the fitness of the schools?

Dr. NORMAN MOORE: This Council has no power, so far as I know, of visiting these schools. It certainly had never exercised it. All the medical schools of this country, and all the hospitals in which medical students received their professional instruction, had to be recognised by the qualifying bodies. The Council accepted that. It did not go and visit each. From these schools for which approval was now sought no application could be received unless the qualifying body stated after visitation and inquiry that it was satisfied.

Dr. CATON said that he was sorry that the Council had not been able to consider the memorials from the universities. He wished that it was possible to delay recognition until the matter had been fully discussed.

Dr. NORMAN MOORE: It has been discussed for ten years.

Dr. CATON: It was discussed very briefly and hurriedly.

The PRESIDENT: Communications from three universities have been received which, I think, ought to be referred to the Examination Committee.

Dr. MACKAY said that the Council was bound to consider applications in view of its own resolution.

The Council then agreed to the motion to approve of the resolutions of the Committee.

Medical Certificates and Diplomas in India.

The Students' Registration Committee stated in its report that it had had before it an application from the All-India Sub-assistant Surgeons' Association. That association had passed a resolution in the following terms:—

That a representation be sent to the Medical Council of the United Kingdom for requesting that body to recognise the course of the study of the sub-assistant surgeons in the medical schools of the United Kingdom, in view of the fact that the sub-assistant surgeons undergo a regular four years' training in recognised Government medical schools, and that the Government have admitted their claims to the Medical Registration Act.

The Students' Registration Committee resolved:—

That this application be recorded, but that the committee, in view of the fact that legislation is contemplated, defer further consideration of it for the present.

Sir DAVID MCVAIL moved:—

That the Examination Committee, together with the chairman of the Education Committee and the chairman of the Students' Registration Committee, be requested to obtain full information regarding the conditions under which medical certificates or diplomas are granted in India, and to what extent, if any, *pro tanto* recognition of curriculum and examination should be given by licensing bodies in Great Britain and Ireland, and to report to the Council.

He said that the committee had had a great deal of trouble over this matter. Certain information was desired which only the Government of India could supply. The India Office had written to India to secure it for the committee.

Dr. MACKAY seconded.

The motion was agreed to.

Registration of Medical Students.

Dr. MACKAY submitted a report of the Education Committee upon a resolution submitted to it as to the regulations in regard to the registration of medical and dental students. That resolution directed the committee to report to the Council what alterations in the Regulations (10, 11, and 12) for the Registration of Medical Students were necessary to bring them into conformity with the facts and with the powers of the Council. The Committee recommended—

I. That the following should be substituted for Clauses 10, 11, and 12 above quoted—

It is recommended by the Council—

(10) That every medical student should be registered in the manner hereinafter prescribed.

(11) That no medical student should be registered until he has attained the age of 16 years, has passed a preliminary examination recognised by the General Medical Council, and has produced evidence that he has commenced medical study at a university, or school of medicine, or at a teaching institution recognised by one of the licensing bodies and approved by the Council.

(12) The commencement of the course of professional study recognised by any of the licensing bodies should not be reckoned as dating earlier than 15 days before the date of registration.

II. That the changes recommended in this Report will, in the opinion of the Committee, necessitate a recasting of the Resolutions passed by the Council regarding professional education.

Dr. MACKAY, in moving that the recommendations framed by the committee should be adopted by the Council, said that in Regulation 11 the committee had substituted the words "teaching institution" for "scientific institution," in view of the fact that the Council had recognised certain secondary schools. The other changes were that the imperative "shall" had been replaced by the permissive "should."

Mr. HODSDON seconded.

Dr. ADYE-CURRAN thought that the substitution of

"should" for "shall" was a recognition of the fact that the Council had exceeded the scope of its authority.

The PRESIDENT, in putting the motion, said that he did so on the clear understanding that if it was carried it would be remitted to the Education Committee to draw up a fresh statement of the regulations embodying the changes.

The motion was agreed to.

Preliminary Examination of the Royal Colleges in Ireland.

Sir ARTHUR CHANCE had given notice of the following motion:—

That any "Requirements or Regulations" of this Council regarding the standard in General Education to be observed in Preliminary Examinations which are compulsory on any Irish Examining Body, in the sense that their observance is regarded by the Council as essential for the continued recognition by the Council of the Preliminary Examination of such Irish Examining Body, shall apply equally to all the Irish Preliminary Examinations in general knowledge recognised by this Council.

He said that he would move his motion in an altered form. It would be as follows:—

That as far as concerns the preliminary examination in general education, the Conjoint Board of the Royal Colleges in Ireland shall be regarded by this Council as if the Conjoint Board were a university examining body.

Sir Arthur Chance went on to say that the Irish Conjoint Board only wanted to be treated in the same way as its competitors, and he did not care what the form of words adopted was if this result was attained. The Conjoint Board was, owing to the peculiar circumstances obtaining in Ireland, forced to hold this preliminary examination. It had appointed a number of gentlemen of the very highest university standing to conduct it, and had deprived itself of any power to interfere with the discretion of these gentlemen. They therefore virtually, although not nominally, formed a university examining board. The Colleges were anxious to keep up a high standard of education. The Universities were free from certain matters which were laid down by the Education Committee, and the Colleges ought to be placed in the same position as these other bodies.

Sir JOHN MOORE seconded.

Dr. LITTLE remarked that the Council had no right to put this examination on the same footing as that of any university. He would, however, be prepared to support a motion such as Sir Arthur Chance had originally placed on the paper.

Sir CHARLES BALL said that he could support the motion originally placed on the paper. The examination was known to be a good one.

Dr. MACKAY said that the Council was being asked to do something which it possibly could not do. He would point out that a university was an integral part in the educational system of the country.

Sir C. NIXON said that the examination in question was admitted to be a good one, and the examining body seemed to be perfectly free from interference by the Conjoint Board. But the examination had nothing to do with the universities, and the universities would resent any proposal that there should be any assimilation of their examinations with the examination of the Conjoint Board.

The PRESIDENT remarked that all that was desired by the Irish Colleges was the admission that they had established an independent Educational Board, that that Board had established a suitable standard of examination, and that that was recognised on its merits. The Council did not need to raise the question of equivalent examinations so long as the particular examination was sufficient.

Sir ARTHUR CHANCE after further debate withdrew his motion.

Regulations for the Diploma in Public Health.

The Public Health Committee submitted a final report in regard to the proposed revision of the regulations for the Diploma in Public Health, together with the comments of the qualifying bodies thereon. The committee proposed that the resolutions and rules adopted by the General Medical Council for Diplomas in Public Health should be as follows:—

I.—The Council, having regard to the terms of Section 18 of the Local Government Act (1888) and of Section 54 of the Local Government (Scotland) Act (1889), and observing that under those sections special privilege is to be accorded to the holders of the diplomas granted under Section 21 of the Medical Act (1886), and therein described as Diplomas in Sanitary Science, Public Health, or State Medicine, thinks it essential to declare, with regard to its own future action under Section 21 of the Medical Act (1886), that it will not consider diplomas to "deserve recognition in the Medical Register" unless they have been granted under such conditions of education and examination as to ensure (in the judgment of the Council) the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the public health; and the Council, in forming its judgment on such conditions of education and examination, will expect the following rules to have been observed:—

Rule 1. The curriculum for a Diploma in Sanitary Science, Public Health, or State Medicine shall extend over a period of not less than nine calendar months.

Rule 2. Every candidate for a Diploma in Sanitary Science, Public Health or State Medicine shall have produced satisfactory evidence that, after obtaining a registrable qualification, which should be registered before admission to examination for the diploma, he has received practical instruction in a laboratory or laboratories, British or foreign, approved by the licensing body granting the diploma in which chemistry, bacteriology, and the pathology of the diseases of animals transmissible to man are taught. The laboratory instruction shall cover a period of not less than four calendar months, and the candidate shall produce evidence that he has worked in the laboratory for at least 240 hours, of which not more than one-half shall be devoted to practical chemistry. The laboratory course should be so arranged as to lay special stress on practical work which bears most directly on the duties of a medical officer of health.

Rule 3. Every candidate shall have produced satisfactory evidence that, after obtaining a registrable qualification, he has during six months been diligently engaged in acquiring a practical knowledge of the duties, routine and special, of public health administration, under the personal supervision of (*a*) in England and Wales, the medical officer of health of a county or of a single or combined sanitary district having a population of not less than 50,000, or a medical officer of health devoting his whole time to public health work; or (*b*) in Scotland, a medical officer of health of a county or counties, or of one or more districts having a population of not less than 30,000; or (*c*) in Ireland, a medical superintendent officer of health of a district or districts having a population of not less than 30,000; or (*d*) in the British dominions outside the United Kingdom, a medical officer of health of a sanitary district having a population of not less than 30,000, who himself holds a registrable Diploma in Public Health; or (*e*) a medical officer of health who is also a teacher in the department of public health of a recognised medical school; or (*f*) a sanitary staff officer of the Royal Army Medical Corps having charge of an army corps, district, command, or division, recognised for this purpose by the General Medical Council. (*g*) An assistant medical officer of health of a county or of a single sanitary district having a population of not less than 50,000, provided the medical officer of health of the county or district in question permits the assistant officer to give the necessary instruction and to issue certificates; or (*h*) That he has himself held for a period of not less than three years an appointment as medical officer of health of a sanitary district within the British Dominions, and having a population of not less than 15,000. The certificate for this purpose must except as provided under (*h*) include testimony that the candidate has attended under the supervision of the person certifying on not less than 60 working days. Provided that if the candidate has:—(1) Produced satisfactory evidence that he has attended a course or courses of instruction in sanitary law, vital statistics, epidemiology, school hygiene, and other subjects bearing on public health administration, given by a teacher or teachers in the department of public health of a recognised medical school; or (2) produced evidence that he has been a resident medical officer in a hospital for infectious diseases containing not less than 100 beds, during a period of three months—the period during which he has been engaged in acquiring practical knowledge of his duties under this rule may be reduced to three months, to include an attendance on at least 30 working days.

Rule 4. Every candidate shall have produced evidence that, after obtaining a registrable qualification, he has attended during three months at least twice weekly the practice of a hospital for infectious diseases at which candidate has received instruction in the methods of administration. 1. Methods of administration shall include the methods of dealing with patients at their admission and discharge, as well as in the wards, and the medical superintendence of the hospital generally. 2. In the case of a medical officer of the Royal Army Medical Corps a certificate from a principal medical officer under whom he has served, stating that he has during a period of at least three months been diligently engaged in acquiring a practical knowledge of hospital administration in relation to infectious diseases, may be accepted as evidence under Rule 4.

Rule 5. The examination shall have been conducted by examiners specially qualified; it shall have extended over not less than four days, one of which shall have been devoted to practical work in a laboratory, and one to practical examination in, and reporting on, subjects which fall within the duties of a medical officer of health, including those of a school medical officer.

*** The Rules 2, 3, 4, as to study, shall not apply to medical practitioners registered, or entitled to be registered, on or before Jan. 1st, 1890.

II.—The Council shall, from time to time, appoint an inspector or inspectors of examinations in public health, with special instructions to report to the Council whether the examination of each licensing body does or does not afford evidence, on the part of candidates passing such examination, of a distinctly high proficiency, scientific and practical, in each and all of the branches of study which concern the public health.

List of the districts and commands that have been recognised by the Council under Rule 3 (*f*):—

Aldershot.
Salisbury Plain.
Southern and South-Eastern.
Western.
Dublin and Belfast.
Cork.
Chatham and Woolwich.
Home.
Eastern.
North-Eastern and North-Western.
Scottish.
Gibraltar Command.
Malta Command.

The following Indian Divisions, viz.:—
1st (Peshawar).
2nd (Rawalpindi).
3rd (Lahore).
5th (Mhow).
6th (Poona).
7th (Meerut).
8th (Lucknow).
9th (Secunderabad).
Burma.

Dr. NORMAN WALKER moved "that the resolutions and rules in their amended form be adopted." He thought that the report of the Public Health Committee was an example of the deliberate way in which medical legislation ought to be carried through. The committee had, firstly, presented draft alterations in the regulations to the Council, and the latter had given directions that these should be sent to the various licensing bodies for their criticisms and comments. The committee had considered the replies very carefully, and as the result of its considerations suggested that in Rule 1 nine months should be recognised. Now he came to the question of laboratory work, and here there was a very considerable difference of opinion. The regulations which were at present in force laid down that the candidate should have worked in a laboratory or laboratories. In its inquiries the committee asked whether this meant six calendar months; and it found that the nominal six months had been reduced in practice to five. In very few places was there made any stipulation as to hours. The proposal for a 13 weeks' course with 150 hours of practical work aroused very strong opposition. As a compromise the committee suggested that the period required should be four calendar months. It further specified that during those four calendar months 240 hours should be devoted to practical work in the laboratories. That was a very considerable stiffening of the regulations.

Dr. NEWSHOLME seconded.

Dr. KNOX said that three months was too short a time, as it would result in cramming, but he would not object to four calendar months as a sort of compromise.

Sir HENRY MORRIS stated that the English Royal Colleges had always had a public health syllabus, and it had quite recently been revised so as to bring it up to modern requirements. The report did not agree with the practice of the Colleges in the reduction of the period in Rule 2 from six months to four. The recommendation from their examiners was that there should not be any cast-iron regulation as to the division of time between chemistry and bacteriology. Examiners found candidates who were so well prepared in chemistry and so badly prepared in bacteriology that they should not be compelled to give so much time to chemistry. Candidates might come to take their course with practical knowledge of one branch. He would be prepared to move an amendment to the effect that the proportion of time to be devoted to chemistry and bacteriology should be left to the discretion of the teachers.

Sir JOHN MOORE said that as chairman of the committee he could not accept such an amendment if it were moved. It had been felt very much in the past that too much time had been devoted to chemistry and too little to bacteriology. There was no doubt about the necessity of a thorough knowledge of bacteriology. He thought that it was a very fair arrangement that not more than one-half of the time should be devoted to chemistry.

Sir WILLIAM WHITLA hoped that the rule would not be made too cast iron in character.

Dr. NEWSHOLME considered that the committee might congratulate itself that the report had been received with so much consent. During the nine months under the proposed rules the instruction and practical work were to be made of a more definite character than was the case formerly.

The motion was agreed to.

Report of the Pharmacopœia Committee.

The Pharmacopœia Committee reported to the Council in the following terms:—

From May 21st to Nov. 18th, 1911, the number of copies of the British Pharmacopœia (1898) sold by the publishers was 581. The total number of copies sold in the year beginning Nov. 19th, 1910, was 1114; this is a larger number than any recorded for several years past. Up to the present time 43,574 copies of the Pharmacopœia and 4511 copies of the Indian and Colonial Addendum have been sold. The stock of the Pharmacopœia now in hand numbers 1439 copies; it will probably suffice for the demand during the next 18 months.

The third report of the Committee of Reference in Pharmacy, with a supplement thereto, has been published, and the Pharmacopœia Committee have received a number of criticisms and comments upon its suggestions, of which note will be taken for subsequent use.

The committee have pleasure in intimating that Dr. Tirard, for many years its secretary, and Professor Greenish, secretary of the Committee of Reference in Pharmacy, have accepted appointment as editors of the new issue of the Pharmacopœia, and are now engaged in classifying the materials relating to the revision of the text which have accumulated in the committee's hands. The committee have to acknowledge the courtesy of the Council of the Pharmaceutical Society of Great Britain, who have been good enough to make arrangements which have facilitated Professor Greenish's acceptance of this appointment.

The editors have submitted for the approval of the committee an outline of the steps they propose to take for the preparation of a first draft of the revised text. These will follow the general lines adopted in connexion with the last revision. It will doubtless be necessary, as on previous occasions, to obtain expert assistance on technical questions from small Committees of Reference in Chemistry and in Botany. The appointment of such committees has been authorised by the committee.

The report was approved of.

Inspection of Qualifying Examinations in Dentistry.

A report was received from the Dental Education and Examination Committee on the inspection of the qualifying examinations in dentistry held during the year 1911. The report concluded thus:—

In reviewing the whole series of inspected examinations their general uniformity and adequacy is striking, and, except in matters of detail, little appears to require amendment. The chief point where differences of practice exist is in the final conference of examiners and in the extent to which the marks originally given are liable to subsequent modification. At the Royal College of Surgeons of Ireland alone there is absolutely no revision of marks once given. At the Royal College of Surgeons of England there is such a revision possible, but it is limited to leniency extended to such as have very nearly attained to a pass mark, whereas in the other bodies it appears, judging from the inspector's reports, to be exercised far more freely, and indeed in some cases the report reads as though the revision were extended in an undesirable degree.

It must be remembered that the mark originally given has had the concurrence of two examiners with the candidate or his paper before them, and was the expression of their deliberate judgment upon his merits. The committee are of opinion that it is not desirable to have a cast-iron rule that under no circumstances can a mark be increased, which might occasionally press hardly upon a candidate who has almost reached the required limit, but that any extension of the practise of revising marks beyond this point must tend to a lowering of the standard.

Your committee are of opinion that the clinical part of the examination in dental surgery is of great importance and should be extended so far as is practicable. And in this connexion it may be mentioned that the inspector desires to add to his report his opinion that in marking this section of the examination credit should be given to candidates for gentleness and consideration displayed in their bearing towards the patient. Your committee consider that an oral examination in surgery is a very valuable portion of the examination, and they recommend its inclusion by any of the bodies which do not at present hold it.

On the motion of Mr. TOMES, seconded by Mr. HODSDON, the report was approved.

National Insurance Bill Committee.

The PRESIDENT submitted the report of the National Insurance Bill Committee. The report detailed the communications which the committee had had with the Chancellor of the Exchequer. It set out further that at a meeting of the committee held on Nov. 29th, 1911, the Bill as amended in Committee of the House of Commons was considered. After discussion it was unanimously agreed that in pursuance of the Council's resolution of May 29th, 1911, the following representations should be made to the Government with a view of procuring further amendments of the Bill on report:—

I. That, as in the case of the Insurance Commissioners for England, it should be provided by Statute that the Insurance Commissioners for Scotland, Ireland, and Wales shall include duly qualified medical practitioners.

II. That statutory provision should be made for the appointment of Advisory Committees, including therein duly qualified medical practitioners, to assist the Insurance Commissioners in Scotland, Ireland, and Wales respectively.

III. That, in view of the large increase in the number of members who may now be appointed on Local Health Committees, it is urgently necessary that statutory provision should be made for the appointment of a larger number of medical practitioners on each such committee in each division of the Kingdom.

IV. That statutory provision should be made for the appointment of local medical committees in the other divisions of the Kingdom, including Ireland, corresponding to the provision made by Clause 58 for the appointment of such committees in England.

V. That Clause 16 (4), in so far as it entrusts the administration of "medical benefits" to existing organisations rather than to the Local Health Committee, as contemplated by Clause 16 (1), is not conducive to the efficiency of the medical service of insured persons, and should be deleted from the Bill; or at least that its application should be restricted to organisations actually in operation at the date when Clause 16 (4) was introduced into the Bill.

VI. That, notwithstanding the introduction of certain amendments relating to the treatment of insured persons in voluntary hospitals and other charitable institutions, there is ground for apprehension that the national scheme established by the Bill may operate so as seriously to impair the financial stability, and therefore the efficiency, of such hospitals and institutions; and that in view of the danger thus apprehended, steps should forthwith be taken by the Government to institute inquiries on this subject, and, if necessary, to propose legislation for the purpose of safeguarding the important interests, educational, scientific, and philanthropic, that are involved.

By request of the Chancellor, these representations were communicated to him on Nov. 30th, 1911.

The report was received and entered on the minutes.

The PRESIDENT then said: This report has been largely

the narrative of the steps that have been taken and the communications which have passed between us and the Government. Almost every stage of it has been made known to members of the Council by circulating a series of memoranda so that the Council has been able to keep pace with the successive steps in the negotiations which have taken place. The instructions given to the committee by the Council and its recommendations are set out in the report. After these are carefully considered by the Council now, I think it will be conceded that most of them appear to have been accepted. Since the committee was appointed the Bill has been before the Committee of the House of Commons and the process of transformation has not yet come to an end, and it is not quite possible for us to say whether further changes may not develop which would cause us to intervene again. For that reason I think that the committee should continue in being. A great many amendments were made in the House of Commons last night. I have not had an opportunity of seeing these amendments, and I cannot tell whether the suggestions which we made yesterday are now embodied in the Bill. In fact, it would be impossible to know whether they have been or not until we see the Bill printed as it emerges from the report stage. The newspaper reports are inadequate for the purpose of giving us the information. It will, however, be observed that two important points still remain not quite satisfactorily settled to the best of our information. One of these is the clause which continues to existing organisations the right to give medical aid and to have that medical aid recognised and subsidised as if it were medical benefit given to the Local Health Committee. Protest was made as to that, and what we are able to suggest is either that the provision should be deleted, or that if that is not done it should be limited in its scope so as to include only certain limited existing organisations which carry on *bonâ-fide* operations. The ground for introducing it before was that it was thought that certain vested rights ought to be respected. What was most desirable was that no new vested right should be made possible between this time and the passing of the Bill into law. I have reason to believe that the Chancellor fully appreciates that. He himself intends to introduce restrictions to that effect in a new clause. In the Bill as originally framed there was a grave doubt that our suggestions for the hospital treatment of insured persons were most inadequately provided for in the Bill. Practically the only recommendation as to the hospital treatment of insured persons was that the approved societies might give subscriptions or donations if they liked to hospitals. There was no indication that the Local Health Committee might make arrangements for such hospital treatment. Next, however, it was arranged that if an insured person was in hospital and had no dependents the sickness benefit went not to himself but to the Local Health Committee to be merged in the general fund. It was pointed out that the hospital was maintaining him and treating him, and it was not fair that the insurance fund should profit by his being so treated at the expense of a charitable fund. That is now met to some extent by an amendment which allows the Local Health Committee to make an arrangement by which the sickness benefit may be used to provide payment to the hospital in respect to his maintenance. Further, in the Bill as originally drafted sanatorium benefit was confined to sanatorium treatment for tuberculosis. Now it is possible for the Local Health Committee to contribute towards treatment for insured persons suffering from tuberculosis or any other disease in sanatoriums and other institutions. The Bill now makes possible that treatment otherwise than in sanatoriums or other institutions should be substituted by the Local Health Committee in respect of that disease. Notwithstanding that, your committee felt that the position of the voluntary hospitals was still in great danger, because they were still called upon in certain emergencies of acute disease to treat insured persons, without payment, except in the case where these insured persons had no dependents, and where there was a definite provision made that their treatment and maintenance should be paid out of the insurance fund. Of course there is the danger of which we are all aware, the danger of the possible diversion of the contributions of workmen and employers from the hospital to the insurance fund. The best that we could do was to point out that the danger will remain, and to ask the Government to make an inquiry as to the facts of the case and as to how the hospitals are to be affected under the new scheme, and if the inquiry proves these fears well grounded to ask that they should take legislative steps. That is the general result of our discussions yesterday on the National Insurance Bill. Under some pressure of time I had to formulate the matters on which representations had to be made to the Government with a view to procuring further amendments to the Bill on report. In conclusion, I move—

That the action of the committee be approved, and that it be requested to continue its efforts in the way of the improvement of the Bill.

Dr. MACDONALD formally seconded the motion.

The motion was agreed to without further discussion.

Conclusion of Session.

This concluded the business before the Council.

On the motion of Sir H. MORRIS, seconded by Dr. FINLAY, the President was thanked for his services in the chair during the winter sittings.

The Council then rose.

IMPERIAL UNIVERSITY CONGRESS.—Dr. Alexander Hill, formerly Master of Downing College, Cambridge, has been appointed secretary of the Imperial University Congress to be held in London in July, 1912.

HOUSING ACCOMMODATION FOR WORKERS AT THE ROSYTH NAVAL BASE.—Dr. Thomas F. Dewar, medical inspector to the Local Government Board for Scotland, and Mr. John Wilson, architectural inspector to the Local Government Board for Scotland, have jointly issued a report in the form of a Parliamentary white paper upon the house accommodation available for workers employed at Rosyth and upon the provision for sickness and accident. Exclusive of the engineering, clerical, and other members of the contractor's staff (about 100 in all), 1800 men were engaged on the works in May of this year, with a probability of more being employed as the work progressed. 34 per cent. of the workers are married, 57 per cent. single, and 9 per cent. boys. Although, perhaps, the housing accommodation is not all that could be desired, it is pointed out that except in a few cases overcrowding does not exist to an extent which would justify prosecution, though the reporters state that they have ample and abundant evidence of overcrowding in a minor degree. They also state that should an outbreak of smallpox occur there is no reason to anticipate that the measures already taken to provide for such a contingency would be inadequate or unsuccessful in cutting short an outbreak. Provision has also been made for accidents. The cost of medical attendance in cases of sickness among the workmen is met by a levy of 2*d.* a week on all employees. The report is published at His Majesty's Stationery Office at the price of 3*d.*

METROPOLITAN HOSPITAL SUNDAY FUND.—At a meeting of the council of the Metropolitan Hospital Sunday Fund, which was presided over by Archdeacon Sinclair and held in the London Mansion House on Nov. 30th, the secretary announced that Sir Ernest Tritton had been elected chairman of the Finance Committee. On the motion of Sir Ernest Tritton it was again decided to give to Sir Edmund Hay Currie an honorarium of £100 to enable him to take a much-needed holiday in the South of France. Archdeacon Sinclair moved the acceptance of the annual report, which stated that the receipts for the year amounted to £67,015. The church contributions—namely, £37,061—were £3717 less than in 1910. A sum of £8000 had been received from the executors of the late Mr. George Herring. Mr. William Herring had given a donation of £1000. Lord Cheylesmore seconded, and the report, which will be submitted to the annual meeting of the constituents of the Fund on Dec. 21st for adoption, was approved. Mr. Sydney Holland stated that in deference to certain expressed wishes he had decided not to continue the Sunday cinematograph exhibitions, notwithstanding the fact that his hospital would thereby suffer to the extent of £1200 a year. Sir Ernest Tritton called attention to the date of Hospital Sunday. He thought that the collection should be made earlier in the year than June. On the suggestion of Sir Henry Burdett it was decided to refer the matter to the executive committee for report. Hospital Sunday next year will be held on June 9th unless any different date is announced.

THE LANCET.

LONDON: SATURDAY, DECEMBER 9, 1911.

The National Insurance Bill.

DURING the past week the general opposition to the National Insurance Bill has not grown less in the medical profession. Numerous correspondents of our own, as well as published statements elsewhere, show that this hostility, although of the most varied kind, has one common origin—the feeling that the principles rather than the details of medical practice have received no proper respect. It is true that throughout the Committee stage of the Bill many other of the interests affected were found not to have been consulted or considered, and in consequence the Chancellor of the Exchequer showed himself willing to amend clause after clause in various directions. But in dealing with a highly organised profession like that of medicine, where the organisation consists largely in a differentiation of duties among men with common ideals, it must be a highly dangerous proceeding to try to force upon a substantial proportion of them a scheme which may profoundly modify their lives and livelihoods without an anxious and well-informed examination of all the facts drawn from unassailable sources. We have protested against the passage of the Bill, as it stood and as it stands, because it will turn the medical profession upside down without in any way securing a proportionate benefit to medicine or to the public. It is not beyond human ingenuity to devise a scheme to which, while the nation was enjoying the advantages of a National Insurance measure, the medical profession could heartily subscribe. But such a scheme should be inspired in its origin with real knowledge. The multiplicity of amendments in the section of the Bill dealing with medical benefits shows sufficiently that the National Insurance Bill was faulty in its inception, though it also testifies to the willingness of the Chancellor of the Exchequer to meet his critics in amity if not in substance.

The acceptance by Mr. J. SMITH WHITAKER, with the approval of the Council of the British Medical Association, of the post of Deputy Chairman of the Board of Commissioners to be constituted under the Act, must be regarded as a policy of compromise on the part of the Association, whose position will be puzzling to all of its ordinary members, and mortifying in the extreme to some of them. The governing body of the Association has throughout advocated making the best of the Bill, and has resisted the proposal that the medical profession, finding the scheme unworkable, should have nothing further to do with it. The line of compromise taken has not been in response to any general mandate of the members, but rather to the feeling of the Council that a policy of making good terms under the Bill was supported by a majority, either in number or weight, among the constituencies. Throughout the summer, therefore, negotiations have been taking place between the Association and the Chancellor of the Exchequer, the field of debate being presumably the six cardinal points on the granting of which depended the adherence of the Association to the Bill. At the meeting of the Representative Body of the Association held on Nov. 23rd and 24th in London, not without many dissentients however, the Representatives decided to take the advice of a report to them from the Council, and to continue through the Association a conditional support of the Bill, although the six cardinal points had not been granted. At the same time the determination to insist upon these points was re-affirmed by what was termed a "Declaration with regard to Future Action as to the Cardinal Principles," the resolution in question being to the effect that the British Medical Association would use every possible means to ensure that no medical practitioner should undertake the attendance and treatment of persons insured under the Bill save in accordance with the six cardinal principles. The situation, therefore, does not differ now much from what it was six months ago, save in the important fact that the medical secretary of the Association, with the approval of the Council, has been placed in a high position on the small and supreme body of Commissioners to whom will fall the administration of the Bill.

Mr. SMITH WHITAKER has proved himself to be an indefatigable worker and an accomplished advocate of the policy of the Association, and his knowledge of the medical side of the Insurance Bill in all its permutations and combinations is probably unrivalled. To a large extent he has been the mouthpiece of the Association during the past six or seven eventful months. His transference, therefore, from the position of chief advocate of a policy of resistance to the Bill until certain concessions are made, to the position of Deputy Chairman of the Commissioners is startling. In his new position his freedom of speech and of action are necessarily curtailed. Hitherto he has spoken for the large section of the Association whose opinions have coincided with those of their leaders; henceforward he will be one of a small group of judicial officers whose business it will be to secure the smooth working of the Act and to dispense even justice between the most conflicting interests. That he will do his utmost to uphold the policy which he has already expounded with such zeal and ability may be taken for granted. He knows the arguments for that particular course and the general justice of the medical protests; but will he have power to enforce his views? The motives of the Council in approving his appointment have been excellent; but while reflections upon the integrity of the Council are ridiculous those upon their judgment have force. They have endorsed, by sanctioning Mr. SMITH WHITAKER'S new position, the working, not the principles, of a measure dangerous to the medical profession, one whose influence has not been gauged and whose promise is full of ill omen.

The General Medical Council and the Sandow Curative Institute.

THE proceedings taken by the British Medical Association before the General Medical Council with regard to the conduct of three medical practitioners in associating themselves in their professional capacity with the "Sandow Curative Institute" have reached a further, but not a final, stage at the recent session of the Council. The name of one of the three gentlemen referred to, Mr. M. E. A. WALLIS, was at the session of last May removed from the Medical Register. Another, Mr. C. E. TRIMBLE, in whose case judgment was postponed in May to allow him to reconsider his position, has now produced evidence to show that he is practising his profession in Wales, having entirely severed his connexion with the Sandow Institute, and with regard to him all proceedings are consequently at an end. The third practitioner affected, Mr. J. R. WALLACE, had the same opportunity afforded to him as Mr. TRIMBLE, but took a different course. He remained associated with the Sandow Institute, and before the Council at its recent session this was frankly admitted on his behalf by Lord ROBERT CECIL, K.C., who stated that the institute had discontinued advertising for the purpose of procuring patients or with the promise to cure disease, that Mr. WALLACE had now absolute control and direction of the institute, and that he accepted full responsibility for everything done in it. This was borne out by the personal evidence of Mr. WALLACE, who stated that he saw all patients and prescribed the treatment to be pursued, being entirely responsible for that treatment. He also said that Mr. SANDOW still saw cases occasionally but undertook no responsibility with regard to their treatment, and that the new arrangement thus described constituted a complete change from that which had prevailed before. This being clearly an effort made by Mr. WALLACE and the Sandow Institute to bring the practice of the former within lines consistent with the well-known principles of medical ethics the Council accepted it as such, so far as the information made that possible. That is to say, the Council again adjourned the case of Mr. WALLACE until the next session in order that he might then produce more satisfactory evidence regarding his professional conduct, such evidence, as was suggested, to be that of medical practitioners. This we interpret to mean that in the opinion of the Council the association of Mr. WALLACE with the Sandow Institute might in the working prove blameless, but that only from observation of the actual practice that might follow professions of amendment could it be ascertained whether the features which rendered the Sandow Curative Institute objectionable had finally disappeared.

At this stage the matter might have rested for another six months, and, strictly speaking, it does so rest, so far as the consideration to be afforded to it by the General Medical Council is concerned. From announcements made through the medium of the daily press by Mr. EUGEN SANDOW, however, and from a letter addressed by Mr. WALLACE to the Registrar of the General Medical Council, we gather that the more recent conditions described by Mr. WALLACE in his evidence—upon which Lord ROBERT CECIL relied in addressing the Council as constituting, according to his case, a course of conduct beyond reproach—are not to be maintained. The statement referred to as made by Mr. SANDOW was published in the newspapers of Dec. 1st, where it may be read. It describes the decision of the Council as a refusal of "plain justice," and as suspending the sword of the Council's displeasure above Mr. WALLACE'S head for a further period of six months, and it concludes as follows: "As apparently there is no means of satisfying that autocratic body, the General Medical Council, and I fail to see any reason whatsoever why the British public should be deprived of the benefit of my medicineless treatment, to which so many thousands have testified, I intend to leave the final judgment of the rights and wrongs of this mysterious offence against an obscure and unreasonable tradition to be decided by the British sense of justice and fair-play, and from now onwards shall place my Curative Institute at St. James's-street at the disposal of every sufferer by making known, through the medium of the Press, that such an institute exists." Mr. WALLACE, in his letter to the General Medical Council, protests generally against the course adopted by the authoritative body of the profession, and in particular against what he alleges to be an ignoring of evidence of similar practices in connexion with other institutions employing medical men. He writes: "I desire to state now, rather than wait until the expiration of six months hence, that I intend to continue my work. If the General Medical Council consider that they are entitled to resolve that this constitutes 'infamous conduct in a professional respect' on my part, then I leave them to direct the removal of my name from the Medical Register; but I reserve my right to question their decision, and I trust they will take an early opportunity of passing some resolution, so as to enable me to do this without unnecessary delay." We gather from this that when the case of Mr. WALLACE comes again before the General Medical Council there will necessarily be evidence of a fresh course of conduct differing from that described at the session recently concluded, and again from that which prevailed before last May, and that any decision come to which is adverse to Mr. WALLACE will be called in question, so far as this may be possible, in the High Court of Justice. In these circumstances we have referred above to the present stage of the proceedings as not being final, and we almost necessarily refrain from commenting upon the position taken up by Mr. WALLACE and Mr. SANDOW.

We may, however, remind our readers of a few of the facts not in dispute which were before the General Medical Council last May, and upon which its decisions were then passed with regard equally to all the three medical men implicated. With the side of the business of Sandow, Limited, which is connected with the promotion of muscular development and the increase of physical efficiency in those who present themselves as clients of a noted "strong man," the medical profession is not immediately concerned. Mr. SANDOW has cultivated an extraordinary muscular development in himself, and if others try to emulate him by seeking instruction from him, his position with regard to

his clients and pupils is not greatly different from that of the professional athlete who trains amateurs for rowing, boxing, running, or other branches of athletics. The case which was brought before the General Medical Council as to the connexion with the institute of three registered medical men had nothing to do with such an aspect of Mr. SANDOW'S business. In addition to giving instruction in dumb-bell exercises and other methods of increasing muscular power, and as a later development, Sandow, Limited, has sought to derive profits from a branch of its business described as the "Sandow Curative Institute," and from what it has described in advertisements as "curative physical culture." As evidence of this claim to be curative—that is to say, to treat and to heal disease—one of the pamphlets or advertising leaflets issued by the institute and laid before the General Medical Council recommended all sufferers from the complaints mentioned in it to place themselves unreservedly in the advertisers' hands, the complaints mentioned including "acute bronchitis." It was stated as a matter of history, and was not disputed, that the practice of the institute had been at one time to send prospective subjects to private medical practitioners for examination in order to ascertain whether any physical weakness rendered the treatment proposed for them inadvisable, but that as a matter of greater convenience the medical men before the Council had been engaged as officers of the institute to make such examinations as indicated above upon its premises, but that their employment was not for the purpose of prescribing physical exercises or any other form of treatment for those consulting them. It was not disputed by the three gentlemen whose conduct was under review that sundry advertisements issued by the institute had appeared to them to be objectionable. On the other hand, it was not suggested by those who laid the facts before the General Medical Council that the position and conduct of the three medical men complained of had not been frankly and accurately described by them at the inquiry and before it, or that they had originally intended to transgress the rules of conduct which should be observed by members of their profession, or that the statement made by Mr. WALLIS was untrue when he said that during his service as medical officer of the institute a great many medical practitioners had visited it and had brought their patients there to undergo treatment. Upon the facts which we have briefly summarised above were based the propositions advanced before the Council by Mr. SMITH WHITAKER on behalf of the British Medical Association that (1) the Sandow Institute undertook the treatment of disease; (2) that the gentlemen proceeded against were employed by the institute in their professional capacity and were aiding and abetting in the carrying out of the treatment of disease by the institute; (3) that the institute had recourse to an extensive system of advertising for the purpose of attracting patients; and (4) that the treatment of those patients at the institute was entirely prescribed by Mr. SANDOW, an unqualified person.

We believe that we have correctly stated above enough to show exactly what the issues have been which the General Medical Council up to now has had to consider and decide, and as to which members of the medical profession will form their own opinions. Mr. SANDOW and Mr. WALLACE have submitted them to the public, a tribunal not always unprejudiced and not entirely competent to appreciate the principles upon which decisions of the General Medical Council upon matters of professional conduct are based. Both have also intimated that before the case of Mr. WALLACE comes again before the General Medical Council a different practice will have been in use, as to which, presumably, there will be no secret, and as to which evidence will, if desired, be forthcoming. Mr. WALLACE has added to this the information that he desires without delay to test the legality of the Council's attitude towards the Sandow Curative Institute and himself. If by an appeal to judicial authority upon a point or points of law a question directly affecting the ethical standards of the medical profession, and of no small importance to the public, can be finally determined, we feel sure that none will welcome the occasion more than the profession at large or the Council, which Mr. SANDOW denounces as autocratic, and which Mr. WALLACE accuses of ignoring evidence tendered on his behalf.

Annotations.

"Ne quid nimis."

DREAMS.[1]

SOMEONE has said that a Philistine family can be defined as one of which all the members tell each other their dreams when they meet at the breakfast table. Yet the subject of dreams has from time immemorial exercised a fascination over the intellectual and the illiterate alike, although the attitude of mind in which it is approached may vary enormously. Some will see in the tragic poignancy of a dream a revelation, from an ultra-mundane source, of things to come, while others will attribute similar phenomena to unusual visceral activity consequent on an injudicious meal. The late Sir Samuel Wilks, Mr. Ellis reminds us, once made the acute remark that "the dreamer merely forms a mental picture, and the description of it he calls his dream." It is in the process of describing dreams that expansions are liable to occur, that dream incidents are prone to be altered in accordance with conscious memories, that coloured interpretations of the dream reality are apt to vitiate its simplicity. For years Mr. Ellis has made it a practice to write down in the morning the plain unvarnished data of his dreams and to adopt the introspective method of dealing with these data. He has therefore been able to satisfy himself that the facts as given in the volume before us are reasonably accurate, and has confined his discussion to what may be called the problems of normal dreaming. The reader will find that Mr. Ellis's dream experiences are very like his own, though curiously enough there appears to be no reference to the "inadequately clothed" dream with which most are familiar. Many of the phenomena receive at Mr. Ellis's hands ample explanation on perfectly simple grounds, to the achievement of which his psychological knowledge and scientific spirit alike contribute. The symbolism of dreams is duly exemplified, and although the author is ready to admire the profound and daring interpretations of dream symbolism furnished by Professor Freud, he is unable to follow him into the devious and puzzling maze of wish-fulfilment.

[1] The World of Dreams. By H. Havelock Ellis. London: Constable and Co. 1911. Pp. 238. Price 7s. 6d. net.

It seems clear that the phenomena of dreams are well worth studying for the light they cast on certain pathological processes of a non-organic sort. In dreams the illusion of false recollection, the sensation of "déjà vu," is fairly common, especially in the hypnagogic state, as it is in waking life. Mr. Ellis offers a theory to account for it which is deserving of serious consideration, but perhaps he does not fully appreciate the extent to which the phenomenon occurs in association with certain idiopathic epilepsies, organic lesions of the uncinate gyrus, and other diseases of "functional" type. In the aura of certain epileptiform seizures it not infrequently happens that surrounding objects lose their "familiarity" or "reality," and that this familiarity or reality is transferred, as it were, to the place and circumstances in which the patient, not yet fully unconscious, imagines himself to be. Hence these seem so familiar that he experiences a keen sensation of "having been there before"—in other words, he has an illusion of "fausse reconnaissance." Many neurasthenic patients complain of the "unreality" of their surroundings, as hysterical patients do of parts of their own body, and it may be that "reality" is an attribute that is detachable. The sense of impending trouble, the fear of impending death, of which Mr. Ellis supplies illustrations from the dream world, is a common accompaniment of vaso-vagal attacks—the "affolement bulbaire" of French writers; and it may be questioned whether one of his examples is not drawn from an ordinary case of so-called cardiac neurasthenia. The tendency to magnification that is often well marked in dreams is paralleled by the disturbances of cœnæsthesia, of which many instances have been recorded. A patient in the throes of a vaso-vagal attack imagined that her head had shrunk to a minute size, while her limbs were giant limbs moving through an enormous range. If such phenomena occur in association with definite functional disturbance of medullary centres, there is no obvious reason why some such explanation should not hold good for analogous experiences when the cortex is asleep. One or two of Mr. Ellis's statements are open to some minor criticism. The sensory aphasic does not always think his nonsense is quite clear and reasonable. On the contrary, his distress at being unable to express himself clearly is sometimes striking. Liepmann was the originator of the modern conception of motor apraxia, not Pick; in Liepmann's ideational apraxia (identical with Pick's ideomotor apraxia) plans are defective, not because they are "not supervised by the higher centres," but because these higher centres themselves are not functioning normally. This book is a charming contribution to the literature of dreams. All who are interested in "the stuff that dreams are made of" will ead it with relish and profit.

THE RELATION OF EPILEPSY TO LEFT-HANDEDNESS.

IN the August number of the *Monatsschrift für Psychiatrie und Neurologie* is a communication from Dr. G. Steiner, based on material obtained in the Psychiatric and Nerve Clinic in Strasburg, relating to certain associations between idiopathic epilepsy and left-handedness. The article contains statements which, if corroborated by subsequent investigation, may turn out to be somewhat far-reaching in their effect. The student of epilepsy is aware of two definite tendencies in the prosecution of the subject under modern conditions of knowledge: there is first the tendency to widen the borders of the disease, and to include therein such phenomena as faints, vagal attacks, migraine, vertigo, narcolepsy, night terrors, &c., and, on the other hand, there is the tendency rigorously to exclude certain morbid conditions which occasionally reveal themselves by episodic phenomena in the form of epileptiform convulsions. Unverricht's myoclonus-epilepsy, psychasthenic convulsive attacks, the epilepsy of infantile cerebral lesions, ought to be considered as distinct from true epilepsy. In this connexion it is desirable to abandon such terms as arterio-sclerotic or alcoholic epilepsy, and to employ the more correct expressions epileptiform arterio-sclerosis and epileptiform alcoholism. Desirous of studying more closely the distinguishing feature of genuine cases of idiopathic epilepsy Dr. Steiner, whose work is based on some little-known investigations of Lombroso, Tonini, and Redlich, has been led to the conclusion that left-handedness occurs with great frequency in the families of such cases. Lombroso was the first to note this apparent frequency in epileptics themselves: of 176 cases 10 per cent. were left-handed. Tonini found the phenomenon in no less than 40 per cent. of his cases. Redlich noted 22 left-handed patients out of 125 epileptics—that is to say, 17·2 per cent. Dr. Steiner, however, seems to be the first to point out that in the families of right-handed epileptic patients left-handedness often occurs in normal individuals. His figures are based on 57 cases of pure idiopathic epilepsy in which the patients themselves and their families were subjected to careful examination from this special point of view. In 40 cases left-handedness was noted in the family; 11 cases were themselves left-handed. Left-handedness in the family with right-handedness of the patients was noted in 70 per cent. of cases; left-handedness of the patients with right-handedness only in the families, in 15½ per cent.; left-handedness in the patients and also in the families in 3½ per cent.—a total of no less than 89·5 per cent. of cases in which left-handedness occurred in the patient or his family. Such figures are sufficiently striking. When it is remembered that the average percentage of left-handed individuals in the community at large is only about from 2 to 5, the data furnished by Dr. Steiner are indeed remarkable. The interpretation of their import is not easy. It is, of course, too large a percentage to be regarded merely as an accident. On the other hand, complacently to characterise this left-handedness as one more of the stigmata of degeneration so common among epileptics is scarcely justifiable. Notwithstanding the contention of some that stammering is more frequent among left-handed people, and the opinion of Havelock Ellis and others that left-handedness is commoner in degenerates than in normal individuals, it cannot seriously be held that left-handedness is of itself a sign of degeneracy. A consideration of the degrees of left-handedness, and of the place it takes in the history of the race and the child, precludes such a view. Dr. Steiner has a hypothesis to account for the apparent predominance of the condition in his epileptics, and more particularly their families—viz., the existence of an inherited tendency to a pathological disturbance of the normal cerebral mechanism, whereby for all practical purposes the left hemisphere leads the right. In normal left-handed individuals certain parts of the right hemisphere lead the left. In epilepsy there is a conflict between this inherited tendency to left-handedness and a congenital disposition to right-handedness.

LOCALISED CONFLUENT VARICELLA.

THE eruption of varicella is usually generalised and non-confluent. In the *Gazette Médicale de Paris* of August 2nd M. Chatin and M. R. Rendu have reported a rare case in which a localised confluent eruption occurred. A child was taken to hospital with an eruption dating from the previous evening. On first sight it seemed to be a patch of eczema covering the whole of the front of the chest and showing a well-marked border. On the back was a similar patch but with the eruptive elements less close together. This localisation suggested the application of some irritant. Indeed, the

patch on the chest recalled the confluent miliary eruption produced by the application of croton oil. But the mother denied that any application had been made. On further examination the typical disseminated vesicles and pustules of varicella were found between the two patches. Similar but less typical lesions, with their characters altered by confluence, could be observed in the patches mentioned. There were also some well-marked discrete lesions of varicella on the face and limbs. What was the cause of confluence of the lesions on the chest and back? It was noticed that in the position of the patches the skin had a slightly yellowish tint. On pressing the mother she admitted that she had applied tincture of iodine there three weeks previously. Evidently this was the cause of the localisation and confluence of the eruption. Analogous facts have been recorded, not only in the case of varicella, but also in variola and generalised vaccinia. In a work on variola, published in 1870, J. Rendu described greater confluence of the eruption on irritated surfaces, particularly on those produced by blistering. Curschmann attempted to localise the eruption of varicella on the limbs by the application of tincture of iodine in the hope of diminishing its intensity on the face, but without success. M. Chatin and M. Rendu refer to the case of an infant who had chronic eczema localised on the chest, back, and upper limbs. The eruption of generalised vaccinia appeared only on the eczematous surface and was so aggregated that it resembled confluent variola. With regard to varicella, Henoch has reported a case in which the eruption was more profuse on the side on which a child always lay. The eruption of varicella has been observed to be more abundant on the surface of an abscess. Galliard has reported a case very similar to that narrated above. A little boy's back was painted with tincture of iodine at the time when the eruption of varicella appeared. The region painted was the seat of multiple miliary vesicles and of numerous vesicles remarkable for their large size, while on other parts the eruption was discrete.

POLIOMYELITIS AND PUBLIC BATHING.

Dr. F. W. Alexander, medical officer of health of Poplar, has sent in an interesting communication arising out of a paper recently read by Dr. F. E. Batten before the Metropolitan Branch of the Society of Medical Officers of Health on Oct. 27th upon "Acute Epidemic Poliomyelitis."[1] Dr. Batten said that "in the Massachusetts epidemic careful inquiry was made into 150 of the 923 cases which occurred in the year 1909," and that "the result of these investigations do not bring into prominence any common factor. It is, however, noteworthy that of the 150 cases 62 were swimming or wading in water more or less contaminated by sewage before the attack." These remarks particularly appeal to Dr. Alexander in view of the remedial methods of bathing water purification in which for some considerable time he has interested himself at Poplar. "In September, 1909," says Dr. Alexander, "in two somewhat lengthy reports, and in my annual report for the year 1909, I pointed out to the baths and washhouses committee of the Poplar Borough Council the horrible dangers of public swimming baths, *inter alia* mentioning how quickly swimming-bath water changes its pristine sweetness even after being used only by a few bathers, particularly so in warm weather, and becomes after use by a number of bathers nothing more or less than diluted sewage, and this condition exists often before the first day's use is finished. The formation of slime in the bath water was also mentioned and commented upon at length. Mr. Pearce, medical officer of health of Batley, in an article contributed to THE LANCET showed that there is manifest danger of infection through the use of polluted bath water." Dr. Batten in his paper stated "that during the last decade acute epidemic poliomyelitis has become widespread in acute epidemic form throughout Northern Europe and America." He also states: "In the Northern Hemisphere the disease always has the greatest prevalence during the months of July, August, and September ..... poliomyelitis is prevalent during the summer months in London, and especially during August and September ..... that poliomyelitis is communicated from person to person probably by means of secretion from the nose and mouth," and that "it may be said that the virus of poliomyelitis has not yet been seen under the microscope and has not yet been cultivated." He also states that the disease has an incubation period of probably less than six days in man, although experimentally the incubation is between 8–12 days, and that there are striking instances where a school has been shown to be the centre for the spread of infection. Dr. Alexander accordingly contends as follows: "As it is during the months of July, August, and September that swimming-baths are mostly used, it has occurred to me that it would be of considerable interest to bacteriologists to take into consideration the possible connexion of polluted swimming-bath water, more especially the slime which forms at the bottoms of the baths, and the disease and possible determination of one of the causes of poliomyelitis, and to find out if such slime plays any part in the cause of poliomyelitis, and at the risk of telling plain truths to see also if lice (which have been found in the towels after use and in the dressing-boxes) take any part." He explains that he cannot produce a specimen of the slime from the Poplar swimming-baths, as those baths are kept free of it by the addition of electrolytic fluid manufactured by the borough council and added in the proportion of 1 part of chlorine to 2,000,000 parts of the bath water. But commenting on Dr. Batten's statement that the virus of poliomyelitis is a living organism which would pass the finest porcelain filter, he adds, quoting from his annual report for the year 1909: "Where filtration and aeration are carried out in public baths it is noticed the filters become covered with distinctly offensive slime occasioning much and continued cleansing of the filters; and then, again, unless the bath is entirely emptied and cleansed slime still remains at the bottom. In any inquiry into the possible cause of an outbreak of poliomyelitis or polioencephalitis it would be of public interest to find out if patients had frequented a swimming bath within a specified period of the first appearance of the disease, as there must be many swimming baths and outdoor public bathing lakes and ponds, &c., where no precautions for keeping the water pure are adopted." Dr. Alexander certainly brings an interesting point to the attention of sanitarians.

[1] The paper read by Dr. F. E. Batten is published in "Public Health" for November, 1911.

THE USE OF SALVARSAN IN MENTAL DISEASES.

Dr. R. Dods Brown, senior assistant physician to the Royal Edinburgh Asylum, describes, in the *Review of Neurology and Psychiatry* for November, his experiences with salvarsan in 17 cases of mental disease of a syphilitic, parasyphilitic, and non-syphilitic nature. The exact record is as follows: one case of insanity from cerebral syphilis, five cases of general paralysis, five of dementia præcox, two of delirious insanity, two of chronic delusional insanity, and one each of acute melancholia and acute mania. Remarkable improvement took place in the first of this series, a man aged 41 who had contracted syphilis 11 years previously, and presented when under observation

definite nervous and mental symptoms of intracranial syphilitic disease. Intravenous injection of 0·2 gramme was followed in 17 days by a further dose of 0·1 gramme. After the first injection the lymphocytic content of the cerebro-spinal fluid fell from 30 to 7·6 per cubic millimetre. Three of the cases of general paralysis were treated intravenously, and two intramuscularly. In all five cases the blood pressure rose after the injection, and there was in addition a relative leucocytosis in the blood. Clinically, no definitely favourable results were obtained in these cases, although in three some improvement was noted, but whether this is to be attributed to the special treatment is doubtful. It is noteworthy that the use of salvarsan in these general paralytic cases made no difference to the Wassermann reaction, which remained positive in the blood and cerebro-spinal fluid, yet a great reduction in the lymphocytic content of the latter took place in several of the cases, in one instance falling from 40 to 7·6 per cubic millimetre. The proteids remained unchanged. The results in the dementia præcox cases were practically negative, except that "in two cases the patients have become more accessible and responsive than they were before." In the other six cases where salvarsan was administered empirically no unequivocal results followed; it is true the two cases of delirious insanity apparently improved. One of the patients suffered from acute recurrent mania, and after receiving the injection she passed through two attacks, both of which were shorter and less severe than any during the previous two years. There was a very marked decrease in the amount of urine excreted in two cases. In one of these it fell from an average of 44 ounces to 16 ounces for four days. Speaking generally, the syphilitic cases gave a more pronounced temperature reaction and a more definite increase in leucocytes after the injection than the others, but the cases which reacted most did not show the best results. The value of the drug in mental disease is still problematical. Recoveries such as can be obtained in syphilis cannot be recorded; Dr. Dods Brown, however, considers that in the majority of his cases the physical health benefited materially.

BILIARY COLIC AND CARDIAC MURMURS.

VARIOUS physicians have drawn attention to the fact that cardiac disease and cholelithiasis are prone to coincide in the same patient, but it has not been possible to prove anything beyond a coincidence or to define an etiological relationship between the two lesions. Various theoretical suggestions have been advanced; some have considered that the cardiac lesions are endocardial and depend upon infective agents introduced to the circulation through the biliary tract, while others have regarded the condition as a myocardial one caused by infection or intoxication from the gall-bladder. Among the latter group of observers is Dr. David Riesman, of Philadelphia, who has written a short note to the *American Journal of the Medical Sciences* for November, 1911, stating that in 56 cases of gall-stone disease seen in his private practice 6, or 10·7 per cent., showed cardiac murmurs. In five of these the diagnosis of cholelithiasis was completely established by operation or otherwise. He thinks that if all patients with biliary colic were examined during or soon after the attack a higher percentage of murmurs would be registered. The murmur heard is that of mitral regurgitation; it is usually associated with some cardiac dilatation and disappears when the attack is over or after an operation if one is undertaken. He describes the case of a woman whose paroxysms of colic left her not merely with a bruit but with a liability to attacks of cardiac dilatation with dyspnœa and cyanosis; these symptoms and signs disappeared after an operation in which a stone was removed from the common bile-duct. Riesman suggests that the relationship is a direct one; the gall-bladder is the seat of an infection whose toxins injure the myocardium, while the rise of blood pressure which occurs during attacks of biliary colic dilates the left ventricle and induces a temporary insufficiency of the mitral valve. The moral is that the presence of a cardiac murmur furnishes no contra-indication to operation for the cure of cholelithiasis, but rather the reverse.

NOVEMBER AT HOME AND ABROAD.

NOT the least of the items that can be placed to the credit of November of this year is its freedom from fogs. Not once did London experience serious inconvenience, and rarely was the atmosphere so thick as to justify the term moderate or light fog. Another good point was its rainfall. Much rain was needed in these islands to compensate for the enormous shortage left by the droughty summer, and the heavy and frequent rains of November have done much to make up the deficiency. In the metropolitan district the amount of rain was about three-quarters of an inch in excess of the average for November, and varied little in the different localities. At Kew, and also at Hampstead and Greenwich, the total was 3·4 in., and at Westminster 3·1 in. Over a very large portion of the kingdom the excess on the average was much more pronounced, especially in the county of Kent. But although the weather was decidedly wet and unsettled it was also sunny for the time of year. Very little is expected in the matter of sunshine in November even on the south coast, and still less in London. The total number of hours over the country generally was, however, above the normal. In the suburbs of London the sun shone brightly for an aggregate of about 55 hours. Nearer the centre the figure decreased to 39 hours at Westminster, while in the City it only amounted to 28 hours. The figure at Westminster exceeded the average by 44 per cent. and that in the City by 27 per cent. The temperature of the month differed little from that of the average November in the British Isles, sometimes being some way above it and at other times below it. In the metropolis the warmest afternoons were at Westminster and the more central districts, where the shaded thermometer rose to 50° or above on 18 days, and the mean of the maximum readings was 51°. At both Kew and Greenwich the corresponding mean was 49° and at Hampstead not higher than 47°. The mean daily range of temperature was less at Hampstead than elsewhere, the figure being 8° at the northern suburb, 9° at Westminster, and 10° at Kew and Greenwich. Not one severe frost occurred in any part of the metropolitan area. At Hampstead the sheltered thermometer descended to 32° or below on no more than four nights, and the same figure was recorded at Greenwich, while at Kew and Westminster the respective figures were 3 and 2. The general wind current was from between south and west and its average strength rather high. Only one spell of wind between east and north occurred, the period being from the 20th to 26th. The weather on the continent underwent considerable fluctuations, but the southern regions were generally much warmer and finer than the most southern parts of these islands. At Paris, however, the climate was very little superior to that in London. Rain fell on 14 days and yielded a total of 2·07 in., and as many as 13 days were sunless. Altogether the sun shone brightly for 59½ hours, a figure very little higher than that in the suburbs of London. Its temperature considered as a whole was slightly colder than London, although on a few days it was warmer. On only 15 afternoons did the shaded thermometer ascend to 50° or above. On the Riviera the temperature was about 10° higher than at Paris and in London, the sheltered thermometer recording 60° or above on 15 days, and the average night being warmer. There

were several spells of cloudy skies, but rain was not so frequent as it often is during November, and rarely very prolonged or heavy. The most rainy periods were on the 8th and 9th, and towards the end of the month. The wind was strong occasionally in exposed situations, but as a rule there was nothing stronger than a gentle breeze. At Biarritz the weather was somewhat more variable and also a little cooler. The thermometer rose to 60° or above on only 12 afternoons, while on several occasions it failed to rise much beyond 50°. Except when rainy, however, the sky was very rarely overcast. As is usually the case at Biarritz when the weather is stormy on the Atlantic and in this country, the wind was frequently very strong from the westward and the sea high. Italy differed little from the Riviera, except that its temperature in the inland districts of the north was much lower and that of the more southern regions higher. The Mediterranean islands and the coast of Algeria experienced a temperature about equal to that of early June in the south of England. The sheltered thermometer rose to 70° or above on several afternoons, and generally to above 65°, while under the influence of the sirocco about the middle of the month it went to 80°. Rain was not frequent for November, but strong winds from various quarters were often experienced, sometimes locally, and sometimes over a very wide area.

TUBERCULIN IN PULMONARY TUBERCULOSIS.

THE recent puffing of tuberculin as an infallible remedy for practically every form of pulmonary tuberculosis is as great a danger to the good name of this valuable remedy as was its reckless dosage in the early days of its existence. A sober analysis of the results obtained by this treatment is therefore most welcome at this stage, and Dr. O. Helm's report in a Danish medical journal, *Hospitalstidende*, on his experience of about 300 phthisical patients treated over a period of five years, is a valuable contribution to the subject. In the period 1906–07, 63 patients were treated with old tuberculin in addition to sanatorium treatment. Very early cases, in which the diagnosis of phthisis might be challenged, as well as very advanced cases were excluded. Götsch's method of administration was adopted, the initial dosage being 1/10 mgr. The treatment was soon given up in 18 patients who reacted unsatisfactorily with increased dosage of tuberculin. As a matter of fact, it is hardly fair to exclude these 18 from the analysis of the results three years later. But with this exception the writer seems to have put the case for and against tuberculin very fairly. Most of the patients exhibited reactions which were, however, seldom excessive. After a lapse of three years the result of the treatment on the remaining 45 was as follows: 84·4 per cent. were "cured," the disease was active in 6·6 per cent., and 9 per cent. were dead. This satisfactory result was, however, partly due to sanatorium treatment, and for this reason, as well as on account of the small number of patients treated, no definite conclusion can be drawn, though in certain individual cases the writer was impressed with the efficiency of the treatment. Encouraged by the favourable reports of new tuberculin (bacillary emulsion) as compared with old tuberculin, the writer gave it subcutaneously to 53 patients, in all of whom the diagnosis of phthisis was certain. Nine patients discontinued the treatment for various reasons. Of the remaining 44, 16 were in Stage I., 20 in Stage II., and 8 in Stage III. of the disease. No very severe or apparently hopeless case was included. None of the patients were febrile, the general condition was invariably good, and there was no case complicated by cardiac or renal disease. In fact, the type of patient was one that usually improves under sanatorium treatment, but without complete arrest of the disease. All but three had tubercle bacilli in the sputum. Twenty-four patients presented no febrile reaction at all, and a violent febrile reaction necessitating the abandonment of the treatment occurred only once. The disease was "cured" in 4, 19 were improved, 12 were stationary, and 9 became worse. More than a year later 7 patients were dead, 15 were unfit for work, 4 were fit for light work only, and 18 were "cured." This result compares unfavourably with the results in the same class of patient treated by sanatorium methods only. It would appear that substantial advantages from this form of tuberculin treatment in phthisis are absent. Bacillary emulsion has been extolled as an antipyretic, and Dr. Helm therefore administered it to 10 patients who, in spite of sanatorium treatment, remained febrile. Anatomically the disease was not very extensive, but in all profuse expectoration and numerous tubercle bacilli were present. Very small doses were given at first, and the largest final dose did not exceed 2·5 mgr. The treatment lasted on an average 55 days, the injections being given at intervals of from three to four days. In no case was the fever diminished by the treatment, and a year later 5 patients were dead and 5 were still unfit for work. The Russian tuberculin "endotin" was given to 10 sanatorium patients, 4 of whom were in Stage I., 4 in Stage II., and 2 in Stage III. of the disease. Gabrilowitsch's method of administration was adopted. Nine of the patients exhibited a reaction when the larger doses were reached. The average increase of weight was 10 lb. Tubercle bacilli were found in as many patients at the end as at the beginning of the treatment, which lasted on an average 93 days. The immediate results in 9 reported cases were: improvement in 4, no change in 2, and progress of the disease in 3. But a year later 6 were "cured," 2 were fit for light work, 1 was unfit for work, and 1 was dead. These results are interesting, although the material is too scanty for any conclusive inferences to be drawn. It must be pointed out that those results obtained with new tuberculin differ considerably from those reported by other observers, especially in certain German sanatoriums.

ŒDEMA INDUCED BY COMMON SALT IN CHILDREN.

IT is now well known that in patients suffering from nephritis or from failing compensation in heart lesions the presence of common salt in the diet exercises an important influence upon the occurrence of œdema, and a "salt-free" diet is recommended, more especially by French physicians, in the treatment of œdema resulting from these conditions. That the same phenomena may be observed in infants and children who are not the subject of renal or cardiac disease is less generally known. The matter is discussed in an interesting paper published in the *Münchener Medizinische Wochenschrift* of Nov. 21st by Dr. Franz Hamburger of Vienna. He states that in infants who are the subjects of acute or chronic disturbances of nutrition excess of salt may cause œdema, even when there is no evidence of disease of the kidneys or heart, and he records a case of similar nature in a boy 5 years of age. The child suffered from chronic digestive disturbance and neurasthenia. He was of emaciated and miserable appearance and was sent for a "cure" to Carlsbad, where he improved considerably. Shortly after his return he was brought to Dr. Hamburger, who found general œdema and marked swelling of the prepuce. The urine was free from albumin, and on examination a faint and variable systolic murmur was heard, which had often been observed before and was not regarded as indicative of any cardiac lesion. On inquiring into the diet taken by the child Dr. Hamburger found that the broth which the child had been given was

very salt, and that it had caused considerable thirst. He ordered a diet poor in salt, and in three days the œdema had lessened considerably, the child having lost 2¼ kilogrammes in weight during that time. The child is now completely sound and in good health. Dr. Hamburger has since found that in many children who are emaciated or cachectic or otherwise damaged by some illness the administration of common salt will lead to œdema, although the heart and kidneys may be healthy. Some cachectic children develop diarrhœa after the administration of salt, in which case œdema does not occur. These observations are of considerable interest and merit careful notice. As Dr. Hamburger points out, they suggest that in cachectic œdema the causal factor may be some agency which disturbs the normal metabolism of salts. They also indicate a definite line of treatment in some cases of obscure œdema in children, particularly those of supposed nephritis without albuminuria.

SOME SOCIAL AND INDUSTRIAL ASPECTS OF THE TUBERCULOSIS PROBLEM.

IN an interesting and instructive popular address entitled "The White Plague in its Social and Industrial Aspects," delivered by Sir Thomas Oliver at the opening of the Tuberculosis Exhibition at Middlesbrough on Dec. 1st, some useful information was collected and expressed in simple yet arresting language, together with thoughtful comments and suggestions. We have only space to refer briefly to some of the points discussed, but the whole address constituted an eloquent appeal to the public to assist in the campaign against tuberculous disease. It is first pointed out that the discovery of the tubercle bacillus has shown that, while the influence of heredity is not altogether to be ignored, at worst it only creates a predisposition, he claimed that this discovery has given hope, because it has opened the way to the study of the prophylaxis of infection by the two methods of preventing the bacillus from entering the body, and of improving the vitality of the body so as to resist infection. Sir Thomas Oliver, then quoted the returns for 1906 of the Registrar-General for the Dublin registration area, which show that in the professional and independent classes the tuberculosis death-rate was 0·63, in the middle-class 2·79, in the artisan and small shopkeeping class 3·54, and in the general service class 4·12 per 1000, and pointed out that these figures suggest that tuberculosis is associated with poverty. He maintained that it will not be far wrong to say that poverty and drink, accompanied by ignorance of the laws of hygiene, are largely responsible for the prevalence of pulmonary tuberculosis. He then considered the circumstances of daily life which may lead on to the way of infection by the tubercle bacillus, and emphasised the influence of badly lit, badly ventilated, dusty, and overheated rooms in favouring the spread of disease. The effects of smoke and dust, and of the dried expectoration of tuberculous patients, were also considered. He referred to some experiments carried out by Dr. Fritz Kristen, of Breslau, to determine the length of time tubercle bacilli remain alive in the dust which can float about in the air. This observer found the life of the tubercle bacillus to be very short, especially when the dust is exposed to daylight and sunlight. In street dust infected with tubercle bacilli the micro-organisms live from three to eight days, in cloth dust similarly infected they live from five to ten days, while in pulverised expectoration they are alive after four to seven days. On the other hand, allowance must be made for dust lying in cellar dwellings and badly lit houses, where the bacillus may retain its vitality for weeks or months. The importance of adequate diet and of good food was next emphasised by Sir Thomas Oliver, and he expressed the opinion that the high death-rate from pulmonary tuberculosis in France at the present time might be a distant but lingering back-wash of the wave of tuberculosis which passed over that country after the Franco-German war, caused by the deprivation of food and by the other rigours suffered during that time. The influence of alcohol in favouring infection by disease was next referred to, and then the rôle of milk from tuberculous cows in causing the disease especially in children was carefully explained. In connexion with preventive and curative procedures, Sir Thomas Oliver referred to compulsory notification as a wise provision. He emphasised the importance of better wages, better dwelling houses, and temperance, and urged that it is a wiser policy for a municipality to provide healthy dwellings for the poorer working classes, houses hygienically constructed, and provided with plenty of air-space and good water-supply, than to spend money upon sanatoriums and the maintenance of bereaved families. He strongly insisted that the milk-supply to our towns should be under the most careful municipal supervision. In connexion with a nasty habit indulged in by some persons—viz., moistening the fingers with saliva before turning over the pages of a book, Sir Thomas Oliver told an interesting story. It appears that in Michigan, a little while ago, the secretary of the Bureau of Health, struck by the large number of cases of pulmonary tuberculosis which had occurred in a particular office, had the leaves of the books examined, with the result that tubercle bacilli were found. The infection was proved to date from the time when a young clerk who had worked in the office, and was the subject of tuberculosis, had been in the habit of moistening his fingers with saliva before turning over the pages of the office books.

IT has been arranged to hold a discussion on Factors which Conduce to Success in the Treatment of Otogenic Brain Abscess at the meeting of the Otological Section of the Royal Society of Medicine on Friday, Jan. 19th, 1912, at 5 P.M., at 11, Chandos-street, London, W. The discussion will be introduced by Sir Victor Horsley and Mr. C. E. West, and the Otological Section are specially inviting members of other sections to take part in the discussion.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

II.

RESUMING consideration of some of the more important sections of Dr. A. Newsholme's report, to which allusion was made in our article of Nov. 25th,[1] we note that the discussion of several of the principal topics entered upon in his report for 1909–10 is renewed in the present volume.

Tuberculosis.

In the above-mentioned article we commented briefly on the medical officer's account of the diminished incidence of tuberculous disease in this country during the last 40 years and the consequent saving of human life. Passing on to consider the various means by which consumption is acquired, and the methods available for its prevention, he remarks that tubercle bacilli are present mainly in the immediate vicinity of acutely consumptive patients of careless habits. The recovery of the majority of persons only slightly attacked may be ascribed to the small dosage of infection they have received or to their high powers of resistance. This resistance varies considerably in amount, being reduced greatly by an attack of measles or of influenza, for example, and being increased by good

[1] THE LANCET, Nov. 25th, 1911, p. 1501.

housing and appropriate nourishment. Among populations living under nearly equal conditions of nutrition the mortality from tuberculosis is found to be highest in those most exposed to protracted infection and to dusty occupations; it follows, therefore, that the greatest possibilities of fruitful action by sanitary authorities lie in preventing such protracted exposures to infection and dust.

In the active campaign against tuberculosis very much depends on the prompt recognition and treatment of incipient cases, for by this means we attain the most hopeful prospect of recovery. Moreover, the recovery of each individual sufferer removes an active focus of infection before its discharge becomes massive and therefore seriously dangerous to others. Unfortunately, however, only a small proportion of patients have hitherto come under observation in their early stages. Discovery of tubercle bacilli in the sputum of a patient implies a stage of the disease which cannot be considered early, and it is in this stage that most of the sufferers first apply for relief. Accordingly, in devising measures for staying the ravages of this scourge it is desirable that the foregoing considerations should have due weight. In the present campaign it is gratifying to realise that much help is already being rendered by the medical staffs of many of the general hospitals and dispensaries, as well as by those of the special hospitals for consumption, who are affording facilities for the detection and treatment of early cases of the pulmonary form of the malady. With respect to the management of advanced cases of phthisis Dr. Newsholme declares that no other measure for diminishing the prevalence of the malady compares with the segregation of such cases under hygienic conditions.

Notification of Pulmonary Tuberculosis.

The medical officer next discusses the measures already authorised by the Local Government Board for securing notification to the sanitary authorities of the existence of individual cases of tuberculosis. Referring to the tuberculosis regulations of 1908, by which cases of consumption occurring in Poor-law practice are compulsorily notifiable to the medical officer of health, he speaks of many towns in which the regulations have been valuable in securing help and advice for cases profoundly needing it. The experience acquired having shown that no disability attached to the cases notified under these regulations a further step was taken by the Board in May of the present year by making all cases coming under the care of charitable hospitals and dispensaries compulsorily notifiable. Under the Order the patient is specially safeguarded against any official interference that may prejudice him in the earning of his livelihood. On the contrary there is abundant evidence, according to the report, of notification bringing help to the stricken patient that had previously been unattainable. After expressing a strong opinion as to the desirability that all cases of consumption should be reported (a procedure which is largely provided for in a recent Order[2]), Dr. Newsholme warns his readers that early notification will not be completely secured even under a general compulsory system in the absence of arrangements for examination of possible cases by skilled diagnosticians, and that such notification will only be entirely successful when the local authorities are willing to organise means for helping the notified patients.

Secondary Infections in Pulmonary Tuberculosis.

Appended to this report is a contribution to the study of secondary infection in pulmonary tuberculosis by Dr. A. C. Inman, of the Brompton Consumption Hospital. While his inquiry gives little hope of success in controlling secondary infections in cases of advanced tuberculosis, the outlook is more hopeful in afebrile cases. Dr. Inman concludes that in most cases of "open" pulmonary tuberculosis the tubercle bacillus is the predominating infective agent, and that the temperature-chart alone cannot determine the presence or the absence of a secondary infection.

Enteric Fever.

In the article in our issue of Nov. 25th statistical details were quoted from this report respecting the decreasing incidence of enteric fever in this country. The money value was also shown of the life-saving thereby effected in 1910 as compared with former years. Readers of the long series of reports of the Local Government Board will remember that from the first the medical department has been mindful of the duty of improving our scanty knowledge respecting the modes of propagation of this refractory disease. Until quite recently the cause of enteric fever prevalence has been commonly attributed to a specifically polluted water-supply. But in later years other causes, such as the conservancy systems of excrement disposal, the influence of flies and of carrier cases, infected ice-creams, have been investigated, whilst water-supplies have been improved, so that the relative proportion of enteric fever attributed to polluted drinking water has undergone considerable diminution. From an excellent report by the late Dr. H. T. Bulstrode[3] published in February last we learn that on account of their cheapness various kinds of molluscs, especially cockles and mussels, often insufficiently cooked, enter largely into the dietary of the poorer residents on the English and Welsh littoral. These molluscs being collected from sewage-polluted sites at the mouths of rivers have, in numerous instances, been the cause of illness by enteric fever and enteritis among the consumers. To the same effect the opinion of Dr. John C. Thresh, the county medical officer of Essex, is quoted, which shows that the remarkable reduction in enteric fever fatality in certain districts under his charge is due to the disuse during 1909–10 of contaminated shell-fish for food. He states that before this date the disease was generally most prevalent wherever most shell-fish was collected and eaten. It can hardly be accidental, remarks Dr. Thresh, that five of the districts formerly most severely affected with enteric fever are on the coast, or near the mouths of estuaries.

Reverting to our comments in THE LANCET of Nov. 25th respecting an exceptionally severe outbreak of enteric fever at Eccles, we gather that the circumstances were further investigated at the laboratories of Professor S. Delépine of the Owens College, at the instance of Dr. S. M. Copeman. After scrutiny and exclusion of the more usual sources of infection—viz., water, milk, fish, and other foodstuffs, as well as of the sewerage and drainage of the town—evidence rapidly accumulated incriminating ice-cream retailed by itinerant vendors as being the main vehicle for the conveyance of infection. The outbreak was sudden, and the majority of the patients were infected within a few days of each other. A definite history was obtained that within the incubation period polluted ice-cream had been consumed by more than 100 of the persons primarily attacked. Evidence was wanting as to how the ice-cream became infected; but the probability is that it was due to contamination of the ice-cream during manufacture by a person who had imperfectly recovered from fever, or who was a carrier of infection long after having suffered from the disease.

Cerebro-spinal Fever and Poliomyelitis.

For some years past a continued fever due to the presence of the meningococcus has been observed at considerable intervals in various parts of Europe and of America. This disease—namely, cerebro-spinal fever—has also occurred sporadically and in a number of limited outbreaks in certain parts of Great Britain during the last few years. Epidemic poliomyelitis has likewise been occasionally met with in this country in the course of the last few years. From a communication to the Académie de Médecine on May 23rd last by M. Arnold Netter, we learn that during the year 1910 epidemics of acute poliomyelitis appeared in many widely separated districts of France.[4] In August last we received information from a special correspondent of an outbreak of "spotted fever" in the area around Holsworthy in Devonshire. Later, in the same neighbourhood, cases were recorded of acute poliomyelitis which apparently led to difficulties of diagnosis. As the epidemic appeared to be spreading Dr. R. J. Reece, a medical inspector of the Local Government Board, was sent down and made investigations on the spot.[5]

Both these diseases appear to be definitely infectious. From the before-mentioned report to the Académie de Médecine we learn that during the epidemic of acute poliomyelitis which occurred in the departments of the Aube and Yonne instances were met with of direct infection, of familial contagion, and of infection after contact with a healthy individual from the affected area who served as an intermediary.

[2] THE LANCET, Nov. 25th, 1911, p. 1496.

[3] A review of this report appeared in THE LANCET of April 22nd, 1911 p. 1089.

[4] THE LANCET, Sept. 2nd, 1911, p. 709.

[5] THE LANCET, Sept. 16th, p. 843, and 23rd, p. 896.

Referring to cerebro-spinal fever Dr. Newsholme observes that attacks of that disease probably occur not infrequently undetected, because meningitis may be caused by infections other than the meningococcus, for instance, by the pneumococcus or by pyogenic organisms, and the symptoms caused by invasion of the meninges by these organisms simulate those of epidemic cerebro-spinal fever, due to the meningococcus.

(To be concluded.)

BRITISH MEDICAL BENEVOLENT FUND.

AT the November meeting of the committee 33 cases were considered and grants amounting to £318 made to 30 of the applicants. The current account is consequently overdrawn to the extent of no less than £457, and the committee urgently appeals for the help which is absolutely necessary unless next month's applications are to be passed over. Contributions may be sent to the honorary treasurer, Dr. Samuel West, 15, Wimpole-street, London, W. The following is an abstract of the cases relieved:—

Daughter, aged 31, of late M.R.C.S. Is a black-and-white artist, but has been unable to obtain work for several months, and is consequently in great distress. Health feeble. Mother a candidate for an Epsom pension. Voted £10.

Widow, aged 74, of L.R.C.P. Edin. Has supported herself since her husband's death 25 years ago by letting lodgings, but finds increasing difficulty in doing so. Only income 5s. a week, an old-age pension. Voted £12.

Daughter, aged 37, of late L.R.C.P. Edin. Used to live with her mother in Paris and maintain herself by giving English lessons, but has been in bad health for the last two years and is now quite penniless. Hopes to shortly obtain pupils or a situation. Voted £5.

Widow, aged 44, of M.R.C.S. No income, and dependent on the help given by a step-son and what can be earned by letting a room. Relieved three times, £36. Voted £12.

Widow, aged 81, of M.R.C.S. Has a small income, but is obliged to support her grown-up children, of whom three are deaf and dumb, and the fourth only able to do a little needlework. Relieved nine times, £60. Voted £5.

M.R.C.S., aged 70. Is quite incapacitated and dependent on his wife, whose income is very small. Relieved once, £10. Voted £5.

Widow, aged 69, of M.R.C.S. Has maintained herself for 30 years by letting lodgings at a watering-place, but is now becoming crippled by rheumatoid arthritis. Voted £12.

Daughter, aged 63, of L.R.C.P. Edin. Is matron at a small orphanage, but has been obliged for many years to devote most of her salary to assist an invalid mother, recently deceased, and now asks for a little help towards the funeral expenses. Voted £5.

Daughter, aged 37, of late M.R.C.S. Has held good engagements as governess and companion, but for the last few months has been unable to obtain a post, and has exhausted her small savings. Voted £5.

L.S.A., aged 66. Used to have a fair practice in a London suburb, but had a long illness with consequent pecuniary difficulties, and is now endeavouring to make a fresh connexion. Relieved once, £10. Voted £10.

L.R.C.P. Irel., aged 65. Practised for many years in London, but was obliged to give up two years ago on account of ill-health, and is now quite incapacitated. No income; wife supplements slight help from friends by letting lodgings. Relieved twice, £36 Voted £18.

Widow, aged 60, of L.R.C.P. Edin. Endeavours to support herself by nursing, but for the last few years has found it most difficult to get engagements, and is now practically dependent on a small temporary grant from a charitable society; health indifferent. Relieved once, £12. Voted £12.

Widow, aged 66, of M.R.C.S. Since husband's death has supported herself by acting as housekeeper, &c., but is now unable to obtain any post and quite dependent on this Fund and the uncertain help of friends. Relieved three times, £36. Voted £12.

L.R.C.P. Edin., aged 54. Has been incapacitated for several years by spastic paraplegia and is dependent on relations who can ill afford to help. Relieved seven times, £84. Voted £12.

Daughter, aged 64, of late M.R.C.S. Assisted her mother in keeping a boarding-house to maintain her father during a many years' illness and now helps two sisters who have a school but can give applicant no salary; health feeble. Relieved three times, £36. Voted £12.

Daughters, aged 61 and 52, of late M.R.C.S. Endeavour to support themselves by taking boarders and ask for help to tide over the winter. Relieved twice, £28. Voted £18.

Daughter, aged 63, of late M.R.C.S. Dependent on two brothers whose help is uncertain and is in very feeble health. Relieved five times, £60. Voted £12.

Widow, aged 70, of L.R.C.P. Edin. Only income an old-age pension of 5s. a week and is crippled by chronic rheumatism. Relieved four times, £48. Voted £12.

Daughter, aged 41, of late L.R.C.P. Edin. Endeavours to earn a living by nursing, but has had no case for some weeks and sees no prospect of one. Relieved seven times, £56. Voted £5.

Daughter, aged 56, of late M.R.C.S. Is subject to attacks of insanity and obliged to live very quietly in the country at the expense of three half-sisters who all earn their living. Relieved seven times, £66. Voted £5.

Widow, aged 75, of M.D. Lond., who was physician to a special hospital. Only income two small annuities which are insufficient for the little comforts necessitated by applicant's age and infirmities. Relieved six times, £36. Voted £5.

Daughter, aged 58, of late M.D. Lond. Has earned as much as possible since father's death many years ago by giving lessons in painting, &c., but is now in ill-health and quite dependent on a half-sister. Relieved 28 times, £208. Voted £10.

Daughter, aged 49, of late L.S.A. Is mentally deficient and entirely dependent on a sister, who is a nurse. Relieved six times, £68. Voted £12.

Daughters, aged 59 and 54, of late M.R.C.S. No income; small earnings from needlework and slight help from friends. Relieved seven times, £94. Voted £20.

Daughter, aged 54, of late M.R.C.S. No income and incapable of earning a living. Relieved four times, £37. Voted £15.

Daughter, aged 57, of late L.S.A. Is in feeble health and dependent on a sister-in-law, who is a widow. Relieved 11 times, £105. Voted £15.

Widow, aged 51, of L.S.A. Quite unprovided for at husband's death from cancer a few years ago and dependent on a son earning £1 a week; is very deaf and in feeble health. Relieved five times, £68. Voted £18.

Widow, aged 63, of M.R.C.S. Unprovided for at husband's death several years ago and entirely dependent on her children. Relieved 13 times, £166. Voted £2.

Widow, aged 56, of M.B. Glasg. Has maintained herself for several years by letting lodgings and by needlework, but is now frequently incapacitated by illness. Slight help from two daughters earning small weekly wages. Relieved three times, £42. Voted £12.

Widow, aged 54, of L.R.C.P. Edin. Practically no provision at husband's death a few years ago and endeavours to support herself by taking boarders. Relieved once, £10. Voted £10.

PUBLIC HEALTH IN INDIA.

(Concluded from p. 1577.)

II. HOSPITALS AND DISPENSARIES.

THE reports which we have received regarding hospitals and dispensaries refer, as we intimated in our last issue, to the triennial period, 1908–10.

Eastern Bengal and Assam.

Colonel R. Neil Campbell, I.M.S., speaks of the urgent need that exists for female medical aid. Thousands of poor women go without treatment from the feeling that it is improper to be treated by a male medical attendant, and because no women doctors or medical assistants are available. He considers that there should be at every district headquarters both a female sub-assistant surgeon, and, if possible, a midwife; at the larger subdivisional headquarters, one of the former; and at the smaller, one of the latter. He has drawn up a scheme for the gradual introduction of such a system in the Province out of public funds, but considers that it is an object which should strongly appeal to public charity. He draws attention to the urgent need of a new hospital at Dacca, now the provincial capital. Encouraging results are reported from the nastin treatment of leprosy, but the numbers are too small as yet to warrant any conclusion being drawn from them. The hypodermic injection of Forster's vaccine has been tried for dysentery in 177 cases with somewhat indefinite results. Intraperitoneal saline injections in collapsed cholera cases have been successful in 37 out of 41 instances.

United Provinces.

The government of these Provinces has made an important modification in hitherto existing rules by allowing district boards to open dispensaries where they are considered to be required without demanding that public funds necessary for the whole upkeep shall be provided. These dispensaries can now be started if private subscriptions are available to assist in their support, and grants in aid may now be made to existing private institutions of a desirable kind, which will thus be encouraged and strengthened by this official support. Great efforts were made to cope with the excessive prevalence of malaria, and travelling dispensaries were established in four of the most stricken districts. More than 31,000 patients were treated in this way. Free distribution of quinine was also carried out extensively. The excessive infant mortality has been inquired into systematically at Cawnpore by a lady doctor and two trained native female nurses; the chief cause was found to be tetanus, due to the unclean methods of local midwives; a scheme has been brought into operation for the training of these nurses. It is stated that the nastin treatment for leprosy has been tried, but without satisfactory results. It was expected that the new medical college at Lucknow would be opened in October of this year; training will be provided for the full medical curriculum, but it is not yet decided whether the course will be for four or for five years. Colonel C. C. Manifold, I.M.S., does not speak very hopefully of the preventive treatment of plague; he considers it useless to expect effective limitation

of rats where food supplies are accessible; inoculation, the one successful and scientific means of combating the disease, has not been accepted by the people; evacuation is not carried out for a long enough time, the people returning to their infected houses only to become victims of the disease; he has more hope from the travelling dispensaries. Some idea of the work done in the hospitals and dispensaries of this province may be gained from these figures: 4,543,746 cases were treated: 196,759 operations were performed.

Central Provinces and Berar.

Lieutenant-Colonel A. Buchanan in his report mentions a severe and unusual outbreak of guinea-worm disease in a village near Nagpur; over 100 persons were affected, all of whom drank water from one well, while the people who used the other four wells in the village were entirely free from the disease; a few persons drank water from the infected well, but filtered it through cloth; none of these were affected. The cyclops, which is the host of the guinea-worm (but which is not a small "insect" as described in the report), was removed from the water by straining through the cloth. Another interesting point is the mention of the occurrence of 25 cases of enteric fever at Chindwara among Indians with symptoms nearly the same as in Europeans; it is not stated to what native race these patients belonged.

Burma.

The principal item of interest in the report on Burma is the opening of the new general hospital at Rangoon, which, however, is not yet finished, though patients are now accommodated there. It is gratifying to note the large increase in women and female children treated; the numbers have risen from 8852 in 1908 to 14,586 in 1910. A considerable increase in syphilis admissions in Burma is noted, especially in Rangoon; venereal diseases are also prevalent at Mandalay; these points are deserving of the particular attention of the Government. Scientific work in the laboratory is carried on under difficulties in the climate of Rangoon; bacteriological investigations are, however, now conducted with success; one of considerable importance to the public health of the city was the detection of cases of glanders among men living in close contact with cab-horses.

III. JAILS.

These reports refer to the year 1910.

Bengal.

In this province a reduction in the average numbers in jail took place in 1910 from 15,065 to 13,163, due mainly to the good season of 1909–10, in which the petty thefts and minor offences of a population affected by scarcity and high prices were less numerous. Lieutenant-Colonel W. J. Buchanan, inspector of prisons, writes strongly against the present system of the employment of convicts as warders, many being appointed to positions of trust, even to be night guards, who were not eligible, but had to be employed owing to insufficiency of the regular warders. The question of alterations in the prison dietary is now under consideration, consequent on Major D. McCay's recent investigations.[1] The death-rate of prisoners was only 18·6 per 1000, the lowest yet recorded (except 17·5 in 1907). The improvement that has taken place has been extraordinary; in the quinquennium 1875–79 the death-rate was 65. The chief cause for this good result in 1910 was absence of overcrowding in the jails, owing to the prosperity of the province consequent on the excellent harvests. Dysentery was much less prevalent, also tuberculosis. Lieutenant-Colonel Buchanan alludes to the effects of the unrest in Bengal during the last few years; the prisoners are not so manageable as formerly, and the work of the jail officers has been rendered more difficult and harassing.

Eastern Bengal and Assam.

Lieutenant-Colonel B. J. Singh reports a steady increase in the number of prisoners since the formation of the new province in 1905, the daily average being now 8136. He complains that magistrates continue to commit juvenile offenders of 10 to 12 years of age to jail for short periods, in spite of recent orders by the Government. No suitable accommodation exists for these juveniles, and the risk of their contamination by the older criminals is very great; moreover, the jails were constantly overcrowded. The death-rate was 32·57 per 1000, a higher ratio than in any year of the decennium; dysentery and tubercle of the lungs were the chief causes of the increase. Lieutenant-Colonel Singh believes that there is a close connexion between the former disease and oral sepsis, and states that wherever medical officers had interested themselves in the proper care of the prisoners' gums and disinfection of their mouths the results were satisfactory. Forster's vaccine was not found to be effective as a dysentery prophylactic. Tubercle of the lungs was in many cases acquired before admission to jail, but the overcrowding and want of separate accommodation were largely responsible for its spread.

United Provinces.

In the United Provinces the jail death-rate was only 15·6 per 1000, compared with 23·7 in the previous year. This denotes a return to normal health after the famine and malarial epidemic of 1908–09. Dysentery was less frequent and fatal. Lieutenant-Colonel C. Mactaggart believes that this was because the prisoners were in better health and condition when received into jail. Tubercle of the lungs was also less severe; malaria was much less prevalent. It is interesting to learn that a female prisoner escaped from the prison at Benares by climbing over the wall, though she was 70 years of age. In her youth she had been an acrobat. But even so, the vigilance does not seem to have been up to the mark.

Central Provinces.

At Raipur jail dysentery caused 195 admissions and 49 deaths. Lieutenant-Colonel W. B. Lane states that the disease was introduced into the jail by a batch of prisoners from the Bastar State, and that it spread rapidly. At Nagpur jail, also, there was an epidemic of 90 cases with 11 deaths. In Lieutenant-Colonel Lane's opinion the disease is due to excess of food, the "unaccustomed plenty" of the jail.

Bombay.

In the Bombay Presidency the jail death-rate was 14·5 per 1000, a very satisfactory figure. No epidemic disease occurred of any importance.

Burma.

In the jails here the death-rate was only 11·98 per 1000, the lowest but one on record. An unfortunate misadventure occurred at one jail where a prisoner surreptitiously took a dose of concentrated solution of quinine, stated to have been at least 300 grains (!); he died in two hours.

IV. LUNATIC ASYLUMS.

In Bengal the rate of mortality among asylum patients was very low, being only 6·58 per cent. of the inmates, a lower figure than that obtaining in the county and borough asylums in England for 1909, which was 9·96. There were no deaths at all from fever. In Eastern Bengal and Assam the mortality rate was 11·81, tubercular disease having caused more than half the deaths at Tezpur Asylum; this was attributed to overcrowding, and the construction of a tubercle ward will be carried out during the current financial year. With the increased accommodation provided in the new hospital of the Punjab Asylum, by which all cases of tubercle, ankylostomiasis (from mud eating), and bowel affections are segregated, there has been considerable improvement in health. The majority of cases in the Indian asylums, of which reports have been received, were, as usual, cases of maniacal insanity.

[1] See THE LANCET, Oct. 22nd, 1910, p. 1217.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7472 births and 4869 deaths were registered during the week ending Dec. 2nd. The annual rate of mortality in these towns, which had risen from 13·1 to 14·2 in the three preceding weeks, further rose to 15·7 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual rate of mortality in these towns averaged 14·2 per 1000, and was 0·3 per 1000 higher than that recorded in London during the same period. The annual death-rates in the 77 towns last week ranged from 7·5 in Walthamstow, 8·7 in Northampton, 10·2 in King's Norton, and 10·6 in Tynemouth to 21·4 in Sunderland, 21·6 in Wigan, 22·5

in Burnley, and 23·1 in Bootle. The 4869 deaths from all causes in the 77 towns were 481 in excess of the number in the previous week, and included 276 which were referred to the principal epidemic diseases, against numbers steadily declining from 2900 to 259 in the 14 preceding weeks. Of these 276 deaths, 68 resulted from infantile diarrhœa, 66 from measles, 57 from diphtheria, 38 from whooping-cough, 25 from scarlet fever, and 22 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 0·9, against 0·9 and 0·8 per 1000 in the two preceding weeks. The deaths of infants under two years of age attributed to diarrhœal diseases, which had steadily declined from 2714 to 73 in the 14 preceding weeks, further fell to 68 last week, and included 29 in London and its suburban districts, 4 in Nottingham, and 3 each in Burnley, Leeds, and Sheffield. The deaths referred to measles, which had been 37, 51, and 44 in the three preceding weeks, rose to 66 last week; 11 deaths were recorded in Burnley, 9 in London, 8 in Nottingham, 5 in Norwich, and 4 in Manchester. The fatal cases of diphtheria, which had been 55, 64, and 61 in the three previous weeks, again declined to 57 last week, and of this number 15 were registered in London and its suburban districts, 5 in Liverpool, 4 in Manchester, and 3 each in Bristol, Stoke-on-Trent, Sheffield, and Cardiff. The deaths assigned to whooping-cough, which had increased from 16 to 32 in the four preceding weeks, further rose last week to 38, and included 7 in London, 5 in Birmingham, 5 in Sunderland, and 3 each in Walsall, Manchester, and Leeds. The 25 fatal cases of scarlet fever were equal to the average in the two previous weeks; 4 deaths occurred in Manchester, and 2 each in Stoke-on-Trent, Birmingham, Salford, Preston, Halifax, and Leeds. The deaths attributed to enteric fever, which had declined from 35 to 20 in the four preceding weeks, slightly rose to 22 last week, and of these 9 were recorded in London and its suburban districts and 3 in Bolton. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had been 2203, 2213, and 2166 at the close of the three preceding weeks, declined again to 2141 on Saturday last; 248 new cases of this disease were admitted to these hospitals during the week, against 292, 291, and 203 in the three preceding weeks. These hospitals also contained on Saturday last 1342 cases of diphtheria, 177 of whooping-cough, 86 of enteric fever, and 72 of measles, but not one of small-pox. The 1307 deaths from all causes in London last week were 161 in excess of the number recorded in the previous week, and included 297 which were referred to diseases of the respiratory system, against numbers rising from 170 to 243 in the four preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 167 and 158 in the two preceding weeks, rose to 188 last week, and 437 inquest cases were registered. The causes of 39, or 0·8 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, Stoke-on-Trent, and in 51 other smaller towns. The 39 uncertified causes of death in the week under notice included 8 in Liverpool, 6 in Sunderland, 5 in Birmingham, 3 in London, and 3 in Coventry.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 742 births and 589 deaths were registered during the week ending Dec. 2nd. The annual rate of mortality in these towns, which had been 18·6 and 16·7 in the two preceding weeks, rose to 18·0 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·6, and was 2·4 per 1000 above the mean rate during the same period in the 77 large English towns. The annual death-rates in the several Scotch towns last week ranged from 14·5 and 14·9 in Perth and Leith to 18·8 in Glasgow and 20·8 in Aberdeen. The 589 deaths from all causes were 41 in excess of the number in the preceding week, and included 72 which were referred to the principal epidemic diseases, against 65 and 63 in the two previous weeks; of these 72 deaths, 31 resulted from measles, 16 from diarrhœal diseases, 15 from diphtheria, 6 from whooping-cough, 2 from scarlet fever, and 2 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 2·2 per 1000, and was 1·3 per 1000 above the mean rate from the same diseases in the 77 large English towns. The deaths referred to measles, which had been 13, 28, and 23 in the three preceding weeks, rose to 31 last week, and included 18 in Aberdeen and 11 in Glasgow. The deaths attributed to diarrhœal diseases, which had been 19 and 16 in the two previous weeks, were again 16 last week, and included 10 of infants under two years of age; 9 deaths were registered in Glasgow, 3 in Dundee, 2 in Edinburgh, and 2 in Paisley. The fatal cases of diphtheria, which had declined from 14 to 7 in the three preceding weeks, rose to 15 last week, and included 8 in Glasgow and 2 each in Edinburgh, Dundee, and Aberdeen. The 6 deaths assigned to whooping-cough, of which 3 were recorded in Glasgow, were equal to the average in the four preceding weeks. The 2 fatal cases of enteric fever, both of which occurred in Glasgow, were equal to the number in each of the two preceding weeks. The 2 deaths referred to scarlet fever were registered in Glasgow and Leith respectively. The deaths referred to diseases of the respiratory system, which had been 144 and 113 in the two preceding weeks, were again 113 last week, and were 44 below the number recorded in the corresponding week of last year. Of the 589 deaths from all causes in the Scotch towns last week, 161, or 27 per cent., were recorded in public institutions, and 16 were attributed to different forms of violence. The causes of 17, or 2·9 per cent., of the deaths in the eight towns in the week under notice were not certified or not specified; in the 77 large English towns the proportion of uncertified causes did not exceed 0·8 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 570 births and 403 deaths were registered during the week ending Dec. 2nd. The annual rate of mortality in these towns, which had been 19·0 and 18·0 in the two previous weeks, rose to 18·3 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·3 per 1000; in the 77 large English towns the mean annual death-rate during the same period did not exceed 14·2, while in the eight Scotch towns it was equal to 16·6 per 1000. The annual death-rate last week was equal to 21·6 in Dublin (against 15·1 in London), 13·6 in Belfast, 25·9 in Cork, 12·8 in Londonderry, 12·2 in Limerick, and 20·9 in Waterford; in the 16 smallest of these Irish towns the death-rate last week was equal to 19·8 per 1000. The 403 deaths from all causes were 7 in excess of the number in the previous week, and included 40 which were referred to the principal epidemic diseases, against 47 and 44 in the two preceding weeks; of these 40 deaths, 14 resulted from diarrhœal diseases, 11 from whooping-cough, 6 from diphtheria, 4 from measles, 3 from scarlet fever, 1 from enteric fever, and 1 from typhus, but not one from small-pox. These 40 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·8 per 1000; in the 77 English towns the mean annual death-rate from these diseases last week did not exceed 0·9 per 1000, while in the eight Scotch towns it was equal to 2·2. The deaths attributed to diarrhœal diseases, which had been 19 in each of the two preceding weeks, declined last week to 14, all of which related to children under 2 years of age; 6 deaths were recorded in Dublin, 2 in Belfast, and 2 in Waterford. The deaths referred to whooping-cough, which had increased from 1 to 11 in the four preceding weeks, were again 11 last week, and included 4 in Lurgan, 3 in Dublin, and 3 in Belfast. The fatal cases of diphtheria, which had been 12 and 2 in the two preceding weeks, again rose to 6 last week, of which 3 were registered in Dublin. The 4 deaths from measles were equal to the number in the previous week, and comprised 3 in Dublin and 1 in Cork. The 3 fatal cases of scarlet fever, which were 2 fewer than in the previous week, were registered in Dublin, Belfast, and Sligo respectively. The fatal cases of typhus and enteric fever were recorded in Dublin. The deaths referred to diseases of the respiratory system, which had been 75, 73, and 78 in the three preceding

weeks, were 77 last week. Of the 403 deaths from all causes in the Irish towns last week, 149, or 37 per cent., were recorded in public institutions, and 8 were attributed to different forms of violence. The causes of 12, or 3·0 per cent., of the deaths in the 22 towns in the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes last week did not exceed 0·8 per cent. in the 77 English towns, but was equal to 2·9 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Staff-Surgeons: A. La T. Darley to the *Hazard*; and H. P. Turnbull to the *Vernon*, additional, for the *Furious*. Surgeons: R. A. Rankine and H. White to the *Victory*; W. L. Cowardin and Q. H. Richardson to the *Vivid*; L. A. Moncrieff and A. C. Paterson to the *Pembroke*, all additonal, for disposal; and G. D. Bateman to the *Victory*, additional, for disposal.

ROYAL ARMY MEDICAL CORPS.

Captain John W. West to be Major (dated Nov. 29th, 1911). Captain Edmund S. Worthington, M.V.O., is seconded for special extra-regimental employment (dated Sept. 29th, 1911).

The undermentioned officers are seconded for service under the Foreign Office:—Captain Ronald E. Todd (dated Nov. 1st, 1911). Lieutenant Campbell Robb (dated Nov. 14th, 1911). Lieutenant Robert Gale (dated Nov. 15th, 1911). Lieutenant Pierce M. J. Brett is confirmed in his rank.

Surgeon-General A. T. Sloggett, C.B., C.M.G., Principal Medical Officer of the Sixth (Poona) Division, Southern Army, has been selected for appointment as Principal Medical Officer of the Coronation Durbar at Delhi. Lieutenant-Colonel H. C. Thurston, C.M.G., on return from a tour of foreign service in Bermuda, has been posted to the Aldershot Command. Lieutenant-Colonel W. L. Grey, in charge of the Military Hospital at Winchester, has been detailed by the War Office for a tour of service in India. Lieutenant-Colonel R. Kirkpatrick, C.M.G., has taken up duty as Senior Medical Officer in Egypt. Lieutenant-Colonel N. C. Ferguson, C.M.G., has left Queen Alexandra's Military Hospital, London, and taken over charge of the Military Hospital at York. Lieutenant-Colonel J. S. Green, from Naini Tal, has been appointed to command the Station Hospital at Bangalore, in succession to Lieutenant-Colonel W. C. Beevor, C.M.G., tour expired. Lieutenant-Colonel H. J. Fletcher, commanding the Station Hospital at Sialkot, has received an extension of his command until May, 1913. Lieutenant-Colonel T. Daly has been appointed to command the Station Hospital at Peshawar for a period of three years. Lieutenant-Colonel A. L. F. Bate, commanding the Station Hospital at Kuldana, has been appointed Senior Medical Officer on board the troopship s.s. *Rewa* which left Karachi for Southampton on Dec. 9th. Major W. E. P. V. Marriott, at present serving in the Dublin District, has been posted to Mullingar with effect from Dec. 18th, on which date he will take over the charge of the Military Hospital at the latter station, in succession to Major C. S. Smith. Major R. Tilbury Brown, specialist sanitary officer to the Burma Division, has been permitted to extend his tour of service for one year. Major L. Way has been transferred from Golden Hill to Cosham. Major C. W. H. Whitestone, from Peshawar, has taken up duty at Cherat as Staff Officer for Medical Mobilisation Stores in the First (Peshawar) Division. Major H. S. Anderson, from Moore Park, has been posted to Buttevant Camp. Major F. W. Begbie, surgical specialist at Colchester, has taken over Medical Charge at Ipswich during the absence on leave of Lieutenant-Colonel H. L. Battersby. Major W. P. Gwynn, on return to India from leave, has taken up the appointment of Embarkation Medical Officer at Karachi for the current trooping season. Captain S. E. Lewis has been appointed to succeed Captain J. Tobin as Medical Officer in charge of the Military Families Hospital at Devonport. Captain F. J. Stuart has been transferred from the Eighth (Lucknow) Division to the Seventh (Meerut) Division for employment as Specialist in Dermatology and Venereal Diseases. Captain J. H. Brunskill has been selected for appointment as Clinical Pathologist at the Curragh. Captain S. Boylan-Smith has taken up duty at Belfast as Specialist Sanitary Officer. Captain R. P. Lewis has arrived home on leave of absence from South Africa. Captain P. G. Hyde, from Dublin, has embarked for a tour of service in Ceylon. Captain C. E. W. S. Fawcett, on return from Thayetmyo, Burma, and Captain M. J. Cromie, from Delhi, have been ordered to join for duty in Ireland, and on arrival will be posted to the Dublin District. Captain M. Keane, from Meerut, has been detailed for duty on board the troopship s.s. *Rewa* which left Karachi for Southampton on Dec. 9th. Captain A. E. B. Wood has embarked for a tour of service at Hong-Kong. Captain F. A. Stephens has been placed under orders for service in the Second (Rawal Pindi) Division of the Northern Army and will embark during the current trooping season. Captain J. H. Campbell, from Warrington, has joined at Bury. Captain H. H. A. Emerson, from Clonmel, has been appointed to Limerick. Captain D. S. B. Thomson has arrived home on leave of absence from Egypt. Captain H. Harding, from York, has taken up duty at Leicester. Captain M. F. Grant, from Aldershot, has joined the London District. Lieutenant J. R. Yourrell has embarked for a tour of service in Burma. Lieutenant O. W. McSheehy, from Taunton, has taken up duty in South Africa. Lieutenant C. M. Finny, from the Curragh, has been posted to the Dublin District. Lieutenant J. Gilmour has been transferred from Cardiff to Devonport. Lieutenant E. T. Gaunt, from Canterbury, has been appointed to the Military Hospital at Shorncliffe. Lieutenant G. H. Stack has been posted temporarily to the London District and attached to the Guards Depôt at Caterham pending embarkation.

INDIAN MEDICAL SERVICE.

The King has approved of the retirement of Lieutenant-Colonel Ernest Gerald Robert Whitcombe (dated Oct. 27th, 1911).

Lieutenant-Colonel T. W. Irvine has been appointed to officiate as Civil Surgeon at Peshawar. Lieutenant-Colonel P. J. Lumsden, Bengal Presidency, has received two months' extension of his leave of absence. Lieutenant-Colonel W. Vost, civil surgeon at Saharanpur, has been transferred for duty at Lucknow. The services of Lieutenant-Colonel J. Crimmin, V.C., C.I.E., have been replaced temporarily at the disposal of the Government of India by H.E. the Governor of Bombay. Major L. T. R. Hutchinson has been selected to hold charge of the office of Presidency Surgeon, Third District, Bombay, pending the arrival of Major A. W. Tuke. Major G. P. T. Groube has arrived home on leave of absence from India. Major V. H. Roberts has been appointed for duty under the administration of the Central Provinces as officiating Civil Surgeon at Seoni and to the Executive and Medical Charge of the Seoni District Jail. The Lieutenant-Governor of the Punjab has been pleased to appoint Captain D. H. F. Cowin to be a Civil Surgeon of the Second Class. The services of Captain B. B. Paymaster have been placed permanently at the disposal of the Government of Bombay. Captain H. Emslie-Smith, Bengal Presidency, has arrived home on leave of absence. Captain C. H. Reinhold has been permitted to extend his leave by the Secretary of State for India. Captain F. O. D. Fawcett and Captain G. M. Millar have embarked for India on termination of their leave of absence. H.E. the Governor of Bombay in Council has been pleased to appoint Captain A. J. V. Betts to be a Civil Surgeon of the Second Class and to officiate as Civil Surgeon at Nasik. The services of Captain G. J. Davys have been placed by the Home Department of the Government of India at the disposal of H.E. the Commander-in-Chief for military employment. Captain E. B. Munro has taken up duty under the Government of Eastern Bengal and Assam. Captain S. H. Lee Abbott has been transferred as Civil Surgeon to Dalhousie. Captain E. Bisset has taken up duty under the United Provinces Administration as medical officer in charge of plague prevention in the Meerut District. Captain W. Lapsley, civil surgeon of Azamgarh, has arrived home on one year and four months' leave of absence from India. The services of Captain V. B. Green-Armytage have been placed temporarily at the disposal of the Government of Eastern Bengal and Assam.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Harry Dudley Rollinson to be Lieutenant, on probation (dated Nov. 3rd, 1911).

TERRITORIAL FORCE.

Royal Army Medical Corps.

2nd East Anglian Field Ambulance, Royal Army Medical Corps: Lieutenant John K. Howlett resigns his commission (dated Dec. 2nd, 1911).

2nd East Lancashire Field Ambulance, Royal Army Medical Corps: Quartermaster and Honorary Lieutenant Sidney Pritchard is granted the honorary rank of Captain (dated May 28th, 1911).

2nd Lowland Field Ambulance, Royal Army Medical Corps: Lieutenant Alexander M. Watson to be Captain (dated Nov. 7th, 1911).

1st Northumbrian Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains: Lieutenant James W. Heslop (dated Oct. 25th, 1911), Lieutenant James P. Milne (dated Oct. 25th, 1911), Lieutenant William Simpson (dated Oct. 25th, 1911), and Lieutenant George H. Spencer (dated Nov. 2nd, 1911).

Attached to Units other than Medical Units.—Lieutenant John A. Preston to be Captain (dated June 8th, 1910). Lieutenant John J. Weaver resigns his commission (dated Dec. 2nd, 1911).

For Attachment to Units other than Medical Units.—John Crosthwaite Bridge to be Lieutenant (dated Oct. 14th, 1911).

ROYAL ARMY MEDICAL CORPS TRAINING IN IRELAND.

The General Officer Commanding-in-Chief in Ireland has arranged for a staff tour for the medical services to be held at Newcastle, county Down, from Dec. 11th to 14th. The directing staff will consist of Surgeon-General G. D. Bourke, C.B., K.H.P., principal medical officer, Irish Command; Brigadier-General F. W. N. McCracken, C.B., D.S.O., general staff, Irish Command; Colonel M. W. J. Edye, assistant director of supplies and transport, Irish Command; Colonel R. H. S. Sawyer, administrative medical officer of the Dublin District; Major C. Dalton, R.A.M.C, staff officer to the principal medical officer, Irish Command; Major D. J. Collins, R.A.M.C.; and Major A. Symons, general staff, Irish Command. The following Royal Army Medical Corps officers will take part in the tour: Lieutenant-Colonel J. H. Daly (Limerick), Lieutenant-Colonel O. R. A. Julian (Dublin), Major G. S. Crawford (Curragh), Major H. S. Anderson (Moor Park), Captain J. Dorgan (Cork), Captain J. H. Brunskill (Curragh), Captain W. D. C. Kelly (Dublin), Captain C. W. O'Brien (Kilbride), Captain S. B. Smith (Belfast), and Captain A. T. Frost (Dublin).

THE JAPANESE NAVAL MEDICAL DEPARTMENT IN THE RUSSO-JAPANESE WAR.

The fourth instalment of the translation of the Japanese Naval Medical report on the late war by Dr. Chemin, staff-surgeon in the French Navy, appears in the November number of the *Archives de Médecine et Pharmacie Navales* (O. Doin, Paris, 2 francs), and is concerned with the methods employed on board in the conveyance of the wounded to the dressing-stations. Most of them walked below by themselves; of the rest, by far the majority were men-handled, but the number carried down on stretchers increased as the war went on. The Japanese had had many of their ships built abroad, and with these had acquired examples of the stretchers of all nations. They examined them to find the most useful pattern, and ultimately concluded that, for their needs, the best was the one designed by their Surgeon-General Totsuka. This they call Renjo-Choka. It is essentially a double thickness of canvas, so sewn together as to leave narrow longitudinal channels, in which are inserted long, light slats of bamboo. Thus arranged, the apparatus can be folded round the wounded man, and the bamboo strips act conveniently as splints. Straps to secure him radiate from the perineum, and others tie the whole round his body. In the form it had reached at the end of the war the central strips behind his back were some six feet long to support his head as well as his body, the strips were omitted at the sides, and they were much shorter in front so as to clear his chin. The canvas extended above and below a little way, and through these extensions rope grummets were worked to give the bearers something to hold, to make carrying easier, and make lowering by a tackle possible. In the practice, which was assiduously carried out, the ambulance parties became very deft in the use of this appliance, which, as improved, gave every satisfaction. It was almost invariably used for carrying the wounded from the dressing station after their wounds were dressed, also for the conveyance of the dead; but the bearers were too anxious to get the wounded down to the doctors quickly to spare time in battle to use this stretcher for any but the serious cases.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—At a meeting held to-day the following resolution was approved by every medical practitioner in Keighley and the immediate districts. I am, Sir, yours faithfully,

Keighley, Dec. 5th, 1911. JOHN B. BERRY, M.D. Edin.

That the National Insurance Bill as at present framed does not satisfactorily embody the reasonable demands of the medical profession as defined by the British Medical Association; that the scheme is unworkable, detrimental to the medical profession, and dangerous to the public health; therefore, in the event of the Bill becoming law in its present form, we medical practitioners in Keighley and district express our determination to refuse to undertake the duties which the Bill proposes to assign to us.

To the Editor of THE LANCET.

SIR,—Has not the time arrived when *per capita* contract practice should receive its true description—"*Speculation* in the care of the health and injuries of human beings"? What a truly magnificent gift to the nation is the sanction of Parliament to such a system! No end of arguments have come to you. From that of the gentleman who was anxious to split the "last straw" (a £20 bill) into so many portions as not to be felt, to those who find in the method freedom from all clerical work ("wait and see") and a chance of being paid something for nothing. Unfortunately for the former, if the German 40·2 per cent. invalidity incidence is correct and all the actuarial 6*s.* is for medical attendance, less than 18*s.* would be available for payment, £19 odd would remain the "last straw," and the poor doctor "the camel."

Is there a professional expert to be found who could correctly advise an outfitter the sum to quote to a newly married couple for the annual supply of their prospective family with clothing? All will agree they know of none; nor can one be found who would foretell with certainty the amount of sickness any given number of individuals must suffer in a year. The West Country expression sums it up: "'Tis all chance-work, isn't it?"

Surely, if we care nothing about future generations of medical men—and have we not a duty to them?—the effect *upon the patient* of any system adopted should be some concern of ours. I have had experience in England, Scotland, and Wales, and never found one who was getting his treatment on the *per capita* principle thoroughly satisfied; many much the reverse. Nor is the panel going to remove their objection; for I find that I annually attend some 150 patients who prefer to pay me whilst they have a panel of four to choose from—at the Chancellor's figure, too. Nobody disputes that half the cure is to impress the patient that you are going to do your best for him. The first essential to this is the belief that the service is willing.

The safeguards against over-attendance are for the framers of regulations to fix, not for the profession to worry out for them. What we must see to is that they are just, and that we are protected from being compelled to do unrewarded work. As an example: Some 600 or 700 people did not require a single night visit during a couple of months because they had to pay 2*s.* 6*d.* for it, but half a dozen of them when being attended gratuitously at the completion of the contract required two or three in a week. If the Insurance Committees are to be repaid the cost of excessive sickness, why not the medical attendant for excessive calls? Will "Old Moore" or will "Zadkiel" be the more likely expert to predict these periods of excessive sickness? Will an insufficient salary paid to the medical officer of health constitute "neglect to observe a public health precaution"?

Should we not insist that there is an actual "free choice of doctor" by securing the acceptance of the certificate of any duly qualified and registered medical man for payment of sickness and disablement benefit and not of those on the

panel only, otherwise a grave injustice will be inflicted on those who are willing to pay a medical attendant. We should also insist on absolute freedom as to what drugs and appliances may be prescribed; to secure continuance on the panel of those who give the best treatment available, as well as that nothing should be repeated without the written order of the prescriber. If the fee for attendance on cases where a midwife is in difficulty is to be payable by the local authority, should it not be something adequate, in view of the greater proportion of ordinary cases being attended by midwives?

A fund is suggested to recompense those who have been manufacturing the rope with which the Chancellor of the Exchequer is endeavouring to hang the profession! What of those who have, in loyalty to the best traditions of practice, refused *per capita* work?—I am, Sir, yours faithfully,

WILLIAM SPETTIGUE, M.B. Edin.

Wellington, Somerset, Dec. 4th, 1911.

To the Editor of THE LANCET.

SIR,—The position is so critical that the attitude of THE LANCET is of the greatest importance.

Many branches of the British Medical Association last week declined to consider the recommendations of the Council, and passed strongly-worded resolutions, to the effect that they would decline to act in any way under the Bill if it should be passed in its present form, and these resolutions were passed before it was known that the Council had sanctioned the acceptance by Mr. Smith Whitaker of an appointment as Insurance Commissioner.

Not one of the six points insisted upon by the representative meeting has been embodied in the Bill, unless it has been neutralised and rendered of no effect by other clauses; the profession will be face to face with health committees absolutely dominated by Friendly Societies; and the Insurance Commission (which has been given drastic powers without appeal) is composed of Friendly Society and Labour officials.

It is quite clear that if there were otherwise no objection to Mr. Smith Whitaker's acceptance of the appointment offered to him, there would be the objection that his appointment would be useless to the profession, as he would be outvoted perpetually; and even if he carried the Commission with him on some points, the points would be useless, in view of the fact that the requirements of the profession have not been accepted and embodied in the Bill.

In refusing to consider the recommendations of the Council a large number of members of the British Medical Association have practically censured the Council, and from all I hear the more recent action of the Council in approving of Mr. Smith Whitaker's appointment will be even more strongly condemned: if so, there will be no course open to the members of the Council other than to resign.

From the resolution already passed by the most important branches it is certain that the great majority of the profession will decline to act in any way under the Bill, unless at the last moment it is greatly modified by the Chancellor by amendments introduced during the passage of the Bill in the House of Lords. I venture to ask you to use your great influence to obtain such amendments, for as it stands the Bill, if passed, will be absolutely unworkable, and must be a failure. I am, Sir, yours faithfully,

S. Hampstead, Dec. 6th, 1911. ALBERT BENTHALL.

To the Editor of THE LANCET.

SIR,—Sir Alfred Pearce Gould states that there are no advocates for the system of State doctors and the system under which the State would undertake to pay the bills for medical attendance upon the insured. The former is advocated by many, and the latter by still more, and would be acceptable to every medical man, but not to any others of the tax-paying community.

Under a scheme of payment for work done the profession would, I believe, soon be reduced to an army of sixpenny doctors, worse off financially than under the present derided 4*s.* per annum inclusive-of-drugs contract rate. The medical man would receive no payment whatever from those who remained in good health, and but small ready cash fees for each attendance. There are other necessaries besides medical attendance, and a woman's 7*s.* 6*d.* benefit money would not prove sufficient to allow her to pay cash fees for the attention she needed in, say, a case of pneumonia, and the practitioner would very probably have to resume his wearisome task of booking, not the modest half-crown, but the still more modest sixpence.

Many years' experience of ordinary general and contract practice have taught me that the sick man very rarely requires any inducement to get well as quickly as possible, as the difference between his income when sick and when in good health generally provides sufficient stimulus, apart from the irksome rules and regulations to which he is required to submit when on his club.

The object of this Bill is "to provide for insurance against loss of health and for the prevention and cure of sickness, &c.," by enabling him to readily obtain all the medical help he requires in times of illness, in addition to a monetary consideration, small though the latter be.

If your readers will refer to page 1605 of THE LANCET of June 10th they will there find a workable scheme which, in a way, amounts to a combination of their present suggestions with that of ordinary contract practice, including in addition payment by the State for exceptional work, and where (1) the practitioner in attendance has a first call on the patient's sick benefit money to provide small (as good as cash) fees for emergency visits, night calls, and for the treatment of diseases due to misconduct; (2) the State would pay annually a small *per capita* rate, the minimum being 6*s.*, exclusive of drugs, &c., to provide the insured with ordinary domiciliary medical treatment; and (3) the State would act as the insurer, and pay extra for exceptional cases such as epileptics, major operations, consultations, anæsthetics, &c.

Herein the doctor, the patient, and the State are all safeguarded; the doctor against the main evils of contract practice, the patient against the possibility of being crippled by a big bill, whilst the State runs but very little risk of having to pay for an excessive amount of work done, inasmuch as the patient will not indulge in anæsthetics or operations if they can be avoided. Such a scheme would, I feel sure, solve our present difficulties, and there is nothing in the Bill to prevent any Local Insurance Committee giving it a trial. It is certain that Mr. Lloyd George is not fully convinced that £4,500,000 is inadequate to achieve his beneficent objects, and that he is prepared to find a greater amount than he had at first thought would prove sufficient. And unless the much-vaunted nobility of our profession is a misnomer it is our bounden duty to strain a point in order to help him all we reasonably can.

What do we find now? We find thousands of people suffering from all kinds of diseases who receive little or no medical attention, mainly owing to the bogey of payment for medical services: (*a*) the Poor-law doctor being inadequately paid limits his work as much as possible; (*b*) the club or contract practitioner likewise; (*c*) the hospital doctor is getting tired, as he gets no payment whatever from the ever-increasing numbers who claim his attention; (*d*) the private practitioner, having a ledger full of accounts of very little value, is often not desirous of increasing their number. A new social scheme is greatly needed, and the opportunity is at hand. Given adequate payment, with fair conditions of service, there should be a good time in store for every medical man. The consultants will still have their big fees, whilst the hospitals will have but little need to fear. If the Act needs amendment later in these respects, amendment will come.

The Bill will so soon become an Act that it is almost time that the discussion of terms should be taken up in earnest, as, though the Workmen's Compensation Acts provided the worker the wherewithal to pay for any treatment required, yet the profession was caught napping, and the lawyer got the cream, the doctor the skim milk, whilst the worker retained the cow.

Let us not be caught napping again.

I am, Sir, yours faithfully,

J. P. WALKER, M.D. Durh., D.P.H.,
Assistant County Medical Officer for Hants.

Winchester, Dec. 4th, 1911.

To the Editor of THE LANCET.

SIR,—Will you permit me, through the medium of your valuable paper, to express my strong disapproval of the action of the British Medical Association in advising their medical secretary, Mr. J. Smith Whitaker, to accept the post of Insurance Commissioner under the National Insurance Bill whilst the all too reasonable demands of the profession remain ungranted by the Government.

Surely it is time that the profession took some other steps

to defend its rights than those the British Medical Association has adopted. So far I cannot see that the British Medical Association has aided us or advanced our interests in any way, and I would appeal to you, Sir, to initiate some course that the profession may follow with better hope of success in opposing the degradation and robbery which this Bill threatens to impose on us. I am firmly convinced that the right course for us to adopt is to refuse absolutely and entirely to work under the Bill *at all*. Those who accept it and are willing to work under it will find themselves committed to the worst form of contract practice: they will be at the beck and call, night and day, of the insured persons; there can be no incentive to good work, and there will be every inducement to men to shirk in every way careful and painstaking work; and the complete demoralisation of that part of the profession which undertakes this work will inevitably result. If Mr. Lloyd George wishes to appoint salaried whole-time officers, let him do it, but let all self-respecting medical men refuse to coöperate with them or to assist them in any way, and I would urge that consultants refuse to meet them. In my opinion the Government are seeking to finance their unworkable Bill at our expense. Let us be careful that we do not help them.

I hope that all members of the British Medical Association will refuse any further contribution to the Defence Fund until the general opinion of the profession has been taken on the action of the Council. In conclusion I would protest most strongly against the squandering of the funds of the British Medical Association in the issuing of such circulars as that sent out respecting the appointment of Mr. Smith Whitaker on Saturday last, the 2nd inst. If the British Medical Association wished to notify the profession as to their action the notice in to-day's (the 5th inst.) issue of the morning papers would have sufficed, and would have cost the fund nothing. If the profession accepts and works under this Bill I am convinced that they will deeply regret it.

I am, Sir, yours faithfully,

REGINALD THORPE, M.R.C.S. Eng., L.R.C.P. Lond.

Tooting Common, S.W., Dec. 5th, 1911.

To the Editor of THE LANCET.

SIR,—It was apparent at first sight that a direct attack on our rights and privileges was contemplated by the Bill; it sets a disgracefully low pecuniary value upon medical services while claiming to be an improvement upon existing club systems; it imposes compulsory insurance and compulsory medical benefits upon classes who do not desire them, and endeavours to impress medical assistance at sweated and ignominious rates of remuneration; it cheapens medical labour in order that the Chancellor may be bolstered up in his preposterous electioneering catchword, "Ninepence for fourpence and free medical attendance thrown in!" Most unacceptable of all provisions, the insurance net was to gather in all whose incomes did not exceed £160 a year. At this point we reach the crucial pivot round which the whole measure revolves, and it is important to bear this in mind. Mr. Lloyd George persists in trying to insist on an insured income limit of £160 a year; the profession tell him firmly that the wage of any worker claiming inclusion in medical insurance must not, and as far as they are concerned will not, exceed £2 a week. Twenty thousand medical practitioners have pledged themselves not to accept service unless this and five other conditions laid down by a unanimous profession are incorporated in the measure before it becomes law. When the time comes, should the Bill now escape the fate of being dropped by its promoters, we have only to put our pledges into operation in order to make the Act the most ghastly administrative failure in the history of national Parliaments.

As things go now there is every reason to anticipate such an ending, for both general practitioners with an exclusively private practice and those who work only in club appointments are beginning to realise more fully to what an extent their practices would be detrimentally affected under the conditions of an income limit of £160 per annum. In the former case it means that in every household from which a certain medical income is derived every year there would in future be a percentage of compulsorily insured beneficiaries who must either henceforth be attended for the munificent fees of 4*s*. 6*d*. a year per head (about 1*d*. a week!) or else be handed over to an insurance or club doctor for attendance at the same rate. Of course, I recognise and concede the point that if the Local Insurance Committees are properly approached and bargained with later on the profession may obtain from their own gardeners, coachmen, or chauffeurs, elected through the Friendly Societies slightly better terms. But medical men have not yet, I hope, come to that. To pursue the argument, the total contributions of all a private practitioner's insurance beneficiaries, supposing for the moment we undertook that kind of work, would go a very short way towards recouping him on his ledger account for the pecuniary loss sustained through their conversion from private paying patients to State insured semi-paupers.

To put a concrete case. A man, his wife, and two young children would employ their usual medical attendant, while a couple of sons and a daughter earning money as clerks and a governess would come under the State scheme. The medical man would have to pry into their incomes, and then to raise the fine point whether their board and lodging, allowed perhaps by a wealthy father, was to count towards their annual earnings. If the family attendant elects to decline insurance work the clerks and the governess, along with the domestic servant, would be obliged to seek medical aid in a more remote and poorly populated neighbourhood, where in a crowded surgery they will patiently wait their turn cheek by jowl with the flea-bitten pauper and the Saturday-night alcoholic. To the private practitioner, therefore, the annual loss in income may amount to anything between a third and a half of gross receipts. There is no mention in the Bill about compensation for this loss, for which the Government would be clearly responsible, nor yet for the damage done to the saleable value of practices.

And the club doctor. What about him? He at the best is only promised a shuffle of the insured beneficiaries and a re-deal. He will gain some new, he will lose some old, ones, and every few months there will be another shuffle. The rate of pay will be very little better from the wealthy State than that which from force of competition, and by the exercise of his charity, he agrees at present to accept from the Friendly Societies and slate clubs. Should he, as is generally the case, be already overworked and sweated, with more patients than he can reasonably be expected to attend to properly, the Bill, even if it brings him an increase in numbers, will sweat him still more. Similarly his patients will suffer for the same reasons. Besides, the malingering loafer out of work will send for him on every possible and unreasonable excuse, and threaten to report him to his virtual masters on the Local Insurance Committees if he fails, through stress of work or any other reason, to respond promptly to the call. A more sharply defined line would be drawn between the club and private doctor. Nor is it necessary to do more than allude to the extra work, inconvenience, and discomfort for doctors and public alike which would inevitably attend a measure dependent for its operation upon a cumbersome and intricate system of committees, local committees, auxiliary committees, and subcommittees. They are all after-suggestions, small patches of sticking plaster intended to hide the gashes of trenchant criticisms to which the glaring incapacity displayed in the conception of the Bill invited attention. One thing is now quite certain: the profession will have none of it. Another thing is almost equally clear, which is that for some unknown or unpublished reason the mandate entrusted by the whole profession to the British Medical Association has not been as effectively put into operation as the individual members of the profession had a right to expect. It appeared to have been lost sight of by the Council of the Association that they sought and were freely accorded the moral support of the profession at large, irrespective of membership or non-membership, and that their mandate was briefly to amend the Bill in accordance with the generally expressed wishes of all, so as to conform with the cardinal points, the whole six points, and nothing but the six points, or else to drop all negotiation with the Bill, especially after the meeting of the representatives in London, to whom such a magnificent lead had been given by the united practitioners of Lancashire and Cheshire. Well, it is not too late even now, and if the blow delivered by the profession as represented by the British Medical Association has been weakly delivered, the Government have still to meet the resistance which will follow from the body of the profession. When the proper time comes and the Bill emerges

as law in its present form a real blow will assuredly be struck unless 20,000 men have pledged their word for nothing not to take service. Meanwhile, Sir, I feel that I am only voicing the sentiments of hundreds of fellow practitioners when I say that in view of recent events some more responsible leadership than that of the Council of the British Medical Association and one more in touch with the real wants of us all is required.

I am, Sir, yours faithfully,

Trinity-road, S.W., Dec. 5th, 1911. H. B. GREENE.

To the Editor of THE LANCET.

SIR,—I have read with interest the letters of Dr. B. Hall, and I am pleased that at last someone has ventilated the views of the rural practitioner, for hitherto the majority of your correspondents appear to have been resident in London or the suburbs. There appears to be no other way of making known the requirements of the rural practitioner except through the medium of the press, for the branch meetings of the British Medical Association are usually held in the large industrial towns, and the majority of country doctors, many of whom reside several miles from a railway station, have no opportunities for attending those meetings and ventilating their views; consequently the opinions expressed at those meetings are not fairly representative of the profession as a whole.

I hope to avoid the error which so many of your correspondents have committed, in writing for town and country doctors alike. I know very little of the working of a medical practice in a large industrial town. I am a country doctor, and I am absolutely convinced that the *per capita* system of payment is far and away the best and most lucrative in a rural district.

I am medical officer to three village clubs with a total membership of about 250, all adult males. A large majority of the members are agricultural labourers, probably the healthiest class of men in the community. I am paid 5*s*. per member per annum, and the amount of sickness is exceedingly small. On the other hand, about 45 of my clients in one village are members of the National Deposit Friendly Society, whose system (and rate) of payment "for work done" appears to be considered fair and reasonable by many of your correspondents. I find that during the last eight years I have received for those of the 45 who have required medical attendance the sum of £46 3*s*. 6*d*. If those 45 had been members of my clubs, paying me the *per capita* fee of 5*s*. per annum I should have received just £90 for them during the same period. I am also medical officer to a rural post-office, and I find that during the last five years I have received in capitation fees the sum of £12 10*s*. I have a record of the work done under that appointment, and I find that if I had been paid "for work done" at the National Deposit Friendly Society's rates I should have received just 19*s*. I am not appending my name to this letter in case the Postmaster-General should not consider my appointment worth continuing. I do not think that any post-office medical officer would willingly exchange the present system and rate of payment under those appointments for one of payment for work done.

I agree with Dr. Hall in thinking that those members of the profession who are crying down the *per capita* system of payment are without experience of it. I cannot say what the effect would be in the large industrial towns, but I am quite sure that in the rural districts where sickness is rare any substitution of a "payment for work done" system in place of the present *per capita* system would mean a serious falling off in income to a large number of country doctors.

There is another point wherein I consider that the British Medical Association is not reflecting the views of the country practitioners, and that is the "free choice of doctor" principle. Anyone who has bought a country practice knows that when an appointment held by a predecessor is not obtained by his successor one year's value of that appointment is deducted from the purchase money; therefore, when an appointment is obtained it is bought and becomes a vested interest. The "free choice of doctor" principle takes away that vested interest without any compensation whatever. I can quite imagine that if it had been Mr. Lloyd George who had introduced the "free choice of doctor" principle all those who have purchased club appointments would have been up in arms against his interference with vested interests, but as it is the British Medical Association instead of Mr. Lloyd George they appear to be silently acquiescing. Probably the principle will be beneficial to urban practitioners, but it appears to me that the country doctor is being sacrificed for the sake of his brethren in the industrial centres.—I am, Sir, yours faithfully,

Dec. 4th, 1911. RURAL PRACTITIONER.

To the Editor of THE LANCET.

SIR,—The sincere thanks of the medical practitioners of this country are due to you for the strong line which you have taken throughout the course of the debate in respect of the Insurance Bill as far as it affects, and will affect, the profession. You have continually and continuously made clear the evils of contract practice which would be crystallised under State authority if that Act comes into operation; and you have ever been on the side of the general practitioner, whose welfare and interests you have always supported in every possible way.

Owing to circumstances which all men of reason in the profession can appreciate, you have not sought to make capital out of the position for your journal; and your pen has been most carefully and wisely restrained, so as neither to engender nor to increase the grave feeling of mistrust which has arisen in respect of the negotiations which have been carried on by the constituted leaders of the profession, who were appointed to look after our best interests, but whose exertions and heavy expenditure of valuable time and money have proved, apparently, so ineffective. At this time of serious crisis I am sure you will use your best endeavours to assist in steadying the position, in preventing a *débâcle*, and in opposing any panicky action which might rend the Association and destroy its powers for good, which under wise direction it must possess.

I am, Sir, yours faithfully,

Dec. 5th, 1911. A. GEORGE BATEMAN.

*** For reasons explained in a leading article we did not publish last week many individual communications with regard to the National Insurance Bill. As correspondents have reproached us for "closing the correspondence," we must point out that no such silly action has been taken, while the views of many of those who wrote to us last week formed the backbone of the editorial comments. We take this opportunity of begging those who address us not to spoil good arguments by mere abuse of those with whom they do not agree.—ED. L.

THE ORIGIN OF CANCER AND THE ORIGIN OF LIFE.

To the Editor of THE LANCET.

SIR,—In his very interesting lectures on Unicellula Cancri Sir Henry Butlin has shown in a striking manner the parallelism that exists between the life and development of different varieties of cancer cells and that of many of the protozoa. He seeks to show, in fact, that "the carcinoma cell is an independent organism like many a protozoon," that it is "a complete animal organism in itself"; and he is now prepared to maintain this view, "not only for carcinoma, but for every variety of malignant disease."

Looking to the generally admitted facts that, as Dr. Bashford says, "cancer arises *de novo* in each individual attacked," and that it occurs "by a transmutation of functional somatic into cancerous cells," as was originally pointed out by Farmer, Walker, and Moore in a paper communicated to the Royal Society on Dec. 7th, 1905, together with the many analogies dwelt upon by Sir Henry Butlin, there seems very much to be said in favour of his view.

To some essential points in his statement, however, I must demur. While all students of cancer are now practically agreed that cancer cells are derived from the tissue cells of the part in which they take their origin, this cannot correctly be spoken of as a kind of process "which has never hitherto been imagined." It is exactly the kind of process known as "heterogenesis," many examples of which I have described and illustrated in my "Studies in Heterogenesis" (1903), and it is a process which has been defined as "the production from the substance of organisms or their germs of alien forms of life."[1] It is true the transmutation here does

[1] An illustrated description of one of the most notable examples observed by me may be seen in the Proceedings of the Royal Society, vol. B, 76 (1905), pp. 385-392.

not lead to the production from the altered tissue cells of what would be generally admitted to be independent living organisms; and certainly the process cannot possibly be cited as an illustration of "the origin of life." Life was already existent in the tissue cells—their mode of life has only been changed; a process allied to heterogenesis has occurred.

I cannot, therefore, agree with Sir Henry Butlin when he goes on to say: "The host in which it dwells has fashioned it out of its own tissues, and, to borrow the figurative language of Scripture, the Creator has breathed into it the breath of life. ..... After ages of past and present civilisation, during which searchers and philosophers have sought to explain the origin and nature of life, we have come no further than this."

The true origin of cancer, as I maintain, is related to heterogenesis, and not, as he thinks, to the still more mysterious problem to which he refers; nor can it fairly be said that in regard to the solution of this problem we have come no further than the establishment of this particular instance of heterogenesis.

Probably Sir Henry Butlin has never studied my little book entitled "The Origin of Life" (1911), where experiments are described in which multitudes of independent living organisms have been taken from tubes (previously sealed hermetically) containing certain saline fluids which had some months before been heated for periods varying from 5–20 minutes to temperatures ranging from 125–145° C., while most of the organisms that had been produced within the tubes were such (torulæ and micrococci) as are known to be killed by exposure in fluids to 60–70° C. for a few minutes. Such experiments surely take us much further towards the solution of "the great enigma" than does any mere proof of the heterogenetic origin of cancer cells—however much they may be shown to be related to many of the protozoa.

I am, Sir, yours faithfully,

H. CHARLTON BASTIAN.

The Athenæum, S.W., Dec. 2nd, 1911.

THE UNICELLULA CANCRI.

To the Editor of THE LANCET.

SIR,—Sir Henry Butlin has stated the case for the unicellula cancri with his wonted lucidity and force, but I venture to question whether he has reduced his thesis to the simplest terms. Is it not a fact that, viewed from the broad biological standpoint, all the cells of multicellular organisms (metazoa) are protozoa? Are not the aggregated cells constituting the metazoa and the segregated cells known as the protozoa all separate, individual animal organisms, bathed in a fluid from which they extract their oxygen and nutriment, and to which they yield their excreta? In the higher metazoa some of these cells—e.g., muscle cells and neurons—are highly specialised and have lost the power of multiplying: such never give rise to cancer cells. Others—e.g., epithelial, endothelial, and connective tissue cells—are less specialised and retain the power of multiplying: there is no doubt that it is from these that the cancer cells are derived. Do we, however, by labelling such cells "parasitic protozoa," "unicellulæ cancri," advance our knowledge?

The cancer cells are manifestly cells which have thrown off their allegiance to the body politic and become rebels. The whole problem of cancer is summed up in the question, What is the cause of this act of rebellion?

I am, Sir, yours faithfully,

Wimpole-street, W., Dec. 3rd, 1911. HARRY CAMPBELL.

PHYSICAL TRAINING IN SECONDARY SCHOOLS.

To the Editor of THE LANCET.

SIR,—I have read with great interest the article on "Physical Training in Secondary Schools," which appeared in your issue of Oct. 21st (p. 1150), and heartily endorse the contents thereof, especially the remark that "the gymnastic teacher should possess expert training and should be a member of the school staff." THE LANCET also points out that, whereas there are many expert lady teachers of Swedish gymnastics, there is a great dearth of expert male instructors. The reason for this state of affairs is that several excellent institutions exist for the teaching of lady students of gymnastics, but that there have hitherto been no similar institutions for male students. An inquiry into the arrangements for teaching gymnastics in other countries reveals the striking fact that the subject has been made a university one in a considerable number, and that special schools, controlled by the State, exist for the teaching of it. Let me quote some examples:—

Sweden.—The Royal Central Gymnastic Institute, founded at Stockholm in 1813, provides a course of study of three years' duration, which includes all the branches of Ling's system. The first two years are devoted to educational and military gymnastics, and the course of instruction includes anatomy (dissections are compulsory), applied anatomy of gymnastics, and physiology. The third year is devoted to medical gymnastics, some theoretical work in which has already been gone through in the second year. Examinations are held at regular intervals, and after passing the final examination the title of gymnastic director is conferred upon the candidate. The institute is under medical supervision, and the chief teachers have the title of Professor and rank as such.

Belgium.—The Institute Supérieur d'Éducation Physique attached to the University of Ghent was duly opened in 1908. After three years' training in physical education the candidate receives the title of Licentiate in the Science of Physical Education. Later on, after further examination and the presentation of a thesis which the licentiate must defend, he may obtain the title of Doctorate in the Science of Physical Education. The syllabus of the course seems to show that it is very complete.

In Austria there are State institutions in Vienna, Prague, and Gratz. Similar institutions are to be found also in Bavaria, Prussia, Saxony, and Norway. I see, also, that physical education is included in the curriculum of the University of Wisconsin. In Denmark the subject of gymnastics has quite recently been made an optional subject for the degree of B.A., B.Sc., and diplomé as school teacher.

In England gymnastics is, I regret to say, neither a university subject nor one which interests the medical profession as a whole. Indeed, I have no hesitation in saying that a medical man who opened a gymnasium for educational gymnastics would be shunned by his colleagues. Even the medical supervision of school gymnastics is almost an unknown factor in this country. This is not as it should be, and I consider that THE LANCET exactly states the case when it says that there should be a close coöperation between the medical officer and the gymnasium instructor. The fact cannot be denied that physical education largely enters into the subjects of hygiene and prevention of disease, and that overdoing or misuse of it leads to pathological conditions, especially in school children. Under these circumstances I feel that many will agree with me when I suggest that physical education be made one of the subjects of the ordinary medical curriculum.

The state of affairs at present is that gymnastic classes are held in the vast majority of the schools by people who are not competent to take them, and as matters stand now children with adenoids, with spinal curvatures, with weak chests are all performing the same gymnastic exercises together with healthy children, and they are doing so under the direction and control of a teacher who is incapable of judging whether he is doing good or harm thereby. Outside schools we have an equally deplorable state of affairs in many directions. The advertising quack who does a large and flourishing trade in so-called scientific gymnastics, with or without some special apparatus, and who boasts of self-arrogated invention and discovery, need only be mentioned.

The only way to improve matters is for the medical profession to take them into their own hands, for until they do so no change can be effected, and I sincerely hope this will be done ere long. In connexion with this, however, I should like to point out that an institute for teaching educational gymnastics will be open in this city in Marylebone in the immediate future. The object of the institute is to give thorough instruction, theoretical and practical, in the science of physical education on the basis of the Swedish system of gymnastics. The course of training will follow as closely as possible the lines upon which the Royal Central Institute at Stockholm is working, with such modifications as occasion requires. The syllabus of the Board of Education will be thoroughly studied and the requirements of the Board will be

met. Anatomy, physiology, theory of movement, hygiene, &c., will be included in the syllabus. The practice of gymnastics will be learnt and taught by students, for which latter purpose classes of school children will be available. The course of training will be of two years' duration, but is so arranged that the first year will form a complete course by itself, fitting the student for posts in elementary schools. The second year's course will enable the graduates to take full charge of any school of whatever standing. A special feature of the institute will be that facilities will be afforded to medical men to gain information and to critically observe the work done.—I am, Sir, yours faithfully,

EDGAR F. CYRIAX, M.D. Edin.

Craven-hill, W., Dec. 2nd, 1911.

THE PRESCRIPTION OF TUBERCULIN.

To the Editor of THE LANCET.

SIR,—In the courteous review of our work "Diseases of the Lungs," which appeared in THE LANCET of Nov. 25th, the important question is raised as to whether tuberculin should be prescribed in fractions of a cubic centimetre or milligramme. Before advocating the prescription and dispensing of the remedy in cubic centimetres we went carefully into the matter with Messrs. Squire and came to the conclusion that for accuracy and facility of dispensing the volumetric measurements were the best.

We beg to submit the following memorandum which we have received from Mr. P. W. Squire on the subject.

We are, Sir, yours faithfully,

R. DOUGLAS POWELL.
P. HORTON-SMITH HARTLEY.

London, Dec. 4th, 1911.

[ENCLOSURE.]

The writer of the review in THE LANCET of Nov. 25th, 1911, is evidently under the impression that he would be obtaining the same amount of solid substance whether he ordered a fraction of 1 gramme or of 1 cubic centimetre of tuberculin, but, of course, this is not so, because 1 cubic centimetre of the bacillary emulsion, for example, weighs 1·114 grammes, and this difference will have to be allowed for in each individual dose of dilution if it were ordered by weight. This introduces an unnecessary factor and an altogether needless amount of trouble. So far from simplifying matters prescribing "by weight" would be introducing complications. When prescribing tuberculin by measure (in cubic centimetres) it diminishes any possibility of a misunderstanding as to whether the figures relate to the liquid itself or to the solid substance it contains. It is, for instance, a simple matter to recollect that 1 cubic centimetre of emulsion represents 5 milligrammes of solid matter, but not so easy to recollect that 1·114 grammes of the liquid is equivalent to the 5 milligrammes. The fact that the emulsion is standardised to 1 cubic centimetre indicates that it is intended to be prescribed "by measure" and not "by weight." It is also much more convenient to work a fluid "by measure" than "by weight."

P. W. SQUIRE.

THE VALUE OF THE ALBUMIN REACTION IN TUBERCULOUS SPUTUM.

To the Editor of THE LANCET.

SIR,—The recent announcement of Lesieur and Prirey[1] as to the presence of albumin in tuberculous sputum seemed to afford a valuable and simple aid to the diagnosis of phthisis. Being temporarily in charge of the Birmingham Municipal Sanatorium at Yardley-road at the time of the article in THE LANCET[2] I took advantage of the opportunity to test the value of the reaction. The author's technique was adhered to throughout, and in the final stages nitric acid was used in preference to the heat method as being more delicate and accurate.

I was able to examine the sputum of 55 patients, of whom 39 had tubercle bacilli present and so were definitely tuberculous. Of these 39 albumin was present in 21, or 53·8 per cent., and absent in 18, or 46·2 per cent., so that the test appears to have no diagnostic value. No very extended conclusions can be drawn from such a small number of cases, but there appears to be a greater likelihood of the reaction being given if tubercle bacilli are present in the sputum, for of the remaining 16 cases which did not present tubercle bacilli, yet which otherwise showed all the signs of phthisis, and were, I think, undoubtedly tuberculous, only 4 gave the albumin reaction and 12 were negative.

I am indebted to my friend, Dr. W. H. Wynn, the visiting physician, not only for permission to publish this, but also for the interest he took in the matter, and to Miss D. Dawson for her assistance in the laboratory.

I am, Sir, yours faithfully,

H. S. GETTINGS, L.R.C.P. & S. Edin., L.F.P.S. Glasg., D P.H. Birm.,
Assistant Medical Officer, Portsmouth Municipal Tuberculin Dispensary.

Dec. 1st, 1911.

[1] Paris Médical, 29, vol. iv., 1911.
[2] THE LANCET, Oct. 14th, 1911, p. 1084.

A SPHYGMOGRAPHIC METHOD FOR THE ESTIMATION OF SYSTOLIC AND DIASTOLIC BLOOD PRESSURE.

To the Editor of THE LANCET.

SIR,—Mr. S. G. Longworth correctly remarks that in current descriptions of the Korotkoff method for the determination of the diastolic blood pressure this is read off "at the point at which a distinct change in the intensity of the sound occurs." This alteration in intensity, pitch, and duration of the sound may be phonetically represented by *swish* to *dup*; the sound *dup* gradually increases to a maximum and then dies away as the air escapes.

The maximum intensity of the sound is taken as representing the diastolic pressure, but it is not always easy to determine this point, and different observers when examining the same patient frequently give different results, and, moreover, the sound not seldom continues equally loud over considerable differences in pressure.

I take the disappearance of the sound as the standard because the event can be certainly and readily determined, and thus has value for comparative observations on the same case. The reading so obtained is perhaps lower than the true diastolic pressure, but the difference would appear to be small. "Miss Allen and Mr. Engle, in the study of the blood pressures of 35 patients in the Johns Hopkins Hospital, found that the readings by the Korotkoff method never differed more than 2–5 mm. from control determinations made at the same time with the Erlanger apparatus, though they took the minimal pressure at the point at which the second sound absolutely disappeared."[1]

I am, Sir, yours faithfully,

J. DAVENPORT WINDLE.

Southall, W., Dec. 4th, 1911.

SUTURE OF THE ABDOMINAL WALL WITHOUT BURIED SUTURES.

To the Editor of THE LANCET.

SIR,—In April, 1906, I described in THE LANCET[2] a double-loop suture which I have reason to believe has proved useful. Recently I have experimented with another form of suture which fulfils similar conditions and possibly has some advantages. The double-loop suture had been used by several surgeons before my description of it, and this may be the case with regard to the method I wish to describe.

The advantage of the new method is that, having a single loop, it is more easily removed, and also that it draws the deep parts together with more lateral strain, thus approximating to the action of a buried suture.

A curved needle armed with silkworm gut is passed from without at some distance from the edge of the incision and through a layer of deep tissues on the opposite side; it is then repassed through the skin somewhat in front of the first puncture. The same process is repeated from the other side, the loops being interlocked. They may be tied independently, or one end may be left long and tied to the corresponding long end of the other loop.

These sutures act as "tension sutures," and a continuous horsehair is all that is required to complete the union. In removing the sutures it is best to cut both sides, otherwise the interlocking makes removal more difficult.

I am, Sir, yours faithfully

J. B. PIKE, M.R.C.S. Eng.,
Honorary Surgeon to the Loughborough Hospital.

Loughborough.

[1] Hirschfelder: Diseases of the Heart and Aorta.
[2] THE LANCET, April 7th, 1906, p. 967.

MUNICIPAL HONOURS.—Mr. R. J. Ryle, M.D. Oxon., M.R.C.S. Eng., J.P., was on Nov. 22nd elected a member of the Brighton town council by a majority of 190 votes over his opponent.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Infirmary and the Insurance Bill.

THE chairman of the board of management has sent a letter to all Members of Parliament for the district from which the infirmary patients are drawn stating that in the opinion of the board the Insurance Bill, as it now stands, will seriously affect the financial position of voluntary hospitals, impairing their efficiency and capacity for good, so that insured persons will run grave risks of being deprived of care and attention in cases of serious illness, and urging that hospital benefit as well as medical and sanatorium benefits should be provided by the Bill.

Jewish Kitchen in Royal Infirmary.

After a good deal of correspondence and discussion the authorities have decided to establish a separate Jewish kitchen, conditional upon the Jewish community defraying the expenses, providing the utensils, and employing the cook.

The Cancer Hospital and the Causes of Cancer.

The annual meeting of the Christie (Cancer) Hospital was held on Nov. 27th. This institution, besides offering treatment and providing a home for acute cases, undertakes the study of the disease. The committee, in coöperation with the Pilkington trustees, has this year appointed Dr. C. Powell White as pathologist. During the year there were 101 in-patients and 41 out-patients. The subscriptions fell from £424 to £377. Many patients are admitted in a late stage of the disease for the alleviation of their suffering during the close of their lives. The death-rate from cancer seemed to be increasing. In Manchester last year 1 in every 17 deaths in the city was due to cancer, the total being 660 out of 11,374 deaths. For the first time in the history of the hospital during its 19 years' existence the number of men patients has been nearly as large as that of women. Dr. Powell White dwelt on the need for a fully equipped laboratory, as well as for an inquiry into the habits, occupations, and hygienic surroundings of the patients. He pointed out that the parts of the body most liable to disease varied in different countries, and in many cases the variations could be traced to specific habits. In Europe and in all temperate countries cancer of the stomach was the commonest form. In Travancore, in the south of India, where the natives chewed the betel-nut, the cancer most commonly affected the mouth; while in Cashmir, in the north of India, where the natives carried charcoal stoves under their clothes to keep them warm, the parts of the body that came in contact with the stoves were most affected.

A Great Water Scheme.

The Ashton, Stalybridge, Dukinfield, and Mossley district waterworks committee has undertaken a tremendous piece of work in relation to their water-supply. Over £1,000,000 have been spent in connexion with the Chew Valley scheme, which will be completed a few months hence, affording provision of water for many generations to come, with no risk of shortage of water even in the longest drought.

Sewage Purification: £40,000,000 Wasted Annually.

Dr. Grossmann, in a paper read on Dec. 1st before the Manchester Section of the Chemical Industry, stated that if all the valuable manurial constituents which are present in sewage could be utilised on the land they would represent a value of somewhere about £40,000,000 annually. The water-carriage system at present in use was the most wasteful system on economic grounds, but it was recognised that its advantages from a hygienic point of view should be such as to outweigh commercial considerations. The sewage at the sewage works, consisting of a liquid and solid part, underwent further purification; the liquid part ultimately found its way into the rivers and sea, and if the purification was thoroughly carried out would fulfil all anticipations with regard to the public health. The disposal of the solid part, however, was still a danger to the community. If the "sludge" was carried out to the sea there was danger of infection to sea life, such as oysters. Moreover, part of it might be washed back to places on the coast, as had actually occurred at several seaside places. If dumped on the ground it created a nuisance, and if used on land for farming purposes there was danger of infectious diseases being communicated to cattle and human beings from grass and grass crops on such land. The value of sewage sludge, calculated on the dry substance contained in it, was only 10*s.* a ton, and it did not pay the farmers to use it, except those in close vicinity to the works, on account of the cost of carriage. Nor could it be profitably used as a producer of illuminating gas. Until, therefore, the disposal of sludge was effected by sound hygienic methods there was still danger to the community. No process for the disposal of sewage sludge could be considered satisfactory which did not return the manurial constituents contained in it to the soil in a thoroughly sterilised condition, and sludge could never become a valuable manure unless it was previously freed from the greasy matters arising from soapsuds and other fatty substances which in the sewers became mixed with the sludge and prevented its manurial constituents from being assimilated by the plants.

Dec. 4th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Public Health and Infant Mortality.

THE second lecture of a series on the Civic Life of the City" was given at the Friends' meeting-house by Dr. E. W. Hope, the medical officer of health, on Dec. 3rd, the subject of the lecture being "The Public Health." He showed that the rate of mortality of all great centres of population was largely contributed to by infant mortality, and any causes, therefore, which directly or indirectly lessened the amount of attention paid to infants added to that mortality. Privation, for example, which deprived the nursing mother of food, immediately affected the infant, who then readily fell a victim to adverse circumstances. The subject had been recognised as one of such vital importance that in Liverpool and other places the health committees had established special committees whose sole function was the preservation of infant life. Dr. Hope then drew attention to two important Acts of Parliament specially designed to safeguard infants—namely, the Midwives Act of 1902, which provided for the training, regulation, and supervision of midwives, and the Notification of Births Act, which enabled visits to be paid to houses where such visits were needed. Various structural alterations and improvements relating to housing, hospitals, &c., were then described by Dr. Hope, who also dealt in an interesting manner with the water-supply of the city, maintaining that it was the best possible. The lecture was illustrated by means of lantern slides and was cordially appreciated.

Wireless Telegraphy at the University of Liverpool.

Through the generosity of Sir William Hartley, the University will shortly be able to receive messages by wireless telegraphy. Sir William Hartley has generously undertaken to defray the cost of a complete installation at the University. Professor Marchant, the head of the department of electrical engineering at the University, will control the installation. Sir William Hartley is to be congratulated upon his public spirit and great generosity, which will prove of incalculable advantage to teaching and research at the University.

Liverpool School of Tropical Medicine and Yellow Fever.

When the late Sir Rubert Boyce collected funds to form the Yellow Fever Bureau at the Liverpool School of Tropical Medicine he contemplated the despatch of an expedition to some country infested with yellow fever to make further research into its cause and treatment. In pursuance of this object the school has now decided to send out Dr. Harold Seidelin, scientific secretary of the bureau, to conduct some new and important researches into the disease, in Yucatan, Mexico. Dr. Seidelin leaves for New York by the *Mauretania* on Saturday, Dec. 9th.

Garston's New Accident Hospital.

The finance committee of the Liverpool city council has decided to offer the executive committee of the proposed new accident hospital at Garston £7500 towards the erection of a new hospital, and this proposal was put before a meeting of the executive committee held on Nov. 29th. Some time ago when the matter was first mentioned, the Liverpool city council offered £5000 towards the new hospital; but

this was not considered sufficient to free Liverpool from its obligation, which was incurred at the time of the incorporation of Garston, and a petition was extensively signed by the residents of Garston in support of Councillor Rawlinson's amendment that £10,000 should be granted by the city council. This was defeated by the council, and the matter has since been brought up, as under the will of the late Sir Alfred Jones the committee should receive £10,000 towards the building and maintenance of a new hospital, which is urgently needed. The committee decided to accept the offer of £7500, if the city council sanctioned the proposal of its finance committee.

Bootle Borough Hospital and National Insurance Bill.

At a meeting of the committee of the Bootle Borough Hospital the following resolution was carried unanimously:—

That the general committee of the Bootle Borough Hospital is unanimously of the opinion that the National Insurance Bill is incomplete unless it provides for the hospital treatment which insured persons must have if their medical needs are to be covered by the Bill.

In passing the resolution the committee is of the opinion that under the operation of the Bill in its present form the hospital will suffer loss of annual income to the extent of about £1000, and will still be called upon to provide for the same number of in-patients, with a very slightly reduced aggregate of out-patients, out of its considerably reduced income. The committee desires the recognition of voluntary hospitals which are largely dependent for their incomes on workmen's contributions, and who obtain treatment for themselves and families in time of need.

Dec. 4th

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

New Lectureship for the University of Aberdeen.

THE late Mr. John Thomson, printer, of the Aberdeen University Press, Limited, in his will instructs his trustees on the death of his wife to pay to the University Court of Aberdeen the sum of £2000 to found and maintain a lectureship on "The Structure and Functions of the Human Body," in order "to afford information to young persons as to the due care of the body in early life with a view to its healthy development and the prevention of its abuse by intemperance, &c." The lectureship is founded in memory of the founder's son, the late John Farquhar Thomson, M.A., who was first bursar in his year in arts at the University of Aberdeen. The University Court is instructed that a member of the University teaching staff shall yearly be appointed by them to hold the lectureship, the lectures to be delivered during the winter session of each year and to be of such number as the University Court, on the recommendation of the Senatus, shall fix when making the annual appointment. The lecturer is to be paid the full revenue of the said £2000, the lectures are to be delivered in the University Buildings at Marischal College, and are to be open, without fee, to the public.

Alleged Premature Dismissal from Hospital.

In the Dundee Sheriff Court on Nov. 27th, Sheriff Neish issued his interlocutor in an important action brought against the Dundee town council. The pursuer, a cabinet-maker, as an individual and as tutor and administrator-in-law to his children, sued the town council for £60 as damages by reason of their having, he alleged, discharged his daughter from the King's Cross fever hospital, Dundee, before the fever, from which she was suffering, had run its course. In consequence of her alleged contagious and dangerous condition three of the pursuer's children shortly afterwards took infection from her and suffered from illness. The town council denied negligence and pleaded that the action was irrelevant and incompetent. The sheriff-substitute found that the pursuer's averments were not relevant and dismissed the action, finding the pursuer liable in expenses. In a note, his lordship said that pursuer did not aver that the medical officer was defenders' servant. All he said was that the defenders were responsible for their medical officer. He did not think it could be maintained that the medical officer was the servant of defenders. His appointment was regulated by the Public Health (Scotland) Act, 1910. His duties were not prescribed by defenders, but only with the approval of the Local Government Board, and he could not be removed from office except by, or with the sanction of, that Board. In the sheriff's opinion the defenders had performed the duty incumbent on them in a question such as was raised in the case at issue. They had a competent and qualified man as medical officer, and the Local Government authority could control the medical officer's administration. The result was that pursuer had not set forth any relevant grounds for his claim, and dismissal of the action appeared to be the appropriate consequence.

Dec. 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Council of the British Medical Association and the Insurance Bill.

THE action of the Council of the British Medical Association in advising its medical secretary, Mr. J. Smith Whitaker, to accept the deputy chairmanship of the Insurance Commission is giving rise to comment in Irish medical circles. It is thought inconsistent for the Council, while stating that the "Insurance Bill, if it becomes law in its present shape, is fraught with danger to the public and to the medical profession," to recommend its chief executive officer to accept office for the purpose of administering the Bill. The Council is handing over its chief of staff to the opposition. Already the profession in Ireland was losing confidence in the British Medical Association, and this action of the Council is likely still further to diminish its confidence. It is felt that while the Council had no right to control Mr. Smith Whitaker's actions, it should not have seemingly recommended his appointment. In view of its action it is difficult for the Council at a later date, if deemed necessary, to advise the profession not to accept employment under the Bill. On the other hand, some few of the profession consider that under all the circumstances it was right to accept the offer, as it indicated that Mr. Lloyd George was holding out an olive branch to the medical profession. Looking at the situation calmly and dispassionately, the moderate men in the profession believe that the Council of the British Medical Association would have shown more diplomatic, if not indeed more legal, acumen had they told their official that he must accept or decline the position solely as a private individual and without seeking their approval; or, better still, had they withheld their own views until they had consulted the rank and file of their members through the Representative Body. To say that there was no time to do this is no adequate excuse, for the members of the Representative Body could have been summoned for Dec. 6th, just as easily as the Council was, and as they had been consulted in other matters in the previous negotiations why should they not have been in this? There is great fear that the action of the Council may injure the movement for welding the medical profession together. So far as Ireland is concerned, there is also a strong feeling that much more might have been done to secure medical benefits, and this is emphasised by the Dublin Trades Council which, on Dec. 4th, passed a resolution emphatically condemning the Irish Parliamentary Party "in their action in depriving Irish workers of the medical benefits of the Insurance Bill."

Appointment of an Assistant Medical Officer of Health of Dublin.

The corporation of Dublin has appointed Mr. M. J. Russell assistant medical officer of health of Dublin, to give his whole time to the duties of the office. The superintendent medical officer is not a whole-time officer, nor has he previously had the assistance of any medical man other than that given by the dispensary medical officers in their own districts.

Pigs and the Public Health.

The Dublin corporation at its last meeting adopted an important report of its public health committee dealing with the keeping of pigs in the city. A disregarded by-law of the corporation provides that pigs shall not be kept anywhere in the city within 50 feet of a dwelling. There are at present in Dublin some 500 piggeries, containing about 5000 pigs, about three-fourths of these piggeries, according to the public health committee, being situated within the 50 feet limit. To avoid interfering with the important industry of pig-rearing, the committee recommended, and the corporation agreed to, the suspension of the by-law. The

Local Government Board has expressed its disapproval of this step, while the council of the Dublin Sanitary Association has expressed the opinion that the keeping of swine under such conditions necessarily constitutes a nuisance within the meaning of the Public Health Act. The public health committee, however, is "under the impression that pigs kept in scrupulously clean surroundings are not any source of danger to public health." But what guarantee has the public that the piggeries are kept in even moderately clean condition?

A Bishop on the Election of Medical Officers.

The Most Rev. the Bishop of Ardagh has addressed a letter to the members of the Longford board of guardians in which he asks the guardians to elect no candidate that fails to prove (*a*) high-class medical learning, as shown in diplomas and testimonials; (*b*) morality, especially social virtue and sobriety; and (*c*) a kind and gentle disposition in dealing with the poor; and in the second place to give the appointment to the candidate who possesses the above qualifications in the highest degree.

Claim of Privilege by Medical Witness Allowed.

A claim of privilege was successfully made by a medical man in a magisterial court at Bray last week. Dr. C. Brew, who was summoned as a Crown witness in the case of a young woman charged with the murder of her child, on being sworn, said that anything he knew about the girl as her medical attendant was of a purely confidential nature and he considered that he was privileged not to give evidence in regard to it. District Inspector Molony submitted that Dr. Brew had no right to claim privilege in the case of homicide or infanticide. The state of the defendant was distinctly relevant to the point at issue. The magistrate, however, held that Dr. Brew was privileged not to give evidence, and gave him leave to withdraw.

Health of Belfast.

The report of the medical officer of health on the health of Belfast between Oct. 15th and Nov. 18th, presented to a meeting of the city council on Dec. 1st, showed that 267 cases of infectious disease had been notified, viz.: 4 of typhus fever, 15 of typhoid fever, 159 scarlet fever, 4 of simple continued fever, 44 of diphtheria, 2 of membranous croup, and 39 of erysipelas. Also 39 cases of pulmonary tuberculosis had been notified. During this period the death-rate of Belfast from all causes was 16·4 per 1000, from chest affections 5·4, and from zymotic diseases 1·2. The cases of infectious disease notified are 55 in excess of the number notified in the preceding month, and 51 in excess of the number notified in the corresponding month of 1910. This increase is mainly due to scarlet fever, the number of cases of which is 59·55 per cent. of the total cases notified.

The Water-supply of Belfast.

At a meeting of the Belfast Association of Engineers held on Nov. 23rd curves of the rate of increase of population of Belfast and of the consumption and supply of water of the city for the past 20 years were shown, and the probable future requirements for the next 10 years were indicated. These curves demonstrated the accuracy of the estimate of Mr. Macassey, late engineer of the Water Board, who in his report to the Water Commissioners of Belfast in 1891 showed the necessity for constructing a reservoir in the Silent Valley of the Mourne Mountains and having it in full operation in 1907. He calculated that in 1906 the consumption would almost equal the supply of 16½ million gallons per day drawn from the Woodburn and Stoneyford reservoirs, with the additional 3 million gallons brought down in the Mourne conduit. Further, it was established that had the Water Commissioners acted on the advice of their late engineer the city would not now be depending on a restricted supply. A critical stage has been reached, for the demand in Belfast has exceeded the supply by about 2 million gallons a day, and the city is dependent on wet weather to fill the reservoirs and keep them full. It is stated that plans are being got ready by the Commissioners for constructing a new reservoir, but it will take four or five years to complete it, and if the population of Belfast goes on increasing a second reservoir will be needed in 1921, by which time the consumption will have increased to 18 or 20 million gallons a day, and this would mean financially an expenditure of perhaps another £1,000,000. The general feeling of the engineers at this meeting was that some quick scheme should be temporarily installed, and they favoured pumping the water of Lough Neagh, and with a few miles of 24 in. pipe connecting this up to the Stoneyford system, which could deliver 4½ to 8 million gallons a day to Belfast at a fraction of the cost of the Silent Valley reservoir. Professor W. StC. Symmers was quoted to the effect that the sterilising effect of the sun's rays on the vast expanse of Lough Neagh was quite sufficient to render its waters fit for drinking purposes. What is good enough for Lurgan, with a 17·5 death-rate, should be safe for Belfast, with a death-rate of 18·6.

A New Medical Guild in Belfast.

A circular has just been issued to the general practitioners of Belfast for a preliminary meeting to be held in the Medical Institute on Dec. 7th for the purpose of organising a union or guild for the object of promoting and safe guarding the interests of all.

Epidemic Disease in Dundalk.

On Nov. 28th, at a meeting of the Dundalk urban council, reports received from the medical officers showed a marked increase in the occurrence of erysipelas, scarlet fever, enteric fever, and especially of diphtheria, of which since the last meeting 10 cases had been notified. No cause has so far been found for the epidemic, but it has been decided to summon weekly meetings of the sanitary committee during the outbreak, and to call a special meeting of the urban council to consider a report on the sanitary arrangements from the Local Government Board's medical inspector.

Dec. 5th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Consumption of Alcohol in 1910.

THE Ministry of Finance has just prepared the statistics of the production and consumption of alcohol during the year 1910, and as I have often remarked in this column statistics of this class do not make pleasant reading, for the use of spirituous liquors is steadily increasing in France. In the year 1910 the consumption exceeded that of 1907 by 110,000 hectolitres of pure alcohol—an increase of nearly 10 per cent. in four years. This, moreover, is only the quantity recorded for fiscal purposes and there will have to be added to the foregoing figures the amounts used by the *bouilleurs de cru*. However that may be, the average consumption of pure alcohol per head of the population, as recorded for fiscal purposes, was 3·59 litres last year, 3·46 litres in 1909, 3·44 litres in 1908, and 3·31 litres in 1907. The departments in which the use of spirituous liquors is most prevalent are here shown in the order of the average officially recorded consumption per head of the population: Seine Inférieure, 12·11 litres; Calvados, 9·38 litres; Somme, 9·36 litres; Eure, 9 litres; Pas de Calais, 8·44 litres; Oise, 7·92 litres; Manche, 7·28 litres; Eure et Loir, 7·15 litres; Aisne, 6·71 litres; Mayenne, 6·37 litres; Orne, 6·27 litres; Côtes du Nord, 5·64 litres; Finistère and Ille et Vilaine, 5·46 litres; Seine et Oise, 5·18 litres; Sarthe, 4·80 litres; Ardennes, 4·77 litres; Nord, 4·51 litres; Seine et Marne, 4·43 litres; Marne, 4·34 litres; and Seine, 4·25 litres. In the other departments the average consumption per head is less than 4 litres. In Gers it is only 0·70 litre; in the Landes, 0·81 litre; in Corrèze, 0·84 litre; in Vendée, 0·85 litre; in Lot et Garonne, 0·88 litre; in Lot, 0·92 litre; in Dordogne, 0·95 litre; and in Tarn et Garonne, 1·01 litre. As regards the relative consumption in town and country, the average per head of the population was 2·97 litres in the country and 4·96 litres in towns.

A Question of Medical Fees.

The seventh chamber of the Tribunal of the Seine has recently decided a legal question relative to medical fees under the following circumstances. On the recommendation of his ordinary medical adviser a gentleman had his son examined by Professor Duval, who thereupon said that an immediate operation in a private hospital was necessary. The operation was successful and the father of the patient paid the surgeon's fees. The ordinary medical adviser at the same time claimed 1200 francs for attendance on the patient before the operation, for being present at the operation, and

for visiting the patient up to the time of his discharge from the hospital. The father offered 800 francs, saying that as he had not asked his ordinary medical adviser either to be present at the operation or to visit the patient afterwards, he did not, in fact, owe anything under these two heads. The tribunal gave judgment in favour of the father, with the remark that attending at an operation and paying visits without the request of the family did not render the family liable to pay fees for such attendance and visits.

Monument to Dr. Guinard.

Last summer I referred in this column to the murderous attack on Dr. Guinard, one of the surgeons of the Hôtel Dieu—an attack which unfortunately caused his death. Immediately afterwards a subscription list was opened for the purpose of erecting a monument to him in the court of the Hôtel Dieu, probably on the very spot where he fell. The subscriptions already amount to 13,000 francs, and it is hoped that 20,000 francs may be collected, for there are several medical societies which have not yet signified their intention of contributing; it is also expected that the General Council of the Seine and the municipal council will make liberal grants.

Workmen's Associations and Tuberculosis.

In the belief that he was acting for the best M. Delcassé, the Minister of Marine, on Oct. 20th issued a circular to the ports having for its object the retirement of workmen suffering from tuberculosis. Compensation was to be granted to men discharged under these circumstances at the rate of 27 centimes per day for patients in the first stage of the disease, 54 centimes for those in the second stage, and 81 centimes for those in the third stage. The scale of compensation was not objected to, but the workmen's association at the port of Brest held a meeting and decided to agitate against the discharge of men suffering from tuberculosis and against the dispersal of men on half pay. Other similar associations followed this example. The workmen at Rochefort issued an appeal in which they said that if any of them were tuberculous they had become so in the service of the State as employer, and that their disease was due to overwork and to the unwholesome state of the buildings in which their duties were carried on. They furthermore argued that the State in the capacity of an employer ought not to set so bad an example to private employers.

Presentation to Professor Hayem.

Many professors of the Faculty of Medicine, the director of the Assistance Publique, hospital physicians, and the majority of the pupils of the eminent clinical teacher, Professor Hayem, assembled on Nov. 19th at the Hôpital Saint Antoine for the purpose of presenting him with a medal struck on the occasion of his retirement from the position of professor and hospital physician. The medal is the work of the sculptor, Roger Bloche. On one side it represents a bust of the professor and on the other side it shows him lecturing in the amphitheatre with the most celebrated of his pupils in the background. Dr. Milard, who presided, gave an outline of Professor Hayem's distinguished scientific career, and in particular the discovery of the physiological serum which bears his name. Professor Landouzy recalled the fact that Professor Hayem's grandfather had been a celebrated physician. Other addresses were then delivered by M. Mesureur, M. Dastre, Professor Barrié, Professor Gilbert, and Dr. Letulle. Professor Hayem, speaking with much emotion, expressed his thanks to his friends, colleagues, and pupils, with special reference to the organisers of the presentation, Dr. Gaston Lion and Dr. Bensaude.

Disorderly Scenes at the Lectures of M. Nicolas.

The disturbances created by the medical students at the lectures of M. Nicolas have begun again worse than ever. The students say that their professor, although distinguished as an embryologist, is not an anatomist, and they find fault with the time-table arrangement of the classes. For instance, instruction in osteology, which was carried on for two months at the amphitheatre of Clamant, now lasts only 16 days since the introduction of the system followed by M. Nicolas. They also complain that the dissecting-room subjects are so imperfectly injected as to be in a sorry condition when brought out. As the disturbances were becoming worse, the lectures of M. Nicolas have been provisionally suspended until Dec. 8th.

Dec. 4th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Physiological Effects of Balloon Ascents.

Dr. Flemming, of the Emperor William Academy in Berlin, has published an account of physiological and pathological observations made by him during balloon excursions, the ascents having been undertaken for the purpose of ascertaining the influence of high altitudes on the human body. He said that although balloon ascents are of frequent occurrence, experiments of this particular kind have nevertheless been rather uncommon in consequence of the fact that at great elevations some of the psychical faculties are weakened and the bodily energy becomes paralysed. No actual pain is felt, but the result is a state of apathy which renders the occupants of the car unfit for scientific work. Inhalation of oxygen, however, restores the normal psychical state The symptoms are, in fact, very like those observed in anæmic persons and are produced by a deficient supply of oxygen to the cerebral cortex. In anæmia the carriers of the oxygen—namely, the red corpuscles of the blood—are insufficient to convey the necessary amount of oxygen to the cortex, whilst at high altitudes a similar effect is produced by the diminished supply of oxygen in consequence of the rarefaction of the air. In Dr. Flemming's experience one of the symptoms observed at a great elevation was well-marked cyanosis of the skin, the mucous membranes, and the hands, which began to appear at a height between 4000 and 5000 metres. The pulse became very frequent, but inhalation of oxygen from a supply carried in a gas bottle brought its rate down to that which is usual on awaking after a quiet rest in bed. When the administration of oxygen was irregular or was commenced too late, then the frequency of the pulse became diminished, but not to the low rate of 68 beats per minute, as was the case when the supply of oxygen had been regular from the beginning. The respiration became more frequent with the increasing rarefaction of the air and also more superficial and irregular. This was partly caused by the deficiency of oxygen, which made the muscles less active; the insufficient oxidation of the tissues also led to the formation of certain products which had an irritant effect on the motor centres of the spinal cord. The respiration was also embarrassed by the expansion of the intestinal gases, as was shown by measuring the circumference of the abdomen. Dr. Flemming remarked that the red corpuscles of the blood were generally supposed to increase in number during residence in mountain resorts, but in the course of his balloon ascents he found that they decreased from 5,800,000 per cubic millimetre on the low ground, to 3,388,000 at an altitude of 8910 metres. This was, in his opinion, due to the fact that the low temperature of − 40° C. at that altitude produced a contraction of the capillary vessels of the skin, so that they became pervious only for the plasma of the blood but not for the corpuscular elements, the temperature and not the altitude being thus the decisive factor. It was remarkable that this low temperature was supported without much difficulty and without a feeling of intense cold, the cause being the dryness of the air and the intensity of the sun's rays, especially of the calorific ultra-red rays. The ultra-violet rays sometimes produced severe dermatitis; some of the balloonists suffered from conjunctivitis, but Dr. Flemming, who had protected his eyes by green-yellow glasses, fortunately escaped it. In conclusion, he described some interesting bacteriological experiments on the influence of the sunbeams on certain pathogenic micro-organisms, especially on pure cultures of the bacilli of enteric fever and cholera, bacillus pyocyaneus, bacillus prodigiosus, and the tubercle bacillus. In the result it was found that by exposure to the sun's rays the bacillus prodigiosus was destroyed after one hour and a quarter on the low ground and after only 20 minutes at an altitude of 5000 metres; for the bacillus of cholera the corresponding periods were one hour and a half on the low ground and one hour at the high altitude; while for the bacillus of enteric fever the periods were an hour and a half on the low ground and 20 minutes at the high altitude. Dr. Flemming then made an experiment on the influence of sunbeams on the development of tuberculosis. He found that the incubation period of tuberculosis was lengthened

by three and a half weeks when an emulsion of tubercle bacilli was exposed on the low ground for 15 minutes, and that tuberculosis did not develop at all after an exposure of the emulsion for 60 minutes. In contrast with this he found that an exposure for five minutes at an altitude of 5000 metres was sufficient to prevent the development of tuberculosis altogether. The bactericidal action of the sun's rays at the high altitude was therefore far greater than on the low ground. Dr. Flemming moreover remarked that at high altitudes wounds usually healed rapidly; furuncles and the pustules of acne also disappeared owing to the destruction of pathogenic germs.

Death of Professor Fraenkel.

Dr. Bernhard Fraenkel, formerly professor of laryngology and director of the laryngological clinic of the University of Berlin, died in that city on Nov. 11th, as mentioned in the last issue of THE LANCET. Professor Fraenkel was the son of a medical practitioner and was born in 1841 at Elberfeld in Rhenish Prussia. He obtained his professional qualifications in Berlin and settled there, first as a general practitioner, in which capacity he soon rose to a prominent position, but eventually specialised in laryngology. He served in the wars of 1864, 1866, and 1870–71, after the last of which he was appointed a *privat-docent* and became physician to the Augusta Hospital. In 1884 he was promoted to be professor; in 1887 he became director of the policlinic, and in 1893 director of the clinic for laryngology, then newly instituted in connexion with the University. For reasons of age and of health he resigned his appointment some six months ago. Among the various subjects to which Professor Fraenkel gave his attention mention may be made of his work on the anatomy of the nose, on the connexion between asthma and diseases of the nose, on cancer of the larynx, on the histology of the vocal cords, and on tuberculosis of the pharynx. In 1894 he founded the *Archiv für Laryngologie* and the Berlin Laryngological Society, of which he was the president until his death. He, moreover, did valuable work in connexion with tuberculosis, especially by advocating sanatorium treatment. He was the founder of the Berlin Sanatoriums Society, a member of the International Association for the Prevention of Tuberculosis, and co-editor of the two journals *Tuberculosis* and *Zeitschrift für Tuberculose*. Formerly he took an active part in movements for improving the position of the medical profession, being one of the founders and a member of the committee of the Deutscher Aertzevereinsbund. For 25 years he was the first secretary of the Berlin Medical Society. His death is generally regretted.

Attempted Murder of a Medical Man.

That club practice in Germany is far from being remunerative is generally admitted, and a recent incident has shown that the holder of such a position may even go in peril of his life. The event in question occurred at Essen, in Rhenish Prussia. A medical man on going home from the railway station was followed by a man unknown to him, and at the door of his house a shot was fired at him, the bullet lodging in his chest. His assailant then took to flight, but was arrested, and found to be a member of a sick club. The victim of this outrage is a medical officer of this club and had incurred the resentment of the club member by declining to certify him as being ill, with the result that the club refused to make him an allowance of sick pay.

Dec. 4th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Clinical Teaching in Neurology.

THE Swiss Federal (State) examinations for the licence to practise medicine in Switzerland ("praktischer Arzt") are at present under revision, and Swiss neurologists are making efforts to secure a proper representation of the specialty of neurology. Dr. Veraguth, lecturer on neurology (*privat-docent*) at the University of Zürich, has worked out propositions which, having been accepted by the Swiss Neurological Society, have been laid before the Society of Swiss Medical Men. He pleads for a better education of the medical student in neurology, including obligatory attendance at a neurological clinique—still a desideratum,—a half-year course at a neurological out-patient department, and lectures on neurology and medical psychology. These propositions have not been accepted by the Federal Examination Commission, which considers the medical student already overburdened with a series of new subjects, such as dermatology and legal medicine, and they have also encountered sharp opposition both on the part of clinical teachers as well as from the professors of mental medicine. The former, with Professor Sahli as representative, hold that neurology should continue to be taught by the professor of clinical medicine, with the assistance of an experienced neurologist. Professor Sahli, at the annual meeting of the Neurological Society held at Bern on Nov. 11th and 12th, emphasised the detriment caused by further specialisation, calling Dr. Veraguth's proposition an attack on the teachers of clinical medicine. The latter, with Professor Forel as spokesman, at a meeting of the Swiss Psychiatric Society held at Zürich on Nov. 25th and 26th, declared that neurology should remain dependent on the professorship of mental medicine, but should be duly enlarged in scope by the establishment of neurological clinics and policlinics under capable sub-professors and medical assistants. Professor Forel objected to having the subject of nervous diseases further split up, lest one morbid condition—for example, hysteria—should be demonstrated to the student at three clinics from three different points of view both as regards definition and treatment. It is probable that several years will still elapse before the conflicting views on this important subject can be harmonised.

Dec. 4th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

A Strike of Scavengers.

THE work of the familiar "White Wings," so named from their white drill uniform, who do the street cleaning of the city of New York, having caused great annoyance to pedestrians and others from the flying dust, the hours of the brigade were changed to eight hours between sunset and sunrise. Although these men are extremely well paid for unskilled work—viz., 818, or £3 12*s.*, a week—the change in their hours moved them to strike. In less than 48 hours the accumulation of filth, especially in the east side of the city, was appalling, and the people were threatened with all the troubles of filth-borne diseases. To the surprise of the strikers, it was pointed out to them that they were civil service employees and were consequently somewhat in the position of soldiers or sailors, a strike among whom means mutiny. "Strike breakers" were promptly imported by the thousand, under whose efforts, extending over a week, the piles of garbage were removed. The misled strikers now find themselves forced out of good employment by the automatic succession of the men following them upon the civil service list. It is likely that New York will be spared a similarly dangerous strike for many years to come.

Transplantation of a Human Kidney.

Although Dr. L. J. Hammond, of the Methodist Episcopal Hospital of Philadelphia, has not yet given an official account of his work, it is well known that on Nov. 13th he transplanted a kidney from the body of a man recently killed in an automobile accident to that of a patient afflicted with renal tuberculosis, with the immediate result of anastomosis of vessels and other satisfactory consequences. Dr. Hammond had a large audience of American and Canadian surgeons who were attending the Clinical Congress at Philadelphia, during which an immense number of major operations were performed.

A Christian Science Home.

A statement made in a former of these letters to the effect that a home for Christian Scientists had been founded in the State of New York has elicited expressions of doubt. The New York evening papers of Oct. 6th published as news a paragraph, of which the following are extracts: "In Special Term of the Supreme Court, Justice Pendleton to-day signed an order approving the certificate of incorporation of the First Christian Science Home Association of the State of New York. The avowed purpose of the association, which is said to be the first of its kind in this State,

is to establish and provide suitable and homelike accommodations for men and women desirous of receiving the benefits and precepts of the late Mrs. Mary Baker Eddy. The home will exclude no one on the ground of poverty, birth, or prejudice, ... and will give shelter, food, clean and quiet surroundings to those who seek its benefits. The incorporators and directors for the first year are Lysbeth L. Campbell, of 150, West 94th-street; Regina F. Rothschild, 365, West 118th-street; Emerson P. Jennings and Susan E. Jennings, 1738, 79th-street, Bath Beach; Philip P. Major, 75, West 92nd-street; and Marguerita Markle, 152, West 98th-street."

The Crocker Bequest.

A California millionaire, who died from the effects of a malignant growth, left £200,000 to Columbia University for the establishment of a fund connected with his name and having for its object the investigation of cancer. After prolonged litigation this legacy has been confirmed, and the Faculty of Medicine, still popularly known as the College of Physicians and Surgeons, is already planning a vigorous programme.

A Seizure of Glass Eyes.

American-made glass eyes are not equal to the German article, and the trade is forced to pay a customs duty of 60 per cent. *ad valorem* on the German eyes as "decorated glass." A so-called German baron has been under suspicion for some time as a smuggler of the articles, and recently the Federal agents found a *cache* in Hoboken, New Jersey, where many of the big liners dock, of 14,000 glass eyes. The baron and a supposed accomplice were arrested and held in £1000 bail each. These imported eyes are sold wholesale at about 4*s.* each, but retail at about 1 guinea, including the fitting and careful matching in colour. Several employees of the steamship lines will probably be arraigned along with the foreign nobleman.

Another Opium Raid.

A raid was made in the Harlem district of New York on Nov. 4th on a Chinese laundry, where the usual supply of opium extract in various forms was unearthed to the tune of several hundred dollars, much of it in the familiar lychee nuts, the kernel of which is replaced with smoking opium and retails at about a shilling. The "joint" (opium den) was considered to be a particularly villainous one in furnishing an exclusive *clientèle* of negroes, who seem to be singularly susceptible to the influence of narcotics and become dangerous criminals under their use.

The Death-rate of New York.

This continues to drop, and for the week ending Oct. 31st was the lowest on record—viz., 12·12 per mille.

Personal.

Dr. David D. Scannell has resigned the assistant professorship of surgery at Tufts College, Boston, and with him the entire surgical faculty, the reason assigned being that he was not considered in the appointments made at Grace Hospital, Boston.—Dr. Simon Flexner, of the Rockefeller Institute for Medical Research, has been appointed by the German Emperor an honorary member of the Royal Institute for Experimental Therapeutics of Frankfort-on-the-Main.—Dr. William James Henry Bellamy, a popular and well-known practitioner among the fashionable winter colony of the South, died at Wilmington, N.C., on Nov. 17th.—Dr. Walter Wyman, the distinguished surgeon-general of the Public Health and Marine Hospital Service, died at Washington on Nov. 20th. He accomplished much for the sailors of the Atlantic and on the western rivers, and established the first Federal Government Sanatorium for Consumptives in New Mexico. He was a power for the general betterment of the nation's health as far as his influence was not circumscribed by his official position, and he is greatly regretted.

Nov. 22nd.

ROYAL INSTITUTION.—Dr. W. Bateson, F.R.S., has been appointed Fullerian Professor of Physiology at the Royal Institution for a period of three years. During the present winter Professor Bateson will deliver a course of six lectures before the institution on the Study of Genetics.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

The Prevention of Malaria.

THOSE who have followed the development of our knowledge regarding malaria know that there are at present in Europe two parties of propagandists with reference to the prevention of malaria. One party advocates anti-mosquito measures large and small, and the other pins its faith to the widespread use of quinine as the correct method of extirpating malaria. For some time there was a danger that, until the difference of opinion between these two parties should be settled, no very active measures against the disease would be taken by administrations. It is greatly to the credit of scientific workers in India that at this point, instead of continuing a controversy from which no useful result was likely to accrue, they disassociated themselves from both parties, and proposed the new line of action which had its beginning at the Imperial Malarial Conference held at Simla in 1909. The outstanding and highly important feature of this conference was not the list of recommendations regarding the particular measures which should, or should not, be adopted, but the founding of a permanent organisation for dealing with the disease in every chief area of the country. The organisation proposed was: (1) a central scientific committee; (2) a committee in each province; and (3) a general committee consisting of the members of the central committee and delegates from the provincial committees. The deliberations of the conference showed that the first essential in the attack against malaria in India is not the immediate initiation here, there, and everywhere of expensive anti-mosquito campaigns on the lines of those reported to have been successful in a few countries under conditions very different from those prevailing in India, but the obtaining of accurate and complete knowledge of all the circumstances connected with the disease in different areas. The central scientific committee was, therefore, appointed to direct and coördinate investigations to this end, and in the first place they made arrangements by which each province should be able to train a number of officers and subordinates in modern methods of malarial research. With this object there was established a Central Malarial Bureau, containing a museum, laboratory, and reference library, and at Amritsar a house was secured which serves as a permanent laboratory for malarial investigations and teaching. The next step was the appointment in the several provinces of some specially trained officers who would devote their whole time to the study of malaria. They have been provided with adequate working staffs, and tour from place to place investigating the disease and assisting in its prevention. In addition, specially qualified officers work directly under the auspices of the central committees. It is the duty of the former workers to ascertain exactly the malarial circumstances of different areas and state the remedies which should be applied. Two noteworthy examples of the results of such work are the reports by Major S. R. Christophers, I.M.S., on the causes of malaria in the Punjab, and by Dr. C. A. Bentley on the causes of malaria in Bombay city, and the measures necessary for its control. These have both been referred to on several occasions in THE LANCET. The more we know of malaria and the more it is studied, the more obvious becomes the conclusions that detailed investigations are essential before large sums of money are spent on schemes designed to improve malarial conditions. When, however, such investigations have been conducted and definite conclusions have been arrived at, it is the function of the provincial and general committees to ensure that satisfactory and complete action is taken upon them. The members of these committees are necessary and complementary to the scientific workers; it is their duty to spread the conclusions, to teach, to persuade, and there can be no doubt that if they do so with energy the result will not be long delayed. There is evidence that in some provinces the malarial committees have already realised their responsibilities in this respect, and one sign of this is found in the fact that the consumption of quinine in this country has increased greatly during the last two years. The most recent move is the initiation of a scheme for an Indian Research Fund, to be devoted exclusively to

researches in connexion with sanitary problems, the primary object being to assist the policy of making a direct attack upon malaria and certain other of the more important epidemic diseases. It is stated that the Government of India has made a grant of five lakhs of rupees to this fund, and that one of the proposed items of expenditure will be the investigation and carrying out of various educational methods by which the people of India may be brought to realise how to protect themselves from malaria and other epidemic diseases.

Smoking in the Army.

The use of tobacco in the army is the subject of an article by Lieutenant-Colonel P. Hehir, I.M.S., in the *Journal of the United Services Institution of India*. He alleges that the imported cigarettes used by troops in this country are made from the refuse of the tobacco market. Last year, he says, one brand was sold for 20 for ½*d.*, the tobacco in them being uncured and half-rotten. There have been issued various orders by commanding officers and general officers, and in some cases the smoking of cigarettes has been prohibited at times when no restriction is made on pipe-smoking. But if it is true that cigarette-smoking is on the increase in the British and in the Indian army, some more concerted action than these spasmodic efforts is desirable. Colonel Hehir suggests that the tobacco sold in canteens, coffee-shops, regimental bazaars, and in cantonments generally, should be closely watched and controlled.

Nov. 15th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Charge Against a Medical Man.

THE trial of Dr. Samuel Peacock on a charge of murder was concluded at Melbourne before the Chief Justice and a jury after a prolonged hearing. The charge was concerned with the disappearance of a young woman who had admittedly been an inmate of a private hospital owned by the accused. The case for the Crown was that the young woman had died after an illegal operation and that the accused had secretly disposed of the body. The accused read a lengthy statement in which it was alleged that the young woman had left the hospital, and some articles of jewellery found in the accused's possession were said to have been voluntarily left behind. No trace of the body was discovered, and the evidence was almost entirely presumptive, except for certain statements made by the principal witness for the Crown who had had certain relations with the missing woman. The jury after three hours' retirement returned a unanimous verdict of "Guilty," and the accused was formally sentenced to death, although some law points are reserved for future argument. Dr. Peacock is 72 years of age.

Tenth Australasian Congress.

Dr. Arthur C. Purchas, the President-elect of the next session of Congress to be held in Auckland, New Zealand, in 1914, is a graduate of the University of Edinburgh. He was born in New Zealand, and is a son of the Rev. Arthur Purchas.

Charities Bill.

The Charity Bill introduced into the Victorian State Parliament by the Government, in which it is proposed to vest the control of finance in all charities subsidised by the Government in a board of three commissioners, passed the second reading in the Assembly, but its further progress was stopped by the dissolution of Parliament, and it must now go over until the new House meets. On the whole it has been sympathetically received, but its serious discussion was not entered upon, as it was recognised that there was no prospect of its being placed on the statute book by the present Government before the General Election.

Pure Milk.

The Victorian Minister of Health recently called a conference of municipal and other bodies to consider the question of a pure milk-supply and the establishment of municipal milk depôts for infants. Some preliminary points were discussed, and the conference adjourned for the appointment of representatives from the Victorian Branch of the British Medical Association and other public bodies, including the Australian Natives Association, a powerful friendly society in Victoria. The Lady Talbot Milk Institute, which was the pioneer movement in this line, has been proved to offer financial difficulty, and it is considered that the municipal councils could better undertake the same work. The attitude of the medical profession towards the new development has not yet been defined.

Melbourne Hospital.

The new buildings of the Melbourne Hospital are now well advanced in certain directions, and three blocks are almost complete as regards the actual construction. They consist of an administrative section and two ward-blocks, each of which is six storeys in height, constructed in brickwork. Although space has been gained by going up into the air, it is evident that the contention of those who considered the ground area too small for a large hospital is being confirmed.

Lunacy in Victoria.

The annual report of the Inspector-General for Insane in Victoria states that there has been a material increase in admissions during 1910, and that whereas 5200 registered patients were under supervision at the beginning of the year, the number at the close was 5349. The receiving house totals were 41 and 47. At the end of 1909 the ratio was 1 insane person to 250 of population, and at the end of 1910 1 to 246. The deaths numbered 368, as against 371 in the previous year. The report discusses the reasons for the high proportion of insane in Victoria. Some points set forth are the high proportion of old people in the population, the low masculinity rate, low birth-rate, and so on, but no positive conclusion is drawn. The expenditure in maintenance was £169,174, an increase of £6057 on the previous year. The Inspector-General has written to the *Australian Medical Journal*, drawing the attention of medical men to the fact that the efficiency of the receiving house is being impaired by the sending of patients who might at once be certified for admission to an asylum, and suggests that this is probably due to a wish to spare the feelings of relatives, but results in blocking the reception of cases for whom something might be effected in the way of improvement or cure.

Nov. 4th.

Obituary.

FRANCIS THOMAS BOND, M.D. LOND., M.R.C.S. ENG., F.R.S. EDIN.,

MEDICAL OFFICER OF HEALTH, GLOUCESTERSHIRE COMBINED DISTRICT, ETC.

Dr. Francis Thomas Bond died at his residence, 3, Beaufort Buildings, The Spa, Gloucester, on Tuesday afternoon last. The deceased was taken suddenly ill on the morning of Thursday, Nov. 30th, whilst waiting at the Great Western Railway Station at Gloucester for a train to Cirencester, where he was to have attended a meeting of the urban district council in his capacity as medical officer of health to the Gloucestershire Combined Sanitary District. He was sitting near the fire in one of the waiting-rooms at the time when he suddenly collapsed, and medical aid having been summoned he was conveyed to his residence. It was found that he had had a slight paralytic stroke, and although his condition improved somewhat he afterwards became worse, passing peacefully away, as stated, on Tuesday afternoon.

The late Dr. Bond was in his seventy-eighth year. He took his Bachelor of Arts degree in 1853, and became a Member of the Royal College of Surgeons of England in 1856, his education and training having been obtained at Queen's College, Birmingham; St. Mary's Hospital, London; as well as in Paris and Edinburgh. He took his M.B. degree (being awarded the medal in physiology) in 1857 at the University of London, where he became M.D. in 1860. Subsequently he became a Fellow of the Royal Society of Edinburgh, and a Fellow of the Chemical Society. For a time he was physician and professor of clinical medicine at Queen's Hospital, Birmingham, and was also professor of chemistry and Dean of Faculty at Queen's College. Later Dr. Bond held an important educational appointment in the south of England, being for some time Principal of the Hartley Institute, Southampton, and this he gave up with a view of devoting himself to sanitary work, which he entered on in 1873, when, upon the formation by

the Local Government Board of the Gloucestershire Combined Sanitary District (which then consisted of 13 local sanitary authorities), he was, out of a large number of candidates, appointed its first medical officer of health, which responsible position he retained to the time of his death. During the period of close upon forty years in which Dr. Bond acted in this capacity he gained an experience of sanitary matters connected with Gloucestershire which is surely unrivalled, and as an expert upon public health questions generally he was properly held in very high esteem. He devoted himself whole-heartedly to the work, and his death comes as a great loss to the various local authorities who had for so long a period had the advantage of his valuable store of knowledge.

Amongst other positions which he had held in the course of a long and busy professional career were those of president of the West of England and South Wales Branch of the Society of Medical Officers of Health, of the Midland Association of Medical Officers of Health, and of the Gloucester Branch of the British Medical Association. Dr. Bond took an especial interest in the question of vaccination, the cause of which he was ready at all times and upon all occasions to champion, and he was prominently associated with the formation of the Jenner Society, of which he was the honorary secretary. He was a prolific writer upon scientific and other questions. Among his many publications may be mentioned contributions on the "Pathology of Rheumatism" in 1858 and the "Pathology of Chorea" in 1860; a translation of "Radicke on Medical Statistics"; "Notes on Water Filtration" in 1875; "A Plea for the More General Practice of Skipping as an Unsurpassed Form of Home Gymnastics" in 1906; and "Gloucester Mineral Spa: its History and Capabilities," issued for private perusal about the year 1906.

Dr. Bond did a good deal in the direction of bacteriological research and experimental work, and was of an inventive turn of mind. Among other things he patented a filter, and a hygienic quilt. He also identified himself with scientific agriculture, and more especially the dairy industry; and he evolved a method of cheese manufacture with which he was associated for a number of years. He leaves a widow, one son, and a daughter.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Adam Szulislawski, extraordinary professor of ophthalmology in the University of Lemberg.—Dr. Charles Throw, adjunct professor of ophthalmology and otology in the University of Toronto.—Dr. A. F. Legendre, of the French Colonial Medical Service, who was sent by the Government on a scientific mission to China, massacred by the Lolos in Hong Chouei Tong.—Dr. Néjolov, professor of midwifery and gynæcology in the University of Warsaw.—Dr. Hans Hammerstein, formerly assistant to Dr. Nagel, professor of gynæcology, of diphtheria contracted from a patient. In spite of the most skilful treatment death occurred in two days.—Dr. Hennigsen, of Gehren, president of the Thüringen Medical Association.

Medical News.

UNIVERSITY OF LONDON.—At the M.D. examination for internal and external students the following candidates were successful:—

Branch I., Medicine.—Phirozshaw Cooverji Bharucha, B.S., University College Hospital; John Webster Bride, B.S., Victoria University of Manchester; Manchersha Dhanjibhai Dorabji Gilder, B.S., University College Hospital; Alexander Edward Gow, B.S., St. Bartholomew's Hospital; Frederick William Higgs, B.S., St. George's Hospital; Ernest Williams Jones, University of Birmingham; David Judah, B.S., and Clement Lovell, B.S., University College Hospital; and Geoffrey Viner, B.S., and Arthur Lowndes Yates, B.S., St. Bartholomew's Hospital.

Branch IV., Midwifery and Diseases of Women.—Elsie Mary Chubb, B.S., London (Royal Free Hospital) School of Medicine for Women; Joseph Bernard Dawson, B.S., University of Birmingham and St. Bartholomew's Hospital; William Poole Henley Munden, B.S., Guy's Hospital; John Hobart Nixon, B.S., St. Mary's Hospital; Alfred Howard Parkinson, B.S., B.Sc., University of Leeds; and Robert Evans Thomas, B.S., University of Bristol.

Branch V., State Medicine.—Alfred Ball, B.S., and Walter Francis Corfield, B.S., University College Hospital; Matilda Hunt, B.S., London (Royal Free Hospital) School of Medicine for Women and Royal Institute of Public Health; James Jenkins Paterson, B.S., B.Sc., University of Liverpool; Alfred Charles Foster Turner, B.S., St. Thomas's Hospital; Wentworth Francis Tyndale, St. George's Hospital; Thomas Williams Wade, B.S., University College, Cardiff, and Charing Cross Hospital; and Cuthbert Ferguson Walker, B.S., St. Mary's Hospital and Victoria University of Manchester.

Branch VI., Tropical Medicine.—Daniel Elie Anderson, B.A., B.Sc., London School of Tropical Medicine; Francis Victor Owen Beit, St. Bartholomew's Hospital and London School of Tropical Medicine; Friedrich Gröne, St. Bartholomew's Hospital; John Hanna Murray, University College Hospital and London School of Tropical Medicine; and Charles Cecil Connock Shaw, B.S., St. Mary's Hospital, London School of Tropical Medicine, and Post Graduate College, West London Hospital.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

UNIVERSITY OF BRISTOL.—At the Autumn Congregation the following medical degrees were conferred. The candidates were presented by the Dean of the Medical Faculty, Professor Edward Fawcett.

M.D.—J. F. Blackett and Latimer J. Short.
M.S.—C. A. Joll.
M.B., Ch.B.—R. C. Clarke, E. E. Davies, C. A. H. Gee, S. H. Kingston, W. A. Reynolds, R. S. Statham, E. F. Thomas, J. W. J. Willcox, and F. P. Mackie.
B.D.S.—C. J. Kelsey and W. J. Lennox.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Umber has been appointed Director of the Medical Department of the West-end Hospital, Charlottenburg, in succession to the late Dr. Grawitz.—*Bonn:* Dr. A. Machol has been appointed Oberarzt of the University Surgical Clinic, in succession to Dr. Stich, who is going to Göttingen; and Dr. Rudolf Finkelnburg has been appointed Director of the Hydrotherapeutic Institute in connexion with the University Medical Clinic, in succession to Dr. Julius Strasburger, who is migrating to Breslau.—*Clausenburg:* Dr. Elemer Veress has been appointed Extraordinary Professor of Biology; and Dr. Genersich and Dr. Reinbold have been granted the title of Extraordinary Professor.—*Göttingen:* Dr. Wilhelm Tintemann has been appointed Oberarzt of the Provincial Asylum, where instruction is given to the University students in Mental Diseases.—*Königsberg:* Dr. R. Haecker has been recognised as *privat-docent* of Surgery.—*Leipsic:* Dr. Läwen has been appointed Director of the Surgical Department of the new St. George's Hospital.—*Marburg:* Dr. F. A. König, of Greifswald, has been appointed to the chair of Surgery, in succession to Dr. Friedrich.—*Moscow:* Dr. A. W. Grigorieff, of Warsaw, has been appointed to the chair of Forensic Medicine.—*Pisa:* Dr. F. Cavazzi has been recognised as *privat-docent* of External Pathology.—*Philadelphia (University of Pennsylvania):* Dr. T. T. Thomas has been appointed Adjunct Professor of Anatomy, in succession to Dr. Davis.—*Prague (German University):* Dr. Karl Zörkendörfer, of Marienbad, has been recognised as *privat-docent* of Balneology and Hygiene.—*Sienna:* Dr. F. Melocchi has been recognised as *privat-docent* of Internal Pathology.—*Vienna:* Dr. O. Porges has been recognised as *privat-docent* of Medicine.

LANGHO REFORMATORY.—At the annual meeting of the Lancashire Inebriates Acts Board held recently at Preston, the chairman stated that after seven and a half years' practical experience at Langho of the working of the present Act they were in a position to judge of its merits and its defects. The number of the inmates had increased. It contained fundamental defects and omissions which practically rendered it valueless, a view that had been endorsed by more than one Parliamentary committee. The Home Secretary had expressed the hope that he might be able to press forward legislation on the subject next session. Many of the failures were due to the women being sent to the reformatory late in life, and also to their not being looked after when they came out. Many of the women inmates were irreformable, and present-day legislation could not effectively deal with them.

REUBEN HARVEY MEMORIAL PRIZE.—The tenth award of this triennial prize will be made on July 1st, 1912. The competition for the prize is open to all students of the various schools of medicine in Dublin which are recognised by the medical licensing bodies in Ireland, and also to graduates or licentiates of these bodies of not more than three years' standing at the time of the award. The prize, value £25, will be awarded to the writer of the best essay, on a subject to be selected by the candidate, evidencing original research in animal physiology or pathology; the

essay to be illustrated by drawings or preparations. The essays, bearing fictitious signatures, are to be lodged with the Registrar of the Royal College of Physicians of Ireland, Dr. T. Percy C. Kirkpatrick, Kildare-street, Dublin, on or before June 1st, 1912.

THE death occurred with painful suddenness at Billingshurst, Sussex, on Nov. 22nd, of Mr. William Henry Hubert, M.R.C.S.Eng. He was a very keen hockey player, and while taking part in a game he suddenly fell backwards and expired immediately. Mr. Hubert was most highly respected. For very many years he had practised in the above district and he held a number of local appointments. After studying at St. George's Hospital Mr. Hubert qualified in 1868.

THE EMPRESS MARIE FÉODOROVNA FUND.—This fund was founded during the Seventh International Red Cross Conference, held at St. Petersburg in 1902, by Her Imperial Majesty the Empress Marie Féodorovna, the August Protectress of the Russian Red Cross Society, for the purpose of awarding prizes to the authors of the best inventions having for their object the diminution of the sufferings of the sick and wounded in time of war. The next competition will be held in connexion with the Ninth International Red Cross Conference to be held at Washington, D.C., from May 7th to 17th, 1912, where the inventions of competitors will be displayed. There are three prizes of approximately £600, £300, and £100. Full particulars of the subjects for competition can be obtained from the secretary, 9, Victoria-street, London, S.W.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill.

UNDER the closure resolution of the House of Commons the guillotine fell upon the report stage of Part I. of the National Insurance Bill on the evening of Thursday, Nov. 30th. This part covers the whole field of National Health Insurance, and in the closure resolution it was included with the proposed new clauses in the first compartment of time devoted to the Bill. However, the full time—two and a half days—was, in fact, given to the new clauses, and not a single line of Part I., as it emerged from committee, was discussed before the guillotine fell. The Chancellor of the Exchequer had about 470 amendments standing on the notice paper in his name. These were put from the chair one by one, and declared to be carried. The Opposition, refraining from the task of forcing divisions, retired from the House after a protest. The numerous changes thus made in the Bill introduce further complexity into it, and their cumulative effect could not be estimated until the measure as amended had been printed.

The Administration of Medical Benefit.

Clause 16 deals with the administration of medical benefit. As amended by the introduction of the changes proposed by the Chancellor of the Exchequer it reads as follows:—

"1. Every Local Health Committee shall for the purpose of administering medical benefit make arrangements with duly qualified medical practitioners in accordance with regulations made by the Insurance Commissioners.

"2. The regulations made by the Insurance Commissioners shall provide for the arrangements made being subject to the approval of the Insurance Commissioners and being such as to secure that insured persons shall, save as hereinafter provided, receive adequate medical attendance and treatment from the medical practitioners with whom arrangements are so made and shall require the adoption by every Local Health Committee of such system as will secure:—(*a*) the preparation and publication of lists of medical practitioners who have agreed to attend and treat insured persons whose medical benefit is administered by the committee; (*b*) a right on the part of any duly qualified medical practitioner who is desirous of being included in any such list as aforesaid of being so included, but where the Insurance Commissioners, after such inquiry as may be prescribed, are satisfied that his continuance in the list would be prejudicial to the efficiency of the medical service of the insured, they may remove his name from the list; (*c*) a right on the part of any insured person of selecting, at such periods as may be prescribed, from the appropriate list the practitioner by whom he wishes to be attended and treated, and, subject to the consent of the practitioner so selected, of being attended and treated by him; (*d*) the distribution amongst and, so far as practicable, under arrangements made by the several practitioners whose names are on the lists of the insured persons who after due notice have failed to make any selection, or who have been refused by the practitioner whom they have selected; (*e*) the provision of medical attendance and treatment, on the same terms as those arranged with respect to insured persons, to members of any friendly society which becomes an approved society who were such members at the date of the passing of this Act and who are not entitled to medical benefit under this part of this Act by reason either that they are of the age of 65 or upwards at the date of the commencement of this Act, or that being subject to permanent disablement at that date they are not qualified to become insured persons.

"Provided that if the Insurance Commissioners are satisfied after inquiry that the practitioners included in any list are not such as to secure an adequate medical service in any area, they may dispense with the necessity of the adoption of such system as aforesaid as respects that area, and authorise the committee to make such other arrangements as the Commissioners may approve; or the Commissioners may themselves make such arrangements as they think fit, or may suspend the right to medical benefit in respect of any insured persons in the area for such period as they think fit, and pay to each such person a sum equal to the estimated cost of his medical benefit during that period, and where the Commissioners take any such action themselves they shall retain and apply for the purpose such part of the sums payable to the Local Health Committee in respect of medical benefit as may be required.

"3. The regulations made by the Insurance Commissioners shall authorise the Local Health Committee by which medical benefit is administered to require any persons whose income exceeds a limit to be fixed by the committee, and to allow any other persons, in lieu of receiving medical benefit under such arrangements as aforesaid, to make their own arrangements for receiving medical attendance and treatment (including medicines and appliances), and in such case the committee shall, subject to the regulations, contribute from the funds out of which medical benefit is payable towards the cost of medical attendance and treatment (including medicines and appliances) for such persons sums not exceeding in the aggregate the amounts which the committee would otherwise have expended in providing medical benefit for them.

"4. The regulations shall provide that, in the case of persons who are entitled to receive medical attendance and treatment under any system or through any institution existing at the time of the passing of this Act, and approved by the Local Health Committee and the Insurance Commissioners, such medical attendance and treatment may be treated as, or as part of, their medical benefit under this part of this Act, and may provide for the committee contributing towards the expenses thereof the whole or any part of the sums which would be contributed in the case of persons who have made their own arrangements as aforesaid, so, however, that such regulations shall secure that no person be deprived of his right, if he so elects, of selecting the duly qualified medical practitioner by whom he wishes to be attended and treated, in accordance with the foregoing provisions of this section.

"5. Every such committee shall also make provision for the supply of proper and sufficient drugs and medicines and prescribed appliances to insured persons in accordance with regulations made by the Insurance Commissioners, which shall provide for the arrangements made being subject to the approval of the Insurance Commissioners, and being such as to enable insured persons to obtain from any persons, firms, and bodies corporate with whom arrangements have been made such drugs, medicines, and appliances if ordered by the medical practitioner by whom they are attended, and shall require the adoption by every Local Health Committee of such a system as will secure—(*a*) The preparation and publication of lists of persons, firms, and bodies corporate who have agreed to supply drugs, medicines, and appliances to insured persons whose medical benefit is administered by the committee, according to such scale of prices as may be fixed by the committee; (*b*) a right on the part of any person, firm, or body corporate desirous of being included in any such list as aforesaid, of being so included for the purpose of supplying such drugs, medicines, and appliances as such person, firm, or body corporate is entitled by law and authorised by the committee to supply except in cases where the Insurance Commissioners after inquiry are satisfied that the inclusion or continuance of the person, firm, or body corporate, in such list would be prejudicial to the efficiency of the service: Provided that—(i) If the Insurance Commissioners are satisfied that the scale of prices fixed by the Committee is reasonable, but that the persons, firms, or bodies corporate included in any list are not such as to secure an adequate and convenient supply of drugs, medicines, and appliances in any area, they may dispense with the necessity of the adoption of such system as aforesaid as respects that area, and authorise the committee to make such other arrangements as the Commissioners may approve. (ii) Except as may be provided by regulations made by the Insurance Commissioners, no arrangement shall be made by the Local Health Committee with a medical practitioner under which he is bound or agrees to supply drugs or medicine to any insured persons. (iii) Subject to the regulations made by the last foregoing proviso, the regulations shall prohibit arrangements for the dispensing of medicines being made with persons other than persons, firms, or bodies

corporate, entitled to carry on the business of a chemist and druggist under the provisions of the Pharmacy Act, 1868, as amended by the Poisons and Pharmacy Act, 1908, who undertake that all medicines supplied by them to insured persons shall be dispensed either by or under the direct supervision of a registered pharmacist or by a person who, for three years immediately prior to the passing of this Act, has acted as a dispenser to a duly qualified medical practitioner or a public institution. (iv) Nothing in this Act shall interfere with the rights and privileges conferred by the Apothecaries Act, 1815, upon any person qualified under that Act to act as an assistant to any apothecary in compounding and dispensing medicines.

"6. There shall in each year be paid to the Local Health Committee for each county or county borough out of moneys credited to a society which has members resident in the county or county borough such sum in respect of the medical benefit of such members and the cost of administration thereof as may be agreed between the society and the committee, or in default of agreement may be determined by the Insurance Commissioners.

"7. If in any year the amount payable to a Local Health Committee in respect of all persons for the administration of whose medical benefit it is responsible is insufficient to meet the estimated expenditure thereon the committee may, through the Insurance Commissioners, transmit to the Treasury and to the council of the county or county borough an account showing the amount so payable and the estimated expenditure, and the Treasury and the county council or the council of the county borough may, if they think fit and if satisfied that the amounts so payable and the proposed expenditure are reasonable and proper in the circumstances, sanction the expenditure.

"8. The Treasury and the council of the county or county borough sanctioning any such expenditure as aforesaid shall thereupon each be liable to make good, in the case of the Treasury out of moneys provided by Parliament, and in the case of the council of a county or county borough out of the county fund or borough fund or borough rate, as the case may be, one-half of any sums so sanctioned by them and expended by the Local Health Committee on medical benefit in the course of the year in excess of the amounts so payable to the Local Health Committee as aforesaid."

Medical Men and Health Committees.

Clause 55 deals with the Local Health Committees. After providing for the representation of insured persons, the clause as amended proceeds:—"(*c*) Two members shall be elected in manner provided by regulations made by the Insurance Commissioners, either by any association of duly qualified medical practitioners resident in the county or county borough which may have been formed for that purpose under such regulations, or, if no such association has been formed, by such practitioners; (*d*) one member or, if the total number of the committee is 60 or upwards, two members, or if the total number of the committee is 80, three members, shall be duly qualified practitioners appointed by council of the county or county borough."

The provision that of the members appointed by the Insurance Commissioners one at least shall be a medical man remains.

Medical Men as Commissioners.

By the amendments now inserted in the Bill, a medical man is to be appointed as an Insurance Commissioner in Scotland, Ireland, and Wales respectively.

The Insurance Commissioners.

The announcement that the Government had appointed Mr. J. SMITH WHITAKER to be the Deputy Chairman of the Insurance Commissioners and the Medical Commissioner was made in the House of Commons on Monday, Dec. 4th. He has become known to Members as the medical secretary of the British Medical Association during the protracted negotiations which that organisation has had with the Chancellor of the Exchequer. The chief interest in Westminster in Mr. SMITH WHITAKER'S appointment is the effect which it will have on the medical profession at large. Mr. LLOYD GEORGE is not yet in a position to give the names of the Irish, Scottish, and Welsh Commissioners.

Third Reading of National Insurance Bill.

The National Insurance Bill was read a third time in the House of Commons on Wednesday, Dec. 6th. The official Opposition brought forward a reasoned amendment to the motion for third reading. It was moved by Mr. H. W. FORSTER and was in the following terms:—"That, while approving the objects of national insurance, this House is of opinion that under Part I. of the Bill public funds and individual contributions will not be used to the best advantage of those most closely affected, and that, as the Bill has been neither adequately discussed in this House nor fully explained to the country, and would in its present form be unequal in its operation, steps should be taken to enable further consideration of Part I. to be resumed next session, and in the meanwhile to have the draft regulations published."

The debate ran largely on the question whether adequate time had been given for the thorough discussion of the measure. The Chancellor of the Exchequer maintained that all substantial points had been discussed at some stage of the proceedings on the Bill. He admitted, in a sentence, that he was not going to say that the Bill gave satisfaction to the medical profession. Ultimately the amendment was rejected by 320 votes to 223. The motion for the third reading was carried by 324 votes to 21.

The Health Visitors Bill.

The Health Visitors Bill has been withdrawn in the House of Commons without having reached a second reading.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 29TH.

National Insurance in the Highlands.

Mr. MACPHERSON asked the Secretary to the Treasury whether, in view of the fact that in the Highlands and Islands of Scotland the population was so poor and scattered, he would take steps to provide for the necessity of giving a grant in aid to the Local Insurance Committee, to be used by them to secure effective enjoyment of all the benefits of the scheme for the insured persons and fair mileage fees for doctors.—Mr. MCKINNON WOOD replied: The difficulty pointed out by my honourable friend has been met to a certain extent by the insertion of Subsection (9) of the Scottish clause, and the new clause passed last night giving power to vary benefits in certain cases; and before arriving at any conclusion as to the desirability or otherwise of special grants it seems necessary to wait for the results of these provisions.

Hospital Inmates and National Insurance.

Mr. EVELYN CECIL asked the Chancellor of the Exchequer whether he was aware that at present if a man left his lodgings and went into a hospital he got his sick pay, which was sufficient to enable him to keep on his lodgings while he was in hospital and help him to a convalescent home afterwards, but that, under Clause 14 (b) of the National Insurance Bill, if he had no dependent, his sick benefit went to the Local Insurance Committee, so that he had none of this money with which to keep on his lodgings or get to a convalescent home; and whether he proposed to make any amendment to the Bill to meet such cases.—Mr. LLOYD GEORGE wrote, in reply: The principle of sickness benefit is that it should assist a man to maintain himself and his family while incapacitated by illness. If he is being maintained without expense to himself, and has no dependents, this principle does not apply. I may remind the honourable Member that the money thus saved to the committees will be used largely in contributions to hospitals and similar institutions.

MONDAY, DEC. 4TH.

Mr. J. Smith Whitaker appointed Medical Insurance Commissioner.

Mr. JOYNSON-HICKS asked the Chancellor of the Exchequer whether the report was correct that Mr. J. Smith Whitaker, medical secretary of the British Medical Association, had been appointed a member of the Insurance Commission; and, if so, when was he first approached.—Mr. LLOYD GEORGE replied: The report is correct. Mr. J. Smith Whitaker was approached last week for the first time on the subject. He consulted the Council of the British Medical Association, and I have a letter from him dated Dec. 2nd as follows: "Having consulted the Council of the British Medical Association I have been advised by them to accept the post of Deputy Chairman of the Insurance Commission for England offered in your letter of Dec. 1st and I do so accept it on the terms stated in that letter."

Mr. JOYNSON-HICKS: May I ask whether we may assume that the British Medical Association are satisfied with the provisions of the Insurance Bill?—Mr. LLOYD GEORGE: I should not like to express an opinion on that question. At any rate the offer was made to the secretary, and the British Medical Association allowed him to accept the position.

Major ANSTRUTHER-GRAY asked whether anyone would be appointed in Scotland to represent the medical profession.—Mr. LLOYD GEORGE: We shall appoint a medical officer, though perhaps not on the same terms as in England. So far as England is concerned, the appointment has been given to one who has experience of this country.

Vaccination Topics.

Dr. PETO asked the President of the Local Government Board whether he was aware that, owing to the increase of exemptions in the three years ended Dec. 31st last, the vaccination officer of the West Bromwich union sustained a total loss of fees of £126 2*s*., towards which the guardians, with the sanction of the Local Government Board, had awarded gratuities amounting to £45; and whether, seeing that out of the 5398 births registered in the West Bromwich union in the year 1910, 1695 children have been legally exempted from vaccination, and in respect of 4463 births registered in the present year up to Oct. 31st, 1483 statutory declarations of conscientious objection had been received, he would consider the advisability of the vaccination officer's fees of 3*d*. per birth and 9*d*. per successful vaccination being revised for the work performed by him; and whether, having regard to the fact that the guardians had refused to increase the officer's fees and had intimated that they would not sanction any further gratuities although the officer was still suffering hardship from a continual increase of exemptions, he proposed to take any action to bring the officer's remuneration up to the average for the years 1903-07 or thereabouts.—Mr. BURNS answered: I am aware of the circumstances of the case. In sanctioning the gratuity proposed by the guardians in March last I drew the attention of the guardians to the losses suffered by the vaccination officer, and suggested an increase of fees. In April the guardians submitted a proposal to appoint the vaccination officer as assistant relieving officer at a salary of £1 per week; and one of the conditions attached to this appointment was that no further claim for loss of vaccination fees should be made by the vaccination officer. The vaccination officer, so I was informed, was quite satisfied with this arrangement, and I sanctioned the appointment. No further communication on the matter has been received from the vaccination officer.

Mr. BUTCHER: Might I ask the right honourable gentleman, in view of the difficulty of dealing with individual local authorities, whether he will issue a general order on the subject of the remuneration of vaccination officers?—Mr. BURNS answered: On that point I have very little to add to the communications I made to the honourable Member on previous occasions. We are dealing with the 25 outstanding grievances, and we are meeting with considerable success.

Mr. SNOWDEN asked the right honourable gentleman whether he had sanctioned the practice of paying fees to workhouse medical officers for vaccinations performed by them in Poor-law institutions; and, if not, whether he would issue an order directing that the performance of vaccinations should be regarded in future as part of the ordinary

duties of the officers for which they were paid by salary.—Mr. BURNS replied: I may refer the honourable gentleman to previous answers. The system of payment by fees which was established by Statute in 1867 has been continued since. I am, however, not unwilling to consider the question of allowing a workhouse medical officer an inclusive salary to cover payments for vaccination when a vacancy has to be filled.

Mr. SNOWDEN: Has the practice mentioned in the latter part of the answer been adopted in any case?—Mr. BURNS replied: Yes.

Mr. SNOWDEN asked the right honourable gentleman whether the vaccinations performed in Poor-law institutions were performed by public vaccinators only or by the workhouse medical officers when the latter were not public vaccinators; why these vaccinations could not all be performed by the medical officer to the workhouse, whether he was a public vaccinator or not; and why the salary paid to the workhouse medical officer could not include the cost of vaccinating the inmates.—Mr. BURNS said in reply: In most cases the workhouse is a separate vaccination district, and a contract has been entered into for the performance of vaccination in it with the medical officer of the workhouse. Where there is no such contract the workhouse medical officer is in nearly every case the public vaccinator of the district including the workhouse, and vaccinates in that capacity. It is not the duty of the workhouse medical officer as such to vaccinate any of the inmates of the workhouse other than the children requiring vaccination.

TUESDAY, DEC. 5TH.

Medical Men in Scattered Districts in Scotland.

Mr. AINSWORTH asked the Secretary to the Treasury whether the Local Health Committees in Scotland to be appointed under the National Insurance Bill would have the power to award additional remuneration to medical practitioners in sparsely populated districts on the basis of mileage or otherwise.—Mr. MCKINNON WOOD replied: Local Insurance Committees may, within the resources at their disposal, make such arrangements with medical men as they think fit, and the amount available for medical benefit may be increased either by the reduction of the other benefits which they administer, or where this is possible and the authorities concerned consent, by grants chargeable to the rates and to the Treasury in equal proportions.

BOOKS, ETC., RECEIVED.

CHEMIST AND DRUGGIST, THE, Published at the Offices of, 42, Cannon-street, London, E.C. Branch Offices: Adelaide, Melbourne, and Sydney, Australasia.

Pharmaceutical Formulas. Being "The Chemist and Druggist's" Book of Useful Recipes for the Drug-trade. Collated chiefly from "The Chemist and Druggist" and "The Chemists' and Druggists' Diaries." By Peter MacEwan, Phar. Chem., F.C.S., Editor of "The Chemist and Druggist." Eighth edition. Price 10*s.* net.; by post, 10*s.* 6*d.*

COBLENTZ, OSCAR, VERLAG VON, Maassenstrasse, 13, Berlin, W. 30.

Vorlesungen über Frauenkrankheiten. Aus der Praxis für die Praxis. Von Dr. Karl Abel, Spezialarzt für Gynaekologie und Geburtshilfe in Berlin. Price M.14.

FIFIELD, A. C., 13, Clifford's Inn, London, E.C.

Charles Darwin and Samuel Butler. A Step towards Reconciliation. By Henry Festing Jones. Price 1*s.* net.

FISCHER, GUSTAV, VERLAG VON, Jena.

Handbuch der Vergleichenden Physiologie. Herausgegeben von Hans Winterstein in Rostock. Sechzehnte Lieferung. Band IV. Physiologie der Reizaufnahme, Reizleitung und Reizbeantwortung. Erste Hälfte. Price M.5 per Part. (About 30 parts to the "Handbuch.")

GRIFFIN, CHARLES, AND COMPANY, LIMITED, Exeter-street, Strand, London, W.C.

Transactions of the Medico-Legal Society for the Year 1910-1911. Edited by Digby Cotes-Preedy, M.A., LL.M. Cantab., L.S.A. Lond., Vice-President of the Society, of the Inner Temple and Oxford Circuit, Barrister-at-law. Vol. VIII. Price not stated.

HERDERSCHE VERLAGSHANDLUNG, Freiburg im Breisgau, Berlin, Karlsruhe, München, Strassburg, Wien, London, und St. Louis, Mo. HERDER, B., 68, Great Russell-street, London, W.C.

Selbstbefreiung aus nervösen Leiden. Von Dr. med. Wilhelm Bergmann, leitendem Arzt an der Kaltwasserheilanstalt in Cleve am Niederrhein. Drittes bis fünftes Tausend unveränderter Abdruck. Price, cloth, 4*s.*

HIRSCHWALD, AUGUST, VERLAG VON, Unter den Linden, 68, Berlin, N.W.

3. Bericht über Salvarsanbehandlung aus dem Kaiserlichen Marinelazarett Kiel-Wik. Von Dr. Gennerich, Marine-Stabsarzt. Price M.2.40.

HIRZEL, S., Königstrasse, 2, Leipzig.

Handbuch der Hygiene. Herausgegeben von Prof. Dr. M. Rubner, Geh. Medizinalrat, Berlin. Prof. Dr. M. v. Gruber, Obermedizinalrat, München, und Prof. Dr. M. Ficker, Berlin. I. Band. Price, paper, M.27; bound, M.30.

KLINKHARDT, DR. WERNER, VERLAG VON, Liebigstrasse, 2, Leipzig.

Leitfäden der praktischen Medizin. Herausgegeben von Prof. Dr. Ph. Bockenheimer, Berlin. Physikalische Heilkunde. Von Prof. Dr. med. Fritz Frankenhäuser. Price, paper, M.7.50; bound, M.8.

Urologischer Jahresbericht. Einschliesslich der Erkrankungen des Männlichen Genitalapparates. Redigiert von Prof. Dr. A. Kollmann in Leipzig und Dr. S. Jacoby in Berlin. Literatur 1910. Price, paper, M.20.

Lehrbuch der Kystoskopie und Stereokystophotographischer Atlas. Von Dr. S. Jacoby, Ehemalig I. Assistenten von weiland Geh. Mediz.-Rat und A. O. Prof. Dr. Max Nitze an der Universität in Berlin. Price, bound, M.25.

LEHMANN'S (J. F.) VERLAG, München.

Ueber Neurorezidive nach Salvarsan- und nach Quecksilberbehandlung. Ein Beitrag zur Lehre von der Frühsyphilis des Gehirns. Von Dr. J. Benario. Mit einem Vorwort von Wirkl. Geheimen Rat P. Ehrlich. Price, paper, M.6.; bound, M.7.

Diagnose und Fehldiagnose von Gehirnerkrankungen aus der Papilla nervi optici. Von Professor Dr. Fr. Salzer, München. Price, paper, M.1.50.

Jahresbericht der Gesellschaft für Natur- und Heilkunde in Dresden. Sitzungsperiode 1910-1911. (Oktober, 1910, bis Mai, 1911.) Redaktion geschlossen 1. VIII., 1911. Ausgegeben 1. IX., 1911. Price not stated.

LIVINGSTONE, E. AND S., 15, Teviot-place, Edinburgh.

The Care of Infants and Young Children. By A. Dingwall Fordyce M.D., F.R.C.P. Ed., Extra Physician, Royal Edinburgh Hospital for Sick Children. Price 1*s.* 6*d.* net.

MACMILLAN COMPANY, THE, New York.

District Nursing. By Mabel Jacques, Graduate of the Hospital of the University of Pennsylvania. With an Introduction by John H. Pryor, M.D. Price 4*s.* 6*d.* net.

METHUEN AND CO., LIMITED, 36, Essex-street, London, W.C.

Outlines of Biology. By P. Chalmers Mitchell, LL.D., F.R.S., F.Z.S., F.L.S., Secretary to the Zoological Society. Revised and supplemented by Geo. P. Mudge, A.R.C.Sc. Lond., F.Z.S. Lecturer on Biology, London Hospital Medical College (University of London) and at London School of Medicine for Women (University of London). Price 6*s.* net.

A Text-book of Inorganic Chemistry. By George Senter, D.Sc. Lond., Ph.D., Lecturer on Chemistry at St. Mary's Hospital, University of London. Price 6*s.* 6*d.* net.

PHARMACEUTICAL PRESS, THE, 72, Great Russell-street, London, W.C.

The British Pharmaceutical Codex, 1911. An Imperial Dispensatory for the Use of Medical Practitioners and Pharmacists. Published by Direction of the Council of the Pharmaceutical Society of Great Britain. Price, blue cloth, gilt, with red edges, 10*s.* 6*d.* net; in stout buckram or in limp waterproof cloth, 11*s.* 6*d.* net. (Postage 6*d.* extra in the United Kingdom; 1*s.* 6*d.* extra abroad.) Interleaved copies bound to order, at an extra charge of 3*s.* 6*d.* per copy.

PIONEER PRESS, Allahabad.

Prevention of Disease and Inefficiency, with Special Reference to Indian Frontier Warfare. By Lieutenant-Colonel Patrick Hehir, I.M.S., M.D., F.R.C.P.E., F.R.C.S.E., F.R.S.E., D.P.H. Camb., D.T.M. (Liv. Univ.), Officiating Principal Medical Officer, Burma Division. Second edition, illustrated and revised. Price not stated.

POWER LAUNDRY, THE, 89, Farringdon-street, London, E.C.

Power Laundry Handbook, No. 2. The Washhouse: All about it. With Many Useful Hints and Tables. Edited by C. F. Townsend, F.C.S. Price 1*s.* net.

REBMAN, LIMITED, London.

An International System of Ophthalmic Practice. Edited by Walter L. Pyle, A.M., M.D., Philadelphia, Member of the American Ophthalmological Society. Pathology and Bacteriology. By E. Treacher Collins, F.R.C.S., Surgeon to the Royal London Ophthalmic Hospital and Ophthalmic Surgeon to the Charing Cross Hospital, &c., and M. Stephen Mayou, F.R.C.S., Surgeon and Pathologist to the Central London Ophthalmic Hospital, &c. Price 21*s.* net.

SALVAT Y COMPANIA, S. EN C., Editores, Calle de Mallorca, 220, Barcelona.

Las Nuevas Adquisiciones de la Cirugía intratorácica. Por el Dr. D. Ricardo Lozano, Catedrático de Clínica quirúrgica, por oposición, de la Facultad de Medicina de Zaragoza. Price, paper, pesetas 12; boards, pesetas 15, net, cash.

SPRINGER, JULIUS, VERLAG VON, Berlin.

Die Gonorrhoe des Mannes. Ihre Pathologie und Therapie. Ein Leitfaden für Aerzte und Studierende. Von Dr. med. Wilhelm Karo. Price, paper, M.2.80; bound, M.3.40

Handbuch der Inneren Medizin. Herausgegeben von Prof. Dr. L. Mohr, Direktor der Medizin. Poliklinik zu Halle (Saale) und Prof. Dr. R. Staehelin, Direktor der Medizin. Klinik zu Basel. Erster Band. Infektionskrankheiten. (In collaboration with 39 authors.) Price, paper, M.26; bound, M.28.50.

THACKER, SPINK, AND CO., Calcutta. THACKER, W., AND CO., 2, Creed-lane, London, E.C.

Tropical Hygiene for Anglo-Indians and Indians. By the Honourable Surgeon-General C. P. Lukis, M.D., F.R.C.S., C.S.I., Director-General of the Indian Medical Service, and Major R. J. Blackham, D.P.H. Lond., R.A.M.C., Knight of Grace of the Order of St. John, of the Middle Temple, Barrister-at-Law, Kaiser-i-Hind Medallist, Divisional Sanitary Officer, First Division, Indian Army. Price 4*s.* 6*d.* net.

TIPOGRAFIA AMERICANA, Caracas, Venezuela.

Universidad Central de Venezuela. Facultad de Ciencias Medicas. P. F. Arreaza Calatrava, Ex-Interno del Degredo de Apestados, Antiguo Interno de los Hospitales Civiles, Ex-Practicante Interno del Hospital militar, Ex-Practicante Mayor del Hospital Vargas. La Peste en Caracas (Epidemias de 1908, 1909, 1910) Tesis de Opcion al Doctorado. Numero 102. Price not stated.

UNIVERSITY PRESS, Cambridge; Fetter-lane, London, E.C. (C. F. Clay, Manager); 100, Princes-street, Edinburgh.

The Climate of the Continent of Africa. By Alexander Knox, B.A. (Cantab.), F.R.G.S., Member of Convocation of the University of the Cape of Good Hope, Author of Notes on the Geology of Africa. Price 21*s.* net.

URBAN UND SCHWARZENBERG, Berlin und Wien.

Nachweis und Bestimmung von Giften auf biologischem Wege. Eine Anleitung für Pharmakologen, Gerichtsärzte, Gerichtschemiker und Apotheker. Von Dr. phil. et med. Hermann Fühner, Privatdozenten für Pharmakologie an der Universität Freiburg i.B. Price, paper, M.7.50; bound, M.9.

WILEY, JOHN, AND SONS, New York. CHAPMAN AND HALL, LIMITED, London.

A Text-book of Physiological Chemistry. By Olof Hammarsten, Emeritus Professor of Medical and Physiological Chemistry in the University of Upsala. Authorised Translation from the Author's Enlarged and Revised Seventh German Edition by John A. Mandel, Sc.D., Professor of Chemistry in the New York University and Bellevue Hospital Medical College. Sixth edition. Total issue, nine thousand. Price, cloth, $4.00 net, or 17*s.* net.

WILLIAMS AND NORGATE, 14, Henrietta-street, Covent Garden, London, W.C.

The King to His People. Being the Speeches and Messages of His Majesty George V. as Prince and Sovereign. Published by Permission. Price 5*s.* net.

Common-Sense Dietetics. By C. Louis Leipoldt, F.R.C.S. Eng. Price 2*s.* 6*d.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BAKER, H. R. POPHAM, M.R.C.S., L.R.C.P.Lond., has been appointed House Surgeon at the Cossham Memorial Hospital.

BALL, C. PRESTON, M.D., B.Ch., B.A.O Dub., L. & M.R.C.S. Irel., L.M., D.P.H., has been appointed Visiting Medical Officer to the Royal Hospital for Incurables, Donnybrook.

BRIDE, T. M., M.D. Vict., has been appointed Honorary Assistant Surgeon to the Manchester Royal Eye Hospital.

BURROUGHS, A. E., M.D. Edin., has been appointed Honorary Assistant Surgeon to the Eye and Ear Infirmary, Myrtle-street, Liverpool.

COX, G. LISSANT, M.B., B.C. Cantab., has been appointed Demonstrator in Pathology at the University of Liverpool.

GARDEN, W. S., M.D., B.S. Aberd., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Horbury District of the county of Yorks, West Riding.

HALL, F., M.B. Vict., D.P.H., has been appointed Assistant Medical Officer of Health of Lincoln.

HARRIES, E. H. R., M.D., B.S. Lond., D.P.H., has been appointed Assistant Medical Officer at the Park Hospital for Children.

HOLDEN, OSCAR, M.B., Ch.B., has been appointed Resident Medical and Surgical Officer at the Jaffray Branch of the General Hospital, Birmingham.

JONES, T. C. LITLER, F.R.C.S. Eng., has been appointed Lecturer in Clinical Surgery at the University of Liverpool.

LANGMEAD, FREDERICK, M.D. Lond., has been appointed Physician to Out-patients at the Hospital for Sick Children, Great Ormond-street.

MURRAY, W. H., L.R.C.P. & S. Irel., has been appointed House Surgeon at the Royal United Hospital, Bath.

OATES, GEOFFREY E., M.D., B.S. Lond., M.R.C.P. Lond., D.P.H., has been appointed Assistant Medical Officer of Health to the Ilford Urban District Council.

RAE, D. ERNEST, M.B., B.S. Aberd., has been appointed Resident House Physician at the Battersea General Hospital, Battersea Park.

ROBINSON, FRANK, M.D. Vict., D.P.H., has been appointed Lecturer in Public Health to the State Medicine Syndicate of the University of Cambridge.

WILKINSON, K. D., M.B., Ch.B. Birm., has been reappointed Resident Medical Officer at the General Hospital, Birmingham.

WOULFE, TIMOTHY, M.B., B.Ch., B.A.O., has been appointed Medical Officer of Tarbert Dispensary District, Listowel Union, Ireland.

WRIGHT, OSWALD KENTISH, M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed Medical Officer to Gresham's School, Holt, Norfolk.

WYMAN, H. B., has been reappointed Resident Pathologist at the General Hospital, Birmingham.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £100 per annum, all found.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant for three months. Salary at rate of 52 guineas per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £85 per annum, with board, residence, washing, &c.

BRENTFORD UNION INFIRMARY.—First Assistant to the Medical Superintendent, unmarried. Salary £185 per annum, with apartments, rations, washing, &c.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £160 per annum, with rooms, coals, gas, and attendance.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—Resident Medical Officer, unmarried. Salary £90 per annum, with board, lodging, and washing.

DERBY, DERBYSHIRE ROYAL INFIRMARY.—Two House Surgeons and House Physician for one year. Salary in each case £100 per annum, with apartments, board, &c. Also Assistant House Surgeon for six months. Salary at rate of £60 per annum, with apartments, board, &c.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £72 per annum.

GOVAN DISTRICT ASYLUM, Hawkhead, near Paisley.—Second Assistant Medical Officer. Salary £150 per annum, with rooms, board, laundry, and attendance.

GRANGE-OVER-SANDS, WESTMORLAND CONSUMPTION SANATORIUM AND HOME, Lancs.—Assistant Medical Officer, unmarried. Salary £150 per annum, all found.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

HELLINGLY, EAST SUSSEX COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £160 per annum, with board, apartments, washing, and attendance.

HENDON, N.W., CENTRAL LONDON SICK ASYLUM.—Assistant Medical Officer. Salary £120 per annum, with board and residence.

HÔPITAL FRANÇAIS, 172, Shaftesbury-avenue, W.C.—Resident Medical Officer, unmarried, for six months. Salary £100 per annum, with board and laundry.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

INDIAN MEDICAL SERVICE.—Twelve Commissions.

LEICESTER INFIRMARY.—Assistant House Physician for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

LONDON LOCK HOSPITAL.—House Surgeon to Female Hospital. Also House Surgeon to Male Hospital. Salary in each case £100 per annum, with board, lodging, and washing. Also Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Assistant Medical Officer and Pathologist. Salary £60 per annum.

MANCHESTER WORKHOUSE, Crumpsall.—Junior Resident Assistant Medical Officer. Salary £110 per annum, with apartments, washing, attendance, &c.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and washing.

NORTHAMPTON GENERAL HOSPITAL.—Senior Resident Medical Officer, unmarried. Salary £120 per annum, with apartments, board, washing, and attendance.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £100 per annum, with board, lodging, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Physician.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL EAR HOSPITAL, Soho.—Honorary Visiting Physician. Also Honorary Pathologist.

ST. BARTHOLOMEW'S HOSPITAL.—Chief Assistants and Clinical Assistants for Aural Out-patient Department.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—Junior Resident Medical Officer. Salary £60 per annum.

VIRGINIA WATER, SURREY, HOLLOWAY SANATORIUM FOR THE INSANE.—Junior Assistant Medical Officer (female). Salary £150 per annum, with board, lodging, laundry, attendance, &c.

WALSALL AND DISTRICT HOSPITAL.—Honorary Radiographer.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, &c., 73, Welbeck-street, London, W.—Honorary Assistant Anæsthetist.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Coatbridge, in the county of Lanarkshire; at Hipperholme, in the county of Yorkshire, West Riding; and at Westhoughton, in the county of Lancashire.

Births, Marriages, and Deaths.

BIRTHS.

DE ZILWA.—On Oct. 16th, at Taprobane, Ward Place, Cinnamon Gardens, Colombo, Ceylon, the wife of Dr. Lucian Arnold Emmanuel de Zilwa, M.D., B.Sc. Lond., of a daughter.

HOLROYDE.—On Nov. 30th, at Barnsley, Yorks, the wife of Douglas Holroyde, M.A., M.B., B.C., of a son.

PRINGLE.—On Nov. 28th, at Croydon-road, Anerley, the wife of Ernest G. Pringle, M.D., of a son.

ROBERTS.—On Dec. 3rd, at Bishopgarth, Woking, the wife of Dr. C. M. Roberts, of a son.

MARRIAGES.

CHITTY—GWILLIM.—On Dec. 1st, at St. Peter's, Piccadilly, Hubert Chitty, M.S., F.R.C.S., third son of G. W. Chitty, Esq., of Ightham, Kent, to Florence Louise Gwillim, third daughter of the late William Gwillim, Esq., of Ross, Herefordshire.

RUTHERFOORD—CADDY.—At St. Andrew's Church, Bombay, on Nov. 17th, 1911, by the Rev. J. Cameron, Thomas Corrie Rutherfoord, Captain, Indian Medical Service, eldest son of the late T. B. Rutherfoord, to Mary Frances Caddy, daughter of John Francis Caddy, and granddaughter of Mrs. Caddy, of Charterhouse, Richmond, Surrey.

DEATHS.

COOPER.—On Dec. 1st, at the West London Hospital, Hammersmith, from blood poisoning contracted while assisting at an operation, Leonard Kingsford Cooper, L.R.C.P., M.R.C.S. Eng., Blackheath, S.E., aged 25 years.

WESTBY.—On Nov. 9th, at Beaufort West, Cape Colony, Ashley John, M.B., youngest son of the late Canon H. H. J. Westby.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE DANGER OF USING ELECTRICAL BED-WARMERS.

To the Editor of THE LANCET.

SIR,—It is with great regret and indignation that an electrical manufacturer reads of the facts "Cave" mentions in your issue of Nov. 18th—viz., that bed-clothes have been set on fire, and a lady nearly injured by the use of an electric bed-warmer. Now it is known, indeed, that there are various types of electric bed-warmers on the market which, from business and ethical reasons, should be condemned to non-existence. Nevertheless, they exist, as "Cave's" communication shows, and there are three causes which explain their existence—namely, (1) manufacturers without the knowledge of the simple mechanical and electrical principles at work in the electric cushion; (2) manufacturers who wish to earn more profit than is fair; and (3) manufacturers who wish to take every available order, and who must therefore manufacture cheaply and without sufficient care.

If these three considerations did not exist on the part of the manufacturers, or if the electrical device is made in accordance with Ohm's and Joule's law, &c., and if good material is worked in the hands of skilled and reliable mechanics, and the whole process kept under strict supervision and adequate testing—then there is not the shadow of a danger in using an electric bed-warmer.

If "Cave" will be kind enough to test the electric cushions made in my factory he will see the impossibility of their igniting, because as soon as the temperature in one part of the cushion reaches 210° F. one of the safety devices cuts off the current altogether. Of course, these safety devices must not only be there, but they must also work properly, and when the temperature has fallen the current is again switched on. It would be ridiculous to put a fuse into the cushion, which would be blown often enough and make the apparatus each time liable to repair.

All I can say is that my electric cushions are absolutely reliable, and having personally tested hundreds of them before sending them out of my factory I have never had a single complaint. On the other hand, as most of them have gone to hospitals and private patients they have proved a helpful addition to clinical means. My cushion is recognisable by the lead seal marked "H" on every one and the rotary switch regulator on the cord which regulates the temperature while in use.

I am, Sir, yours faithfully,

Berlin, Nov. 25th, 1911. RICHARD HEILBRUN, Ph.D., A.A.T.E.E.

WANTED, A POST.

To the Editor of THE LANCET.

SIR,—Would some of your readers kindly inform me as to the best method of getting a middle-aged maternity nurse (Queen Charlotte trained) attached to some institution where she would have a home to go when disengaged, and where she would be sure of getting the one thing she most desires—viz., work and a fair remuneration for the same?

I am, Sir, yours faithfully,

JOHN E. H. PARSONS.

The Cottage, Shipton-under-Wychwood, Oxford,
Dec. 4th, 1911.

RAGGED SCHOOL UNION AND SHAFTESBURY SOCIETY.

To the Editor of THE LANCET.

SIR,—There is nothing novel about the bitter need of the poorest children of London in the winter time; unfortunately it recurs with depressing regularity. And with it must be repeated, by your kind permission, my appeal to your readers for their generous help of the work of the Ragged School Union. This society has been the true friend of London's poorest children for nearly 70 years. Our work, while resting on a religious basis, is unsectarian and non-faddist, and by reason of our long experience we claim that it is economical and practical. We exist to meet promptly the real and pressing needs of the slum child. Our relief work can be summed up briefly as follows: Food for the child that is hungry; clothes for the child that is ragged; boots for the little feet blue with cold; simple pleasures for the sad, and healing for the sick and crippled. To all who are well fed, warmly clad, soundly shod, happy and healthy, I earnestly appeal on behalf of those unfortunate "opposites" down in the dark places of London's poor streets. A careful expenditure of all funds entrusted to the R.S.U. is guaranteed, and I can safely promise a wealth of gratitude for every penny your readers kindly send to me.—I am, Sir, yours faithfully,

JOHN KIRK, Director and Secretary.

32, John-street, Theobald's-road, London, W.C., Dec. 1st, 1911.

Quis (*M.D.*).—1. The workhouse infirmaries are supported out of the rates, and the patients are supported by the parishes or unions. 2. The county hospitals, not necessarily, but very generally, in or quite near to the county towns, are supported by voluntary subscriptions.

M.D. writes: I have a patient who suffers from a good deal of discomfort from underclothing. I should be obliged if any of your readers could inform me about any texture which is non-irritating and at the same time cool.

Service.—Is not the point rather that all practitioners enter the profession after long, difficult, and costly training, and in this respect all have an equal right to consideration?

Disgusted.—We are much obliged to our correspondent; and will see if we can make useful comment upon the speeches of the politician in question.

Staff.—Such attendance would certainly not be objected to.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

Dec. 4th–9th (Havana, Cuba).—American Public Health Association.
" 12th–14th (Washington, D.C.).—Southern Surgical and Gynæcological Association.
" 19th–23rd (Moscow).—Third Pan-Russian Therapeutical Congress.
" 27th–30th (Baltimore).—American Physiological Society.

In 1912:—
Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
Feb. 13th–14th (London).—Central Poor-Law Conference.
March 7th–11th (Berlin).—Thirty-third Balneological Congress.
" 23rd–April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
" (London).—First Congress of Pure Food and Health Society of Great Britain.
April 1st–7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
" 14th–20th (Rome).—Seventh International Congress on Tuberculosis.
" (Rome).—Seventh International Congress of Dermatology and Syphilology.
" (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 7th–17th (Washington).—Ninth International Red Cross Conference.
" 27th–June 1st (London).—Eighteenth International Congress of Americanists.
" (London).—International Horticultural Exhibition.
June 24th–27th (London).—The (Biennial) Health Conference and Exhibition.
" (London).—Missionary Exhibition.
" (Dublin).—Celebration of the Bicentenary of the School of Physic in Ireland (Medical School of Trinity College, Dublin).
July 2nd–5th (London).—Congress of the Universities of the Empire.
" 2nd–6th (Doncaster).—Seventy-third Annual Show of the Royal Agricultural Society of England.
" 12th–16th (London).—Imperial Conference of Teachers' Associations.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 6th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 30	30·37	S.W.	...	51	48	39	43	43	Foggy
Dec. 1	30·19	S.W.	...	51	49	43	44	46	Overcast
" 2	30·12	S.W.	...	57	49	45	46	47	Overcast
" 3	29·85	S.W.	0·08	72	54	45	45	46	Cloudy
" 4	29·89	S.	0·08	63	49	43	44	45	Raining
" 5	29·53	S.W.	0·21	58	50	41	48	48	Raining
" 6	30·08	S.W.	0·27	60	46	37	37	38	Fine

The following journals, magazines, &c., have been received:—
Journal of the Scottish Meteorological Society, Polyclinic, Man, Medical Chronicle, Yellow Fever Bureau Bulletin, Public Health, La Clinique Infantile, Transactions of the American Otological Society, Revista Stiintelor Medicale, Edinburgh Medical Journal, South African Medical Record, Dublin Journal of Medical Science, Transvaal Medical Journal, Practitioner, Indian Medical Gazette, Indian Medical Journal, Medico-Surgical Journal of the Tropics, Annales de Gynécologie et d'Obstétrique, Journal of the Royal Sanitary Institute, Montreal Pharmaceutical Journal, Canadian Journal of Medicine and Surgery, Cleveland Medical Journal.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W (temporary address during building of new house).

TUESDAY.

SURGICAL SECTION (Hon. Secretaries—L. A. Dunn, James Berry): at 5.30 P.M.

Short Papers:

The President (Mr. Clinton T. Dent): Case of Intestinal Obstruction following an Ovariotomy 45 Years Previously.

Mr. Robert Jones (Liverpool): Treatment of Claw Foot.

Mr. Thomas H. Kellock: The Results of the Operation for Inguinal Hernia in Young Children.

Mr. John Murray: Case of Pancreatic Calculus—Stone Removed by Operation.

Mr. Walter G. Spencer: Hydrocephalus Internus—Subdural Rupture causing Hydrocephalus Externus.

WEDNESDAY.

BALNEOLOGICAL AND CLIMATOLOGICAL SECTION (Hon. Secretaries—A. Manuel, F. A. de T. Mouillot): at 5.30 P.M.

Paper:

Dr. G. Monod (Vichy): The Treatment of Gastro-hepatic Dyspepsia at Vichy, Carlsbad, and Cheltenham.

(At 7 P.M. the Members will dine together at Bellini's Restaurant, Mill-street, Regent-street, W. The charge for the dinner is 4*s.* 6*d.*, and Members may bring their friends. Dr. Manuel will be glad to receive names of those intending to dine.)

THURSDAY.

DERMATOLOGICAL SECTION (Hon. Secretaries—J. H. Sequeira, Wilfred Fox), at 11, Chandos-street, W.: at 5 P.M.

Demonstration of Cases.

NEUROLOGICAL SECTION (Hon. Secretaries—Wilfred Harris, T. Grainger Stewart): at 8 P.M.

Clinical Meeting:

Dr. Garrod: Case of Myotonus.

Dr. James Collier: (1) Peculiar Case of Congenital Paralysis; (2) Three Cases of Bilateral Athetosis.

Mr. Percy Sargent: Three Cases of Facial Palsy treated by Hypoglossal Anastomosis.

Dr. Otto May: (1) Case of Cerebral Diplegia treated by Posterior Root Section; (2) Case of Cerebral Monoplegia.

Dr. P. W. Saunders: Pituitary Tumour with Hypopituitarism.

Cases

Will also be shown by Dr. James Taylor, Dr. Leonard Guthrie, Dr. Hinds Howell, and others.

FRIDAY.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—T. R. Whipham, H. S. Clogg, Percy G. Lewis), at 11, Chandos-street, W.: at 4.30 P.M.

Discussion

On the Treatment of Tuberculous Joint Disease in Children, to be opened by

Mr. A. H. Tubby: The Relative Advantages of Operative Measures.

Sir Anthony Bowlby, C.M.G.: The Results Obtainable without Operation.

Dr. A. Butler Harris: The Rôle of Vaccine Therapy.

The following also will take part in the Discussion: Mr. A. E. Barker, Sir W. Watson Cheyne, C.B., F.R.S., Mr. Robert Jones (Liverpool), Mr. J. Jackson Clarke, Mr. R. M. Corner, Mr. P. Lockhart Mummery, Mr. W. G. Sutcliffe (Margate), Mr. H. J. Gauvain (Alton), Mr. R. C. Elmslie.

ELECTRO-THERAPEUTICAL SECTION (Hon. Secretaries—G. Harrison Orton, Cecil R. C. Lyster): at 8.30 P.M.

Clinical Meeting:

Interesting Skiagrams, &c., will be shown by Dr. Aldridge, Dr. Ironside Bruce, Dr. Lewis Jones, Dr. Reginald Morton, Mr. A. D. Reid, Mr. Gilbert Scott, and others.

Demonstration of the "Oscillothermex," a combined apparatus for Diathermy, High Frequency, and X Ray Treatments.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Mr. J. D. Malcolm: Some Remarks on 400 Operations involving the Peritoneum and a Comparison of the Fatal Cases, 3·75 per cent., with those of the Writer's Earliest Work.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor-road, S.W.

WEDNESDAY.—5 P.M., Fleet-Surgeon D. J. P. McNabb: Hospital Ships and their Functions.

OPHTHALMOLOGICAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Card Specimen will be shown by Dr. Edridge-Green, Mr. A. H. Levy, Mr. W. H. McMullen, Mr. A. S. Worton, and Mr. N. B. Harman. Papers:—Dr. T. Henderson: The Pathogenesis of Choked Disc.—Dr. A. Bronner: Notes on Three Cases of Ulcer of the Cornea combined with Painful Spasm of the Sphincter Pupillæ.—Mr. J. H. Parsons and Mr. E. K. Martin: The Action of Ultra-Violet Rays upon the Ciliary Body and Lens.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, 17, Bloomsbury-square, W.C.

TUESDAY.—8 P.M., Prof. H. G. Greenish: A Series of Slides Illustrating Caraway Cultivation in Holland. Mr. G. C. Druce: A Visit to Japan (illustrated by lantern slides).

NEW LONDON DERMATOLOGICAL SOCIETY, 20, Hanover-square, W.

THURSDAY.—4.30 P.M., Clinical Cases.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. H. G. Adamson: Clinique (Skin). 5.15 P.M., Lecture:—Dr. U. Pritchard: Complication of Middle Ear Suppuration.

TUESDAY.—4 P.M., Dr. J. J. Perkins: Clinique (Medical). 5.15 P.M., Lecture:—Dr. A. J. Jex-Blake: Congenital Heart Disease.

WEDNESDAY.—4 P.M., Mr. P. Turner: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. R. A. Gibbons: Pruritus of the Vulva.

THURSDAY.—4 P.M., Mr. R. J. Howard: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. T. Claye-Shaw: The Mode of Thought in the Insane.

FRIDAY.—4 P.M., Dr. J. D. Grant: Clinique (Ear, Nose and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. P. Dunn: Glaucoma.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Morton: X Ray Diagnosis.

WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M.. Dr. Simson: Diseases of Women. 5 P.M.. Lecture:—Mr. Bidwell: The Treatment of Acute General Peritonitis.

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture VI.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M.. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. S. Taylor: A Trace of Albumen.

SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 3.15 P.M., Special Lecture:—Sir Dyce Duckworth: The Personal Factor in Disease.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Prof. Hewlett: Recent Researches on the Function of the Hypophysis Cerebri.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 2.15 P.M., Special Lecture:—Dr. F. Taylor: Pain in the Back.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Pathological Demonstration (Dr. Duncan).

TUESDAY.—Clinic; 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld).; Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. R. M. Leslie: The Tuberculin Treatment of Tuberculosis.

WEDNESDAY.—**Clinics:**—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Pathological Demonstration (Dr. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. B. Giles). **Clinics:**—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., **Lecture:**—Dr. G. G. Macdonald: The Natural Cure of Diseases.

FRIDAY.—2.30 P.M., Operations. **Clinics:**—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Pathological Demonstration (Dr. Duncan).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., **Lecture:**—Dr. Maguire: The Germicide Treatment of Pulmonary Tuberculosis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Batten: Paraplegia.
FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. G. Holmes: Cerebellar Disease.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY AND FRIDAY.—3.45 P.M., Lecture:—Mr. A. Wylie: Larynx.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Dr. W. Griffith: Pathology of the Dermis.
THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Bullous and Vesicular Eruptions (continued)—V., Herpes; VI., Zoster; VII., Dermatitis Herpetiformis.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Mr. W. R. Douglas: Chronic Enlargements of the Testicle. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (16th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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The Hunterian Lecture
ON
THE INTRA-ABDOMINO-PELVIC PRESSURE IN MAN.

Delivered before the Royal College of Surgeons of England on Nov. 17th, 1911,

BY R. H. PARAMORE, M.D. LOND., F.R.C.S. ENG.,

PATHOLOGIST AND REGISTRAR, HOSPITAL FOR WOMEN, SOHO SQUARE.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—Last year, in my lectures on the Evolution of the Pelvic Floor,[20] I referred that process to the necessity for a pressure within the body cavity which as evolution proceeded became more and more important.

RELATIONSHIP BETWEEN VISCERAL PRESSURE AND METABOLISM.

This conclusion was based on the association that step by step with the advance in structure a corresponding increase in dominance over the environment obtained; the two changes, the one in structure, the other in activity, running along such parallel lines, and the association being of such an intimate nature as to have a causal relationship. On the one hand, we saw that as the abdominal wall began to be differentiated the first indication of a pelvic floor appeared; that as the abdominal wall further evolved a similar advance in the pelvic floor was found; and that still more marked changes occurred in it with the appearance of the thoracic diaphragm: from which it was clear the development of these three musculatures was correlated, mutually dependent on a common cause, which itself increased in intensity from stage to stage. And, on the other hand, an analysis of the progressive change in the habits and conditions of life, exhibited by members of this series, revealed this cause to be a progressively increasing demand for a more and more effective internal pressure. For I showed how the medium in which the animal lives must influence the pressure within the body cavity, of which even in the fish an increase was necessary for visceral acts; that to obtain the same effect as before, the same return of blood from the viscera to the heart, the body wall of air-dwelling vertebrates had to be more active than that of water-dwelling vertebrates; that with the advent of ribs the excursions of pressure had to be greater than in animals without a thorax, since the greater quantity of air inspired necessitated an amplified expiration; and that with the establishment of mammals, characterised by a still greater increase in activity, still greater excursions had to occur. Throughout the series we have a progressively heightening metabolism of the organism as a whole, called forth by the necessity for greater activities, exemplified at each stage, demonstrating once and for all the intimate relationship between the visceral pressure and general metabolism.

SOME OF THE PROBLEMS TO BE CONSIDERED.

It is plain if this generalisation be true—if an adequate internal pressure has been and still is of such importance in the lower vertebrates that their respective positions in nature have only been reached and maintained by the adaptation of the muscles enclosing their viscera in each class for such an end—we ought to find in man a similar and a correspondingly advanced association; correlated with his remarkable predominance, the musculatures enclosing his viscera should be the best developed of all the vertebrates; and arguing from analogy, their purpose should be the production of an intensified internal pressure. If so, we should find evidence that the pressure is not merely a passive result of visceral weight as some have supposed [9 15 17 25] or caused indirectly by the muscular contraction maintaining the body in equilibrium, as others have thought,[23] but that it is produced for a purpose of its own, which reacts on the body as a whole; and inversely, that when this complicated muscular mechanism becomes defective in one or other direction, producing an average pressure too high or too low, a general bodily effect ensues; we ought to discover with the resulting pressure change deviations from the normal, pathological states, dependent on its rise or occurring with its fall.[24]

Such are the problems involved in a consideration of the intra-abdomino-pelvic pressure in man. To-day, it is impossible to treat the subject with completeness; time only permits some fundamental points may be touched on; but especially do I wish to show that besides the very considerable pressure caused by activity and straining—to which the term "intra-abdominal pressure" is so often limited—even during posture and rest, a pressure is maintained within the abdomen; and next, that during activity and all active postures, this pressure is due mainly or even entirely to the contraction of the muscles enclosing the viscera, which even during recumbency participate in its production, and so that the visceral weight is correspondingly negligible; and finally, to refer briefly to the physiological significance of this pressure.

HIGH DEVELOPMENT OF THE ENCLOSING MUSCULATURES IN MAN.

We may first notice man indeed falls within the generalisation referred to; for a comparison of the three enclosing musculatures in terrestrial pronograde mammals with those in him shows that the maximal advance in development has been reached in the human type. The pelvic floor musculature, instead of enclosing a very narrow wedge-shaped space, as in carnivora—in which most probably of all pronograde mammals the greatest excursions of visceral pressure occur—presents in man as a wide slightly concave sheet, forming a true floor, a real supporting structure, its upper surface opposing more or less at right angles the down-thrust of the viscera, and therefore being more capable of resisting a longer sustained and a more direct—i.e., a greater—pressure from above than occurs or can occur in the former animals. The abdominal wall and thoracic diaphragm show corresponding advances. In the former, the transversales, size for size, are much thicker and stronger; Professor Keith[11] has shown that with the assumption of the upright carriage the muscle has gained about one-third in weight. And the diaphragm is not only better developed, but its attachments pass much more deeply into the abdomen,* so that we have, according to the same observer,[11] two distinct types of this muscle—one found in animals which go on all fours, and one peculiar to animals that walk erect. This greater development of the transversales and of the diaphragm in orthograde mammals cannot have been required to maintain the body in equilibrium when erect by a direct action on skeletal parts; nor can it be supposed that the advance in the diaphragm has been caused by a change in the elasticity of the lungs.

FUNCTION OF THE ENCLOSING MUSCULATURES.

What can the function of these extensive musculatures be if not to contract upon the collective viscera in the abdomen and by compressing them to cause a pressure effect? Let us briefly consider their action. The two transversales with their intermediate tendon form a continuous sheet, closely applied at the front and at the sides to the visceral mass, their fibres passing for the most part horizontally from one side to the other. Since the lumbar and pelvic fibres, when they contract, cannot in any way cause an approximation of their skeletal attachments, the resulting effect must be a compression of the viscera to which they are apposed, tending to displace the lower ones into the pelvis, causing a pressure there, and simultaneously preventing a descent of the epigastric viscera. Contraction of the epigastric fibres, however, which arise from the margin of the costal arch on each side, may cause a narrowing of this arch and a diminution in volume of the thoracic base, and a consequent displacement of the epigastric viscera and with them of the diaphragm upwards into the chest; but if the diaphragm prevent this upward displacement, a narrowing of the thoracic base will not occur, but the pressure therein will be maintained raised.

That such an effect will occur when the transversales contract will be readily granted; for instance, during straining and laughing and similar acts, no one will dispute that a considerable visceral pressure occurs in which the transversales participate. But the question to be considered is, when do these muscles not contract, when is their relaxation complete? I cannot to-day attempt to answer this question. I can only remind you that even during apparent rest the

* The diaphragm is better developed in aquatic mammals than in man; this is due to the density of the water in which they pass so much of their time, and does not vitiate the argument.

fibres of striated muscle are in a state of partial contraction or tone (Pembrey [21]), which determines a pull on their skeletal attachments. If this be admitted, it is clear, provided the diaphragm simultaneously exerts a pressure downwards, that even during rest a visceral pressure exists. We must remember the transversales are well-developed muscles, and consequently play some considerable part in the economy of the body, for if they did not function their regression would occur. That their purpose is to cause a pressure effect is indeed indicated by their phylogeny; for they first appeared in the amphibia, just in those vertebrates, that is, for which a terrestrial life with all its possibilities began, and for which the emergence from the denser medium of water to the much lighter one of air was a definite accomplishment.

That the thoracic diaphragm is similarly concerned with causing a pressure effect within the abdomen, by tending to thrust the epigastric viscera downwards, is indicated by the high position of its trefoil tendon, the steep descent of its costal fibres, and the remarkable length and muscular development of its crura, which reach far into the abdomen—as low as the second and the third and even the fourth lumbar vertebræ: just the very anatomical conditions, in conjunction with those of the abdominal wall, by which a pressure effect within the abdomen could be most easily produced. And were it not that the diaphragm separates the abdomen from the thorax, and is as closely related to the lower thoracic viscera as it is to the upper abdominal, no one would doubt it to be a compressor of the latter and that it is an abdominal muscle.

THE DIAPHRAGM AND NEGATIVE PRESSURE IN THE CHEST.

But the negative pressure within the chest introduces a difficulty: for continuously exerting an aspiratory effect on the diaphragm, it has been thought to have drawn the diaphragm upwards and to be the cause of its high position; and for this reason, and because the diaphragm participates in inspiration, it has been assumed to be a purely respiratory muscle, that it exists only to overcome the elasticity of the lungs, and that, except when violently contracted as by straining, it does not compress the abdominal viscera. In line with this conception, it has been supposed the epigastric viscera are maintained in position, suspended, by the negative pressure within the thorax, and that in the erect posture, since they tend to gravitate downwards and to drag the diaphragm with them, they not only aid the diaphragm in overcoming the elasticity of the lungs, but cause a partial vacuum in the epigastrium—that is, that the pressure there is negative. It has even been thought, both formerly and recently, that the adhesion of the pericardium to the diaphragm below, and its attachment to the fascia of the superior mediastinum, and so to that of the neck above, forms one of the chief supports of the diaphragm and plays a part in the support of the abdominal viscera. The Roentgen rays, however, demonstrate that descent of the central tendon occurs (Keith); so it is clear this mediastinal fascia, which does not prevent such descent, cannot be the cause of the high position of the epigastric viscera. These epigastric viscera, moreover, extend a little higher into the chest laterally in the regions of the cupolæ than centrally in the region of the attachment of the pericardium, and, what is more remarkable, the heavy right lobe of the liver reaches a little higher than the stomach in the left hypochondrium.

ACTION OF THE DIAPHRAGM.

At first sight, the negative pressure in the thorax may appear sufficient to explain the high position of the epigastric viscera, just as Matthews Duncan [3] supposed the thorax expanded, and Schatz [23] stated the intercostal muscles hypertrophied, in pregnancy to help bear the heavy uterus by an increased suction upwards. And, in the same way, the mere weight of the epigastric viscera may appear sufficient to explain the descent which occurs on change from the supine to the erect posture. But this hypothesis takes no account of the structural condition of the diaphragm. Much more likely is it that the descent of the epigastric viscera, which occurs on rising to the erect from the supine posture, is caused to a large extent at least, if not mainly or entirely, by the diaphragm actively depressing them, or rather rotating them, downwards and forwards, a movement which determines the enlargement of the thoracic base, and results in an increase in the vertical diameter of the chest. By this enlargement of the thorax and change in the abdomen the pressure within each is so altered that the difference between them becomes greater; indeed, the pressure within the epigastrium, as measured within the stomach, is, according to Moritz, absolutely increased. Thus, more blood is squeezed into the thorax towards the heart, so that the aortic pressure may be raised on standing and the cerebral circulation safeguarded in this otherwise dangerous position. Such action of the diaphragm could only be rendered effective by the abdominal wall resisting the descent of the epigastric viscera; and this opposition affords an adequate explanation of the structural development of the diaphragm, and at the same time indicates that the position of the epigastric viscera is dependent upon the reaction between these two musculatures.

For it is unlikely the diaphragm would be so well developed were it a purely respiratory muscle, and had only to overcome the elasticity of the lungs, because the force this elasticity exerts is comparatively small. If this were all we should expect the diaphragm in man, instead of being better developed than in the terrestrial pronograde mammals, to be no better developed; and if in man the weight of the viscera really assists the diaphragm, it ought not to be even as well-developed as in these lower mammals. Further, we should expect expiration to be a physical elastic recoil permitted by relaxation of the diaphragm, but due to shrinkage of the lungs, instead of being effected, governed, and controlled by muscular action as Professor Keith has pointed out that it is.[12] Indeed, we find the negative pressure in the thorax is not suddenly produced at birth, but develops slowly—is, indeed, not demonstrable during the first four days of life, and at the eighth day of life, according to Hermann,[6] is only −0·4 mm. Hg, so that in the first few days of life the elasticity of the lungs does not come into play for expiration, yet expiration occurs, and it can only be produced by a muscular contraction of the body wall muscles.

At this time the act must be comparatively difficult; and, like so many other phenomena in the early life of man, represents in this feature, more or less, the conditions which prevailed during the early evolution of the vertebrates, when expiration, first attempted, became established—an accomplishment effected by the development of the external oblique muscles of the body wall, which evolved to meet and overcome this at first seemingly insuperable difficulty. The increase in elasticity of the lungs has rendered the act easy in adult man; but the ease of its accomplishment is a spurious reason for the argument that expiration is a passive recoil, and that muscular activity does not determine it; for many contractions of muscle occur and continue of which we are unconscious—such, for instance, as that of the transversales during rest. But, even in the adult, the apparently passive expiration has a limit, beyond which expiration can only be continued by a forcible contraction of the body wall muscles, in spite of the fact that the lungs are still elastic and a negative pressure still persists in the thorax, as it does even after the most forcible expiration. This forcible contraction of the body wall muscles has to be made even in the supine position, when the weight of the epigastric viscera, in so far from hindering, may even facilitate it; it is, indeed, easier to effect in the erect posture than when lying down, probably because the volume of the thorax is larger in the former position and the difference of pressure within it and the abdomen greater; clearly, it is produced to overcome the resistance of the still contracted diaphragm, for there is no other structure than the diaphragm to occasion it.

From this it seems reasonable to infer that the continued contraction of the abdominal wall in ordinary expiration is required, not because the lungs are unable to shrink without it, but because the diaphragm opposes the act—opposing it, not violently, but gently, therefore expiration is easy; but opposing it with a force which is greater, not less, than the force of the elastic recoil of the lungs, for the reason that the pressure in the abdomen must remain ever greater than that in the thorax. Thus, in the abdominal type of breathing expiration is effected by the abdominal wall actively pushing up the epigastric viscera, and with them the diaphragm, in spite of its continued contraction, by which means a pressure in the abdomen greater than in the thorax is assured. That the diaphragm continues to exert a pressure downwards during ordinary expiration is shown at once by the fact that the pressure in the stomach does not become negative or reach zero during ordinary expiration,[13] as we should expect

it to do if the diaphragm became flaccid and allowed an equalisation of the very different pressures on its opposite sides to occur.

CONTINUOUS DOWNWARD PRESSURE OF DIAPHRAGM.

That the diaphragm, by its contraction, usually exerts a pressure downwards upon the epigastric viscera is clear from these considerations; that it usually does so when it violently contracts no one will deny. But the question again arises, When does the muscle not contract? The necessity for a continued activity of the abdominal wall muscles during expiration, when we should expect the diaphragm to relax, shows that the elasticity of the lungs is insufficient to overcome the diaphragm even when partially inhibited. From my study of this subject I have come to the opinion that the diaphragm only becomes completely relaxed—that is, flaccid—exerting no traction downwards on the thoracic side, and no pressure downwards on the abdominal—when the pressure in the thorax becomes raised and equals that in the abdomen, as may occur when straining movements are made with the glottis closed. This is exemplified by the act of coughing. In this act, after a breath has been taken, the glottis is closed and the pressure in the thorax considerably raised by an increased contraction of its muscles; the glottis is then opened, and a blast of air escapes. The escape, however, is peculiar in this, that it is not sustained; moreover, not only is the outrush of air suddenly checked, but a great and rapid rise of pressure in the abdomen is produced, which is propagated downwards throughout its cavity, bulging the hypogastrium and being transmitted into the pelvis. This, it seems to me, is determined by a sudden contraction of the diaphragm, the stimulus for which is the sudden lengthening of its fibres, made possible by a state of relaxation and caused by the rapid fall of pressure in the thorax. At all other times the diaphragm is contracted, even during expiration, and the force it exerts downwards is not only sufficient to overcome the elasticity of the lungs when these can distend, but to cause a compression of the abdominal viscera which it is able to do, provided they be of sufficient bulk, in virtue of the resistance offered by the abdominal wall.

For it is to be noticed that if by expanding the thorax the lungs be distended to their utmost so that they can stretch no more, or if they be prevented from distending by a closure of the glottis which can be voluntarily produced, however much the diaphragm contract, it will not be able to descend. Under these circumstances, if the spine be extended, the pressure in the epigastrium may easily become negative, epecially in thin individuals, in spite of a continued contraction of the enclosing muscles. The enlargement of the thorax causes an advance of the sternum, and this with extension of the spine causes the abdominal wall to become recurved, unless the volume of the viscera be unduly large. The resulting negative pressure may be due in part to the tendency of the epigastric viscera to sag downwards; but more probably the powerful recti muscles, which have a considerable width in the region of their thoracic attachments, play a greater part in the production of this negative pressure at least when it is marked. For instead of being bulged forwards, or running from the thorax to the pubes in a straight line, they are drawn inwards towards the spine by the transversales; and instead of adding to, or not affecting, the internal pressure, by tending to advance and to enlarge the abdominal cavity, they diminish the pressure. Thus, Professor Keith distinctly states that by taking a deep thoracic breath *and holding the abdominal walls as rigid as possible* he was able to produce a negative pressure of −4 mm. Hg in the stomach.[13] By such maximal inspiration the pressure in the chest, which at the end of ordinary inspiration equals about −7·5 mm. Hg (Howell)[10], sinks to about −30 mm. Hg or more (Howell)[10], so that even here we have a relatively much greater pressure in the epigastrium. It is obvious that a similar and greater negative pressure can be produced by expanding the thorax with the glottis closed, when the lungs are only partially distended, as after an expiration.[17] In this case, since air cannot enter the lungs, the diaphragm is forced to ascend in spite of its contraction, and a considerable enlargement of the thoracic base occurs into which the epigastric viscera pass, the abdominal wall being markedly drawn inwards. These conditions, however, are uncommon events in the body, the former occurring during yawning, the latter perhaps in the initial stage of vomiting; so that for practical purposes we may say the diaphragm is continuously exerting a pressure downwards upon the epigastric and other abdominal viscera.

The combined effect of the abdominal wall and thoracic diaphragm is thus to cause a general compression of the abdominal viscera. These, we find, have definite shapes, even the hollow intestinal tract, as sections of the frozen body show, and the more solid organs facets on their surfaces—clear evidence of how they all are compressed against each other and the enclosing walls during life, demonstrating, too, how by opposing each other and these walls they are maintained in place and are not suspended in the normal by any ligament. The pressure so caused in the large and extensive abdomen is propagated to the pelvis, which in its phylogeny, and indeed ontogeny, has reacted by an adaptation of its structure to successfully withstand it. We have already referred to the change in its floor. The shape of its cavity has also altered in that it has approached the form of a hemisphere—i.e., the form of greatest possible capacity with smallest superficies, a feature which distinguishes it from the pelves of all other animals, and is an indication in itself that a pressure continuously existed within it during life.

MANIFESTATIONS OF THE INTRA-ABDOMINO-PELVIC PRESSURE.

I pass on now to the manifestations and measurement of this pressure in man, and to a brief examination of the values found which may be expected to throw light on the mechanism of its production and to verify or disprove our tentative conclusions.

At the outset it is to be remarked that no evidence of a pressure caused by the tone of the abdominal wall and thoracic diaphragm can appear when these muscles are rendered more or less inactive as by general anæsthesia. The fact that on laparotomy in a well anæsthetised subject the intestines do not bulge out through the wound, nor air rush into the peritoneal sac, is no proof that during conscious life a pressure due to such muscular activity does not exist within the abdomen; and yet this observation appears to have caused doubt or denial of such pressure.

And experiments which put out of court this muscular activity are similarly void; such, for example, as those of Quirin,[22] who found immediately under the abdominal wall in anæsthetised animals a pressure which varied from 0 to 13 mm. of water;† and those of Hörmann,[9] who killed his animals outright, and then discovered that immediately beneath the abdominal wall no positive pressure existed. Nor do the experiments of Kelling,[15] who found in starving dogs which were not anæsthetised that the pressure within the abdomen immediately beneath the anterior abdominal wall in the dorsal decubitus was nothing (0), negative a tone of the abdominal walls in the normal dog, much less in normal man; for it is plain that the volume of the viscera plays a part in the pressure effect caused by the activity of the enclosing muscles, that the muscles will more easily cause a pressure when the visceral mass is large than when it is small. Reference has already been made to the occurrence of a negative pressure in the epigastrium of man, when the chest is maximally expanded and the spine hyperextended; this negative pressure is not due to an absence of tone of the abdominal wall, but to the action of the recurved recti muscles, which tend to pull the linea alba forwards and so to enlarge the abdominal cavity and thus to obstruct the action of the transversales which is to diminish it, and as a consequence the pressure within falls. So in starving dogs, in which the visceral mass is rendered small, it is not surprising that no positive pressure should obtain; for the depth of the epigastrium, i.e., the distance from the xiphoid process of the sternum to the spine, is very considerable in dogs, and the course of the recti highly arched. Moreover, the tone of the muscle itself cannot be so good in animals reduced by starvation; nutrition, clearly, is a factor in this question.

Nor must we be deluded into denying the existence of this pressure, because usually we are unconscious of it. Whilst we may recognise that a pressure change occurs within the abdomen during the straining associated with visceral acts, the fact that we are unconscious of a similar, though much smaller pressure when the body is maintained in various postures and during rest is, of course, no proof that such

† Contrast this with Lewis,[16] "The average pressure in the abdomen of 10 anæsthetised cats, lying on the back with the limbs gently fixed, was 2 mm. Hg." (Ibid., p. 242.)

pressure does not exist. Indeed, we are unconscious of the pressure in the abdomen when it is very considerably raised, as occurs during active movements, even violent ones, when the pressure may be greater than that associated with the straining for visceral acts; this, as Schwerdt[24] naively remarks, is because at such times we think of other things.

MEASUREMENT OF THE INTERNAL PRESSURE.

It is easy to convince oneself that a considerable pressure within the abdomen is produced by straining: the impulses caused by cough afford a ready example. But to show the existence of a pressure during rest and posture, it is necessary to use a manometer and to connect it by means of a tube with the interior of some viscus such as the rectum or stomach. It is best to fix a small bag, such as an ordinary thin rubber finger-stall, on to the end of the tube; this prevents the contents of the viscus from entering the tube and vitiating results. The bag is partially distended with air, so that whilst pressure changes may be transmitted to the manometer, the elasticity of the bag itself plays no part in their production; the bag is then passed; or it may be passed first, and then a known small amount of air pumped into it. It is necessary to see that there is free play of pressure between the bag and the manometer, by getting the patient to cough: if the mercury does not respond immediately, the bag must be readjusted, as kinking sometimes occurs. When this is done, if the subject is caused to assume different postures, different pressure-values are found, which for the same posture are always approximately the same.

Thus, in the case of the rectum, one finds in the left lateral position, the subject lying at ease, a positive pressure of 6 to 8 mm. Hg. On turning more on to the face and assuming the semi-prone position, the mercury is seen to fall and may reach zero, or a small negative pressure may be found; whilst, when lying flat on the back, but still at ease, the mercury rises and the rectal pressure is found to be considerably higher than when on the side. If the patient be now asked to get into the knee-chest position, a negative pressure of −6 to −8 mm. Hg will be found to occur; but to obtain this the thighs must be vertical, the chest low on the couch, and the back well arched so that it forms a marked concavity; otherwise a decided positive pressure may still persist. On standing erect an intra-rectal pressure of 20 to 28 mm. Hg is registered. On asking the subject to bend forwards whilst still standing, so that the body becomes horizontal, a fall of pressure to 10 to 18 mm. Hg occurs, rising again when the patient stands upright—this without corsets.

Effects of Movements.

If the manometer be watched as the subject changes from one position to another, elevations of pressure, at times quite considerable, will be noticed to occur; these are, of course, due to the active process of moving. As the required attitude is attained the mercury falls and becomes fairly stationary; often, however, subsequently falling a little more as the position becomes easy and the subject's attention is directed away from herself, the muscles then relaxing as much as they will. Even under such circumstances small oscillations, rhythmic in character, frequently occur, and are due to respiratory movements.

The effect of more violent movements upon the internal pressure can be studied by asking the patient to overcome external resistances. Thus, if whilst she is bending forwards she lifts a fairly heavy weight, a considerable increase of pressure results; according to my observations the pressure rises to 46 to 64 mm. Hg. It may, however, be much higher, reaching 120 mm. Hg (Keith). The effect of straining can be gauged by asking the patient to bear down when in the left lateral position. The mercury rises as a rule slowly, registering a pressure of 52 to 72 mm. Hg or even higher; and it remains raised and fairly stationary as long as the breath continues to be held and the straining effort is prolonged; on releasing the breath the mercury falls to its original position. The increase of intra-abdomino-pelvic pressure incident to straining is therefore characterised by its gradual rise and its sustained elevation. On coughing, the mercury shoots up to 80 or 100 mm. or more; but it falls as rapidly: the act causes but a momentary impulse.

Pressure-Values in the Epigastrium.

Coming now to the pressure-values in the epigastrium, it is established beyond doubt, by the work of Schwerdt,[24] Kelling,[15] Moritz,[17] and Keith,[13] that the pressure in the stomach in the normal—with the single exception already referred to—is always positive, even in the erect posture. Professor Keith, in his article on visceroptosis, puts it down from 4 to 8 mm. Hg during expiration, rising to 12 mm. Hg during inspiration.[13] Negative pressures, however, other than those produced by expanding the chest with the spine extended, have been found: but these are generally small and almost negligible, such values as −0·5 to −1·5 cm. of water having been given by Schreiber. These have been attributed by others either to faulty technique (Moritz), or to pathological conditions—e.g., enteroptosis (Keith).

As in the case of the pressure within the rectum, changing the posture changes the pressure within the stomach. As the average of numerous observations on himself, Moritz gives the following:—

Lying on back	6·3 cm. H_2O	equals	4·6	mm. Hg.
Sitting	8 ,,	,,	5·8	,,
Standing erect	7 ,,	,,	5·1	,,

Thus the pressure in the stomach when sitting is slightly greater than when standing, and when standing is greater than when lying down; in all positions it is considerably above the atmospheric pressure, but what is of greater significance from the point of view of causation of this pressure, it is slightly greater in the upright posture than when lying down. This compares very well with Schatz's observation[23] that while the pressure in the rectum on standing erect measures 28 cm. H_2O, on sitting it is increased to 32 cm. H_2O, but on lying down falls to 14 cm. H_2O. It must be stated, however, that Schwerdt[24] gave higher values for the horizontal (13·5 cm. H_2O) than for the upright (11 cm. H_2O), and I also found a similar condition in a pregnant woman near term. My observations on stomach pressure, however, have been insufficient to form an opinion on this matter. From the work of Moritz[17] and the evidence of accurate and extensive observations his paper contains, however much one may disagree with his interpretations of his results, the figures he gives may be accepted.

Just as the pressure in the rectum is increased when the subject rises from the recumbent to the erect posture, so the pressure in the stomach is increased when the body is lowered from the horizontal position and inverted, by which means the stomach occupies the lowest part of the abdomino-pelvic cavity. Thus Moritz found:[17]

Lying flat on back	7 to 8 cm. H_2O	equals	5 to 5·8	mm. Hg.
Body inverted (i.e., thorax depressed)	20 ,,	,,	14·7	,,
On back again	6·5 ,,	,,	5	,,

A repetition of the experiment gave:—

Body inverted	19 cm. H_2O	equals	13·9	mm. Hg.
Flat on back	7 ,,	,,	5	,,

It is to be noticed that the figures representing the pressure in the stomach when it is dependent are much less than those found in the rectum in the erect posture. If gravity is the effective cause of the pressure, surely the pressure in the stomach, when the body is inverted, should be approximately equal to that in the rectum in the erect posture.

Activity produces considerable elevations of the intragastric pressure, just as it does of intra-rectal pressure; during the change from one posture to another considerable increments of pressure occur. Thus, moving the arms or legs, or holding a weight at arm's length, produces an increase. Schwerdt found the intragastric pressure increased from 11 cm. H_2O to 24 cm., when 5 kg. were held with the arm stretched horizontally forwards, and that it reached 59 cm. when 10 kg. were so held. Keith found on bending down and lifting a heavy weight, the pressure within the stomach rose to over 70 mm. Hg.

CAUSES OF VARIATION OF PRESSURE-VALUES.

From these measurements it is obvious a considerable range of pressure occurs within the abdomino-pelvic cavity. The pressure is different in different parts for the same posture; it changes in the same part with change of posture; and considerable elevations occur with active movement. The question is, What is the cause of these pressure-values, and why do they vary so? To get at this we must analyse and critically examine them.

There are but three factors, by the summation of which the pressure within the hollow viscera, as measured clinically, is produced. First, there is a possible pressure caused by the viscus itself, due to the musculature in its

walls actively contracting on the contents. Next, there is the pressure imparted from the viscera above in virtue of their weight; the remarkable changes occurring with change of posture appear to show its importance. Last, there is the pressure caused by a compression of all the viscera by the body wall and diaphragm enclosing them; as is evident at least from the changes of pressure produced by activity.

POSSIBLE PRESSURE CAUSED BY THE VISCUS ITSELF.

It is first necessary to discover whether the visceral walls participate in the production of the pressure-values, to an extent at least of masking the other factors. At first sight it seems that they do so; that they possess a certain degree of tone, rhythmically varying; and that visceral processes can only occur by their increased contraction. And yet in the case of the cardiac region of the stomach, and in that of the rectum in the intervals between successive defæcations, from which viscera the pressure-values given were obtained, all the evidence points the other way; that the pressure caused by a tonic contraction of their walls is so small as to be negligible from this point of view. There is no doubt that during active visceral processes a rise of intravisceral pressure occurs quite apart from any pressure outside the viscus. Moritz has shown that the passage of food from the stomach into the duodenum is determined by an active contraction of the pyloric part of the stomach, with the production of very considerable pressures within this part, rhythmically recurring; yet he also showed that during the same act variations of pressure within the cardiac part of the stomach, due to a contraction of its wall, did not occur or were so slight as to be scarcely perceptible. Indeed, from the pressure record he obtained, it seemed the stomach was quiescent even after a large meal had been eaten, whilst, in fact, it was digesting and passing the food onwards, as shown by its being empty at the end of the experiment. The only noticeable pressure changes occurring in the cardiac part of the stomach during this process, the observation of which lasted for four hours with a short break, were elevations due to respiration and those caused by the cardiac beat; these were considerable, and, of course, not due to a contraction of its walls. No one will think that defæcation occurs without a considerable rise of rectal pressure due to a contraction of its own musculature, but in the intervals between the acts of defæcation what evidence is there of any marked contraction or even of tone in the rectum? And, naturally, for these clinical observations one chooses a quiescent interval. The fact that all the viscera are closely packed within the abdominal cavity, in consequence taking definite shapes, and the occurrence of a negative pressure within the pelvic viscera when the abdominal walls are relaxed, as in the knee chest position, clearly indicate the tone of the visceral musculature is so trifling that the hollow viscera are readily affected by changes of pressure immediately outside them.

Moreover, if a pressure within the hollow viscera is necessary for their functioning, and if such a pressure already prevails within the body cavity, there seems no reason for the visceral walls to be sustained in continuous contraction of any extent, or indeed to contract at all, unless the pressure within, as in the antrum pylori, is to become for some reason or other considerably greater than in adjoining parts. The function of the hollow viscera is not only to propel their contents onwards, but their walls are actively engaged in glandular, assimilative, and excretory work, just as the pancreas, liver, and kidneys; and whilst at first sight one inclines to the notion that a tonic contraction of the hollow visceral walls occurs and must influence the pressure, because of the existence of their musculature and the known tonic contraction of smooth muscle in the vascular system, we find in the solid viscera, equally important organs, no musculature other than that belonging to their vessels, so that these at least have not the means themselves to produce a pressure within them, except that caused by a swelling of their cells combined with the resistance of their capsules. In line with this, we find the visceral musculature characterised by the extraordinary slowness of its contraction; whilst the body wall muscles are remarkable for the rapidity with which they react as well as for their power of sustained contraction. It is evident that the rapid changes of pressure found in the hollow viscera to result from movement, and the considerable excursions which occur, are due to the rapid sequence of contraction and relaxation of the body wall muscles and diaphragm, not to any supposed alteration of tone or contraction of the visceral walls themselves; for the variations of pressure occur simultaneously with every movement of the patient—the mercury in the manometer responds immediately to such change—and, moreover, they correspond with the magnitude of the movement, being greater when the movement is greater, less when the movement is less.

PART PLAYED BY THE VISCERA IN VIRTUE OF THEIR WEIGHT.

Whilst it will be generally admitted that the elevations of pressure incidental to movement are caused by the increased contractions of the body wall muscles and diaphragm, difficulty arises when we consider the cause of the pressure found during the maintenance of posture; such different values are found in the rectum in the erect and recumbent positions that at first sight it seems the rectal pressure must be due to the weight of the visceral column above it; and the great majority of writers, with the notable exceptions of Schatz, Schwerdt, and Keith, believe the visceral weight to be the determining factor. Moritz was so impressed with the results of change of posture on the pressure values he obtained that he attributed the intra-abdominal pressure to the effects of gravity almost entirely, and thought if the enclosing walls play any part it is but a very restricted one. Thus he explained the differences in the intra-gastric pressure obtaining between the upright and horizontal positions to the different extent the liver weight is transmitted to the stomach in each position, for when standing or sitting the liver must press more on the stomach than in the dorsal decubitus. Yet the differences between the pressures given by Moritz for these several positions are so small as to make one doubt the validity of this explanation. Whilst the intragastric pressure when standing is 7 cm. H_2O, when lying down it is still 6·3 cm. H_2O. One would think, if the liver weight is the main cause of the pressure when standing, that in the dorsal decubitus a considerable fall should occur. More significant is it to find that in the two vertical postures—sitting and standing—in which the liver weight, as Moritz admits, is the same for each, a difference in pressure occurs, actually greater than that between the pressures found when standing and lying down. Moritz explains the difference between these two vertical positions as probably caused by the alteration of the inclination of the pelvis and a diminution of volume of the abdominal cavity, which the change from standing to sitting causes, with a resulting increase of pressure. But how such increase of pressure can occur unless the abdominal wall and other enclosing musculatures participate is difficult to understand. And if the increase of pressure found in sitting over and above that found in standing is due to muscular action, it is just as likely that the lesser increase found in standing over and above that found in the dorsal decubitus is similarly produced; and further, if the enclosing muscles play a part in the pressure variations which occur with change of posture it is as likely as not they are concerned in the maintenance of the pressure during posture.

When we come to examine the pressure values found in the rectum for different postures the same conclusion that the visceral weight is inadequate as the only or the main cause is also forced upon one. One can scarcely attribute the pressure in the left lateral position—6 to 8 mm. Hg—to the weight of superimposed viscera, for the rectum lies buried in the rigid pelvis and the part in which the pressure is measured—the rectal ampulla—abuts against the concavity of the pelvic floor, and the rigid side of the pelvic cavity arches over it as a sort of roof, and in this position there are no superimposed viscera. Equally convincing is the significant increase of pressure which occurs when the patient turns from the left lateral position on to the back, lying flat and at ease. The increase may be so great that the pressure is doubled, and, more remarkable still, on standing the pressure may be only further increased by a similar amount. These results compare very favourably with Moritz's observations on the stomach pressure for corresponding positions. In the right lateral (i.e., in which the liver weight is put out of court and the patient lies on a couch) the intragastric pressure was 3 to 5 cm. H_2O (2·2 to 3·7 mm. Hg); but on turning on to the back it rose to 6·5 to 9 cm. H_2O (4·7 to 6·6 mm. Hg); whilst on standing erect the pressure averaged 7 cm. H_2O (5·1 mm. Hg). Since the weight in the dorsal decubitus is borne by the extensive surface of the posterior abdominal

wall and is thus distributed over a wide area, one cannot concede that gravity can be the cause of such an increase of pressure in the rectum which occurs on changing the position from the side to the back. Nor can one attribute the pressure in the rectum when standing erect to the effect of the visceral weight, since the increase which occurs with change from the dorsal decubitus to the erect posture is no more, or not much more, than occurs on turning from the side on to the back.

Moreover, the effect of inverting the body on the pressure values found in the, for the time being, lowermost and uppermost poles of the visceral mass is altogether discordant with the hypothesis that the pressure is due to the visceral weight. For when standing the pressure in the rectum is 20 to 28 mm. Hg, whilst in the inverted, or at least in the knee-chest, position it sinks to − 6 to − 8 mm. Hg, but for corresponding positions the pressures in the stomach are 5 to 6 mm. Hg and 14·7 mm. Hg respectively. The effect of inverting the body is, therefore, to cause a much greater difference of pressure in the rectum than in the stomach, in spite of the visceral column being approximately the same. It is clear the weight of the superimposed viscera is insufficient to explain the pressure values found, and if the pressure in the stomach in the inverted position is due to the weight of the superimposed viscera, as is probable, the pressure in the rectum in the erect posture must be due to some other additional force. The only explanation can be that in the two postures the tension of the enclosing muscles is different; that in the erect position it is high, in the inverted it is low.

But the increase in tension in the erect posture is not everywhere the same, for if even the abdominal wall had merely to overcome the influence of gravity on the viscera, the lower, infra-umbilical part would have to offer a greater resistance than the supra-umbilical part, just as the lateral pressure of a viscous fluid on the side wall of a vessel containing it increases with its depth. But in the erect posture the increased tone of the infra-umbilical belly wall as compared with that of the supra-umbilical is required, not because, or merely because, it has to bear a greater part of the visceral weight—it has, indeed, to overcome the tendency of the viscera to sag downwards and to resist as well the effect of the contraction of the enclosing wall above—but because it has to force the blood in this part of the body cavity, and that coming from the lower extremities, to a greater height—viz., to the thorax. This necessity is clearly evident in the erect posture, but when the body is inverted it disappears.

COMPRESSING EFFECT OF THE ENCLOSING MUSCULATURES.

These considerations dispose of gravity as the effective cause in the production of the intra-abdomino-pelvic pressure for most postures—a conclusion confirmed by finding a positive pressure in the stomach in the erect posture at ease. Were gravity the only factor concerned, the pressure in the stomach should be at least not positive; indeed, we should expect it to become negative, just as the pressure within the rectum actually becomes in the knee chest position. The only alternative is that the effective factor in the pressure formation for most postures, just as it is the one to which the great excursions of activity alone are due, is the compressing effect of the musculatures enclosing the viscera; that the intra-rectal and intra-gastric pressures are due for the most part to the general pressure within the pelvic and epigastric poles of the visceral mass respectively, and are caused by the viscera pressing against each other and against the walls enclosing them; and that the differences in pressure found in these parts in any one posture except unnatural positions, such as the knee chest or inverted, are due more to a *difference in tension* of the respective segments of the musculatures than to the effect of the weight of the superimposed viscera, which, though playing some part, appears to be more important than it really is, at least in the erect posture, the position of activity.

INTRA-ABDOMINO-PELVIC PRESSURE AND THE CIRCULATION.

Coming now to the physiological significance of the intra-abdomino-pelvic pressure, indications have already appeared that its function is a circulatory one, and that by this means it affects the body as a whole.

As we have seen, the abdominal wall and thoracic diaphragm are antagonists, opposing each other, and doing so by means of the viscera in virtue of their bulk and incompressibility. In other words, they are coördinated; and in this coördination the pelvic floor musculature participates, and it would be strange if the thoracic musculature were not similarly involved. The purpose of all these musculatures is to cause a pressure effect within the body cavity, to the end that a greater pressure shall prevail in the abdomen than in the thorax, just as in the abdomen itself we find evidence that the pressure in the lower part is greater than in the epigastrium even in the supine position (rectal press. 10 to 14 mm. Hg and stomach press. 4 to 5 mm. Hg).

At first sight it seems the function of the diaphragm is a respiratory one, causing an entry of air to the lungs and this alone; but Mosso[18] and others have shown that more air can be respired by a purely thoracic breath than by a purely abdominal one, and thus costal respiration is the more effective from this point of view, as it was the primitive method of breathing. But respiration, to serve its purpose, requires not only that the stale air in the lungs should be refreshed by an additional supply, but that the lung tissues should be simultaneously flooded with an increased volume of blood. This accession of blood during inspiration is determined to a certain extent by the fall of pressure in the thorax itself, which acts, as Lewis[16] has shown, by diminishing the pressure in the pericardium. Thus more blood passes through the lungs on inspiration; and this results, perhaps, as well by thoracic as by diaphragmatic breathing, since both increase the negative pressure in the pericardium; although the influence of the diaphragm may be greater in this respect because of its direct attachment to the pericardium. This is supported by the phylogeny of the diaphragm, for, as Keith has shown,[14] it was primarily a circulatory muscle, directly influencing the dilatation of the heart by a traction on the pericardium.

But the diaphragm, by increasing the pressure in the abdomen, has a further effect than this. Leonard Hill[7] has demonstrated that if the inferior vena cava be opened in the thorax in a cat each time the diaphragm descends blood gushes out, and in the intact animal it gushes from the abdomen into the large venous reservoirs directly connected with the right heart, which is thus supplied with a larger volume of blood, and consequently the general blood pressure rises. But when respiration is purely costal the usual inspiratory rise of intra-abdominal pressure may fail, or even fall below zero, the compression of the abdominal viscera lessens or ceases, no such gush of blood occurs, and the general blood pressure falls (Lewis). This, then, is a reason for believing that the average arterial (aortic) blood pressure is lower in the thoracic type of breathing, as in reptiles and birds, than in the abdominal or combined type, as in mammals; and that in woman, who certainly uses her diaphragm less than does man, the general blood pressure is lower than in the male (Oliver[19]),‡ and may explain the fact that in man himself breathing generally becomes thoracic in the supine position (Mosso), in which posture an aortic blood pressure for the supply of the brain may with safety be lessened.§ Thus, the intra-abdominal pressure influences the aortic blood pressure, raising it, and other things being equal, increasing the blood velocity towards distant parts. By this means not only are the viscera themselves and the skeletal muscles better supplied with blood, but more especially the brain, carried high on man's shoulders, is adequately and rapidly provided for, in spite of the opposing action of gravity. Thus, in enteroptosis, in which the intra-abdominal pressure is lower than normal, we find all the symptoms of neurasthenia appear.

INFLUENCE OF INTERNAL PRESSURE ON THE VISCERA.

But there is another result of the intra-abdomino-pelvic pressure, and that is its influence on the viscera themselves. Quite apart from the maintenance of the several organs in their respective positions within the body cavity, which the compression of the whole visceral mass by the ever-contracting muscles enclosing them cannot help but determine, and which is their most obvious and perhaps least important function, the pressure so caused has other purposes. Clearly it tends to limit the distension of organs, and probably is an effective agent in preventing undue dilatation of the hollow viscera, as for example, may occur from fermentative processes. This it may do in two ways, either directly by

‡ In women the pressures are generally from 5 to 10 per cent. less than in man.

§ See also François Franck.[4]

supporting the viscera, or indirectly by influencing the circulation through them, and this probably is much the more important. For by compressing these viscera within certain limits it supports the capillaries within them, and thus by raising the capillary blood pressure it increases thy velocity of blood flow through them. Thus it materiall affects the metabolism of the hollow organs and other abdominal viscera, assisting and hastening it.

As is well known, disorders of digestion are perhaps the most frequent concomitants of early enteroptosis; and nothing cures these cases of flatulent dyspepsia more efficiently than a routine involving muscular exercise, such as golf; the resulting increased tone of the whole muscular system affecting the body-wall muscles as well as those of the limbs, and the capillary circulation of the stomach and other viscera becomes improved. That the intra-abdomino-pelvic pressure has such an effect on the visceral circulation becomes clear when the dynamics of the capillary circulation are considered, of which Dr. Leonard Hill is such an able exponent.

It may, of course, be objected that the thin-walled capillaries, permeating the viscera, could be easily obliterated, especially when the intra-abdominal pressure is very greatly raised, as during straining and violent movements; and, becoming greater than the blood pressure in the arterioles supplying them, the capillary circulation would, for the time being, cease. And no doubt this occurs, at least to some extent, just as when a muscle hardens, the capillaries within it must be occluded. But such elevations are usually brief, so that the cells do not suffer. It is probable that elevations of internal pressure are associated with, or cause reflexly, a dilatation of the visceral arterioles, just as the arterioles of a muscle dilate when the muscle hardens; and so when the phase of relaxation succeeds the phase of increased tension or contraction, a considerable flooding of the visceral area, as of the muscle, occurs. At least it is well known that violent exercise, such as horse-riding, influences most beneficially what people call "their liver," and this can only occur by means of the flow of blood through the visceral capillaries being affected.

Thus, the intra-abdomino-pelvic pressure, even that maintained during posture and rest, subserves most important circulatory functions. It not only quickens the whole circulation, but renders the blood richer and purer in a shorter time; and this is the reason of its far-reaching effects on general metabolism. By maintaining a high aortic pressure it lays the foundation for an efficient cerebral circulation so important to man; it is, indeed, by its means that man has been able to evolve and is able to maintain a vigorous and strenuous life, both physical and mental, in spite of his erect carriage and the elevated position of his brain.

In conclusion, I would again emphasise the importance of this pressure. Unfortunately, the subject is not only of academic interest, for aberrations from the normal abound amidst the populace, and in my experience form perhaps the commonest of the ills to which man is heir.

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A YEAR'S WORK IN

ABDOMINAL AND PELVIC SURGERY

IN THE ROYAL VICTORIA INFIRMARY, NEWCASTLE UPON-TYNE, AND IN A PRIVATE HOSPITAL DURING 1910.

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STATISTICS of an exceptional character have a value of their own. They show what *can* be accomplished by skilful operators who make a careful selection of cases, or who have had exceptionally fortunate experiences; but they are apt to mislead practitioners unacquainted with the details and the difficulties of surgical practice, and also to induce too confiding patients into the belief that surgical operations can be undertaken with impunity.

A record of every operation performed during a whole year seems to me to represent the best method of indicating the probabilities of success or failure, as against indication of those possibilities which are of little use to the majority. The statistics offered (Tables I. and II.) refer only to operations performed by myself, and apply not only to the viscera but to all the structures of the abdomen and pelvis. The relative paucity of minor and of emergency cases is due to the fact that the great majority of these are operated upon by the junior staff.

In a former paper of mine[1] the statistics of my abdominal and pelvic work during the period of office of my last full-time house surgeon in the old infirmary (November, 1905, to February, 1906) were given, and it was suggested that they might later prove of some historical interest. Until the latter end of 1909 it was difficult in the new infirmary to get any satisfactory statistics, and impossible to obtain proper records of cases, as there was only one surgical registrar for the whole institution. Since then each surgeon has had a registrar of his own, and a complete record of the surgical work has become possible.

In the paper referred to it was stated that the old Royal Infirmary of Newcastle—which was vacated in 1906—established claim to be considered the worst hospital in the British Isles, as certainly as the present institution can claim to be the best. It is of interest to compare our surgical results in the miserable and apparently inadequate place we left with those obtained in the costly and palatial building in which we now work.

In the paper quoted above I wrote:—

> So far as I can judge, the only serious drawback in connexion with the old building was the frequent occurrence of pneumonia after, or even independent of, operation.

Even this, however, is now discountable, in view of the fact that pneumonia appears to be as prevalent in the new as it was in the old institution, the structural defects of which must be exonerated from special blame.

It seems to me certain, since our experience has proved it, that surgical results are not influenced by the costly and elaborate arrangements of the modern hospital, but that they depend upon strenuous personal endeavour on the part of everyone concerned to carry out the simple essential requirements of present-day surgery.

I am responsible for the charge of 48 beds, and the staff comprises an honorary surgeon, an honorary assistant surgeon, an honorary registrar, an honorary house surgeon, a paid anæsthetist (he receives £80 a year), and an indefinite number of dressers, varying from two to six, according to supply. There are three sisters in charge of the wards in which I am interested, but only one of these (in the male ward) works solely under my supervision, for in the women's and children's wards more than one surgeon acts. Each of these wards has, in addition to the sister, one staff nurse and three or four probationers.

The operating theatres, four in number, are supervised by

[1] Edinburgh Medical Journal, February, 1907.

TABLE I.—*Statistical Summary of Operations on Abdomen and Pelvis in 1910.*

Compiled by Mr. C. M. F. Saint, M.B., B.S. Durh., Surgical Registrar *pro tem.*, and Mr. R. J. Willan, M.S. Durh., F.R.C.S. Eng., Surgical Registrar at the Royal Victoria Infirmary, Newcastle-on-Tyne.

Nature of disease and operation.	Recovered	Died	Total
Hernia—			
Inguinal	109	—	109
Femoral	14	—	14
Umbilical	6	1	7
Ventral	7	—	7
Epigastric	1	—	1
Laparotomy—			
Exploratory for cancer	1	—	
,, ,, other conditions	6	1	7
Stomach and duodenum—			
Gastrostomy	4	2	6
*Gastro-enterostomy	54	5	59
*Partial gastrectomy for cancer	4	1	5
*Pyloroplasty	2	—	2
*Perforating gastric and duodenal ulcers	5	1	6
Exploration for stomach cancer	6	1	7
Liver—			
Abscess and tumour	6	2	8
Gall-bladder—non-malignant conditions	27	2	29
,, cancer	2	1	3
Pancreas—			
Tumour, &c.	4	2	6
Small intestine—			
Obstruction, &c.	9	2	11
Large intestine—			
Appendicitis	94	—	94
Carcinoma	7	6	13
Other conditions, non-malignant	12	1	13
Rectum and anus—			
Non-malignant conditions	39	—	39
Cancer	10	3	13
Spleen—			
Excision for rupture	1	—	1
Genito-urinary.			
Kidney and ureter—			
Nephrectomy	3	—	3
Nephro-lithotomy	3	—	3
Nephropexy	1	—	1
Nephrotomy and drainage	3	—	3
Partial nephrectomy	1	—	1
Uretero-lithotomy	2	—	2
Exploratory	3	—	3
Bladder—			
Suprapubic cystostomy	5	—	5
Lithotrity	2	—	2
Suprapubic lithotomy	2	—	2
Median lithotomy	1	—	1
Excision of benign tumour	3	—	3
Excision of malignant tumour	3	—	3
"Plastics" on vesico- and recto-vaginal fistulæ	3	—	3
Prostate—			
Suprapubic prostatectomy	17	2	19
Perineal prostatectomy	4	—	4
Other operations	9	—	9
Urethra	7	—	7
Testis and scrotum	15	—	15
Spermatic cord and penis	11	—	11
Vagina and vulva	2	—	2

TABLE I.—(*Continued.*)

Nature of disease and operation.	Recovered	Died	Total
Female Pelvis.			
Ovariotomy (for tumour)	18	—	18
Oöphorectomy (mammary cancer)	1	—	1
Exploratory operation	1	—	1
Salpingectomy (ectopic gestation and pyosalpinx	8	—	8
Broad ligament tumour	2	—	2
Hysterectomy—supravaginal	23	—	23
,, vaginal	15	1	16
Abdominal myomectomy	2	—	2
Other operations	11	—	11
Psoas abscess, &c.	10	—	10
Total	616	34	650

* Five partial gastrectomies (4 recoveries and 1 death) have been also included under posterior gastro-enterostomy; 1 perforating duodenal ulcer has also been included under the same heading; and 1 perforating pyloric ulcer (recovery) under pyloroplasty. In making out the totals, these have only been counted once. In the extended list, therefore, 7 cases are down twice.

a sister, who is in charge of them all. The theatre in which my work is done has an instrument nurse, a sponge nurse, and an assistant nurse to do whatever she may be told.

Only the senior staff has any permanency. From the house surgeon onwards there are constant changes, each house surgeon being appointed for only six months of office. The fact that the chief object of the institution, apart from its duty to patients, is educational is fully realised, and though it is disappointing for the surgeon to know that almost as soon as assistants and nurses have gained the necessary skill to be of value to him it is their turn to leave, the experience is not altogether of disadvantage, if he constantly remembers that the best way to keep himself up to the mark is by teaching others.

During the early days of a complete change, however, the position is often a more trying one for the surgeon than any would suppose who have not experienced it. Each member of the senior staff is so fully occupied with his own work that he can attend to little else, and the most difficult undertaking must be faced with unskilled and frequently with too few assistants. This is wrong, and with regard to this matter, as in some others, a revolution is surely impending in the conduct of our hospitals.

Selection of Cases for Operation.

There is no more difficult problem in surgery than that which presents itself in making a proper selection of cases for operation. Anatomical, physiological, and pathological knowledge, diagnostic acumen, prognostic capacity, are all requisites of the good surgeon. Anyone can become a surgical mechanic. Capable surgeons are not so easily produced. It is so easy and so safe to cut everywhere "to see" that the surgeon is encouraged to operate in any case and in every case. The public applauds because something has been done. The surgeon and the public are apt to forget, until they receive an unpleasant reminder, that it may sometimes be wise to do nothing.

The first principle to bear in mind is that there is no special surgery of the abdomen, pelvis, or other region, as the text-books lead us to believe. The general principles of surgery must be observed in respect to all parts of the body, though neglect of this or that canon may be followed by more serious consequences in one part than in another.

One of the most important indications for operation in the abdomen, as elsewhere, is in connexion with *arrest of hæmorrhage*. Spontaneous hæmorrhage from any of the abdominal viscera, like spontaneous hæmorrhage from other parts of the body, is not subject to general laws, and each individual case requires consideration, if harm is not to result from operations undertaken to arrest it.

On the other hand, intraperitoneal hæmorrhage is a definite indication for an operation undertaken in order to see the bleeding point. If this principle had been kept in mind, the "lesson of the South African War"—to leave punctured

TABLE II.—*Detailed Statistics of Operations in Abdominal and Pelvic Surgery for 1910, comprising Private Hospital Cases and those Treated at the Royal Victoria Infirmary, Newcastle-on-Tyne, by Rutherford Morison, Senior Surgeon to the Infirmary.*

(Prepared by Mr. Saint, surgical registrar *pro tem.*; verified by Mr. Willan, surgical registrar to the Infirmary.)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Hernia.						
Inguinal.	Radical cure.	74	12	—	—	86
"	" and single castration.	1	—	—	—	1
" with undescended testicle.	" and orchidopexy.	10	—	—	—	10
" " "	" and castration.	1	—	—	—	1
" with ovary and tube (with twisted pedicle) in sac.	" and removal of tube and ovary.	—	1	—	—	1
" with interval appendicitis, and secondly, volvulus from adhesions.	" and appendicectomy.	1	—	—	—	1
" with hydrocele of tunica vaginalis.	" of both.	2	—	—	—	2
" with anal fistula.	" "	1	—	—	—	1
" double.	" double.	2	1	—	—	3
" " with undescended testicles.	" double, and single castration.	1	—	—	—	1
" strangulated.	Herniotomy and radical cure.	2	—	—	—	2
Femoral.	Radical cure.	2	9	—	—	11
" with hydrocele of sac.	" of both.	—	2	—	—	2
" strangulated.	Herniotomy and radical cure.	—	1	—	—	1
Umbilical.	Radical cure.	—	5	—	—	5
" strangulated	Herniotomy and radical cure.	—	1	—	1	2
Post-operative ventral.	Radical cure.	2	4	—	—	6
" " with fæcal fistula.	Resection of small intestine, 9 ft., and radical cure.	—	1	—	—	1
Fatty hernia of linea alba.	Radical cure.	1	—	—	—	1
Peritoneum.						
Pelvic abscess; cause unknown.	Drainage, abdominal.	—	1	—	—	1
Retroperitoneal abscess, paracolic.	Laparotomy and drainage.	1	—	—	—	1
Tuberculous peritonitis.	Laparotomy.	3	1	—	1	5
Retroperitoneal malignant growth.	Exploratory laparotomy.	1	—	—	—	1
Stomach.						
Simple ulcer: body; lesser curve.	Posterior gastro-enterostomy.	6	9	1	1	17
" " "	Posterior gastro-enterostomy: vicious circle? vomiting; second operation; entero-anastomosis; diarrhœa; death.	—	—	1	—	1
" " " with hour-glass contraction.	Posterior gastro-enterostomy.	—	3	—	—	3
" body; lesser curve, with hour-glass contraction.	Posterior gastro-enterostomy and gastroplasty.	—	1	—	—	1
" body; rupture threatened.	Infolding of affected part of wall.	—	1	—	—	1
" lesser curve and pylorus.	Posterior gastro-enterostomy.	—	1	—	—	1
" pylorus.	" "	3	—	—	—	3
" " with stenosis.	" "	3	—	—	—	3
" " "	Pyloroplasty.	1	—	—	—	1
" " ruptured.	" through ulcer.	—	1	—	—	1
Carcinoma, irremoveable.	Exploratory laparotomy	4	1	1	—	6
" " with gastrocolic fistula.	" "	1	—	—	—	1
" "	Posterior gastro-enterostomy.	3	—	—	—	3
" removeable.	Partial gastrectomy.	1	3	—	1	5
" of œsophagus.	Gastrostomy.	3	1	1	1	6

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
First Part of Duodenum.						
Simple ulcer.	Posterior gastro-enterostomy.	7	1	—	—	8
"	Posterior gastro-enterostomy, with occlusion of pylorus.	1	—	—	—	1
" with stenosis of pylorus.	Posterior gastro-enterostomy.	3	2	—	—	5
" with pernicious anæmia, hæmatemesis, and melæna.	" "	—	—	1	—	1
" ruptured.	Laparotomy and closure.	2	—	1	—	3
" "	Closure and posterior gastro-enterostomy.	1	—	—	—	1
" pylorus and duodenum.	Posterior gastro-enterostomy.	5	1	—	1	7
Liver and Gall-bladder						
Liver abscess.	Drainage through thorax.	1	—	—	—	1
" cirrhosis from yellow atrophy.	Omentopexy	—	—	—	1	1
" hydatid cyst.	Laparotomy and removal (drainage).	—	2	—	—	2
" " " (suppurating)	Laparotomy; drainage.	—	1	—	—	1
" malignant growth (vascular)	" and excision.	—	—	1	—	1
" " disease.	Exploratory laparotomy.	1	—	—	—	1
" subhepatic gumma.	Laparotomy and drainage.	—	1	—	—	1
Cholecystitis.	Cholecystostomy.	1	3	—	—	4
"	Cholecystenterostomy.	—	1	—	—	1
Gall-stones in gall-bladder and cholecystitis.	Cholecystostomy.	3	10	—	—	13
" " "	Cholecystectomy.	—	6	—	—	6
Gall-stones in gall-bladder with acute pancreatitis.	Cholecystostomy.	—	—	1	—	1
Gall-stones in gall-bladder and common bile-duct.	Cholecystostomy and choledochostomy.	—	1	—	1	2
" " "	Cholecystostomy only.	—	1	—	—	1
Division of common hepatic duct during cholecystectomy.	Anastomosis of common hepatic and common bile-ducts.	—	1	—	—	1
Carcinoma of gall-bladder.	Exploratory laparotomy.	—	1	—	—	1
" "	Cholecystostomy.	—	—	—	1	1
" "	Cholecystectomy.	—	1	—	—	1
Pancreas.						
Traumatic ruptured pancreas.	Laparotomy and drainage.	1	—	—	—	1
Pancreatic cyst.	" "	—	1	—	—	1
Chronic pancreatitis with interval appendicitis.	Cholecystenterostomy and appendicectomy.	—	—	—	1	
Carcinoma of pancreas with jaundice.	Exploratory laparotomy	1	—	—	—	1
" "	Cholecystenterostomy.	—	—	1	—	1
Chronic jaundice of pancreatic origin.	"	—	1	—	—	1
Rest of Small Intestine—Jejunum and Ileum.						
Acute intestinal obstruction.	Laparotomy and separation of adhesions.	—	—	1	—	1
" " " adhesions due to puerperal sepsis, secondly volvulus.	Enterostomy.	—	—	—	1	1
Acute intestinal obstruction, strangulation by band.	Resection of 2 ft. of bowel.	—	1	—	—	1
Acute intestinal obstruction by Meckel's diverticulum.	Resection of affected bowel.	1	—	—	—	1
Paralytic ileus; kidney disease.	Laparotomy.	—	1	—	—	1
" " no cause found, in patient with phthisis.	"	1	—	—	—	1
Chronic intestinal obstruction—old appendicitis.	Separation of adhesions.	1	1	—	—	2
Chronic intestinal obstruction—old strangulated hernia.	Resection of bowel.	—	1	—	—	1

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Rest of Small Intestine—Jejunum and Ileum—(Continued).						
Chronic intussusception—polypus.	Reduction: enterotomy and removal of polypus.	1	—	—	—	1
Fæcal fistula.	Resection and lateral anastomosis.	1	—	—	—	1
Large Intestine.						
Appendicitis—acute non-perforative.	Appendicectomy.	2	2	—	—	4
,, ,, with general peritonitis.	,,	1	—	—	—	1
,, ,, perforative.	,, and drainage.	1	2	—	—	3
,, ,, with general peritonitis.	,, ,,	1	2	—	—	3
Appendix abscess.	Drainage only.	—	1	—	—	1
,, pelvic.	,, per vaginam.	—	1	—	—	1
,, ,,	,, per rectum.	1	—	—	—	1
,,	Appendicectomy and drainage.	7	6	—	—	13
,, with general peritonitis.	,, ,,	1	1	—	—	2
,, with chronic intestinal obstruction.	Separation of adhesions and appendicectomy.	1	—	—	—	1
,, with adherent bowel.	Appendicectomy and resection of 44 in. of bowel.	1	—	—	—	1
Appendicitis, interval.	Appendicectomy.	31	31	—	—	62
,, with tuberculous peritonitis.	,,	—	1	—	—	1
Tuberculous ileo-cæcum.	Ileo-colostomy.	1	—	—	—	1
,, ,,	Resection of ileo-colic distribution (Jamieson-Dobson).	3	2	—	—	5
Sigmoiditis.	Laparotomy.	1	—	—	—	1
Ulcerative colitis.	Cæcostomy.	—	1	—	—	1
æcal fistula.	Closure.	1	—	—	—	1
Old colostomy.	Closure of opening.	1	—	—	—	1
Sigmoido-vesical fistula (sacculitis).	Separation and closure of openings in bladder and sigmoid, and resection of bowel.	—	1	—	—	1
,, ,, ,,	Closure and resection of bowel.	—	1	—	—	1
Multiple papillomata with ulceration.	Cæcostomy.	—	—	—	1	1
Carcinoma, caput cæci.	Ileo-colic resection (Jamieson-Dobson).	—	1	—	—	1
,, ascending colon.	,,	—	—	2	—	2
,, ,, ,, with ovarian cyst.	,,	—	—	—	1	1
,, transverse colon.	Resection.	—	1	—	—	1
,, sigmoid.	,,	1	1	—	1	3
,, irremoveable ileo-cæcal valve.	Ileo-colostomy, lateral anastomosis.	—	—	1	—	1
,, splenic flexure.	Colostomy (permanent).	—	1	—	—	1
,, sigmoid.	,, (temporary).	—	1	—	—	1
,, ,, with sigmoido-vesical fistula.	,, (permanent), also appendicectomy.	—	—	1	—	1
,, ,, with secondary carcinoma of ovary.	Exploration and resection of adherent bowel.	—	1	—	—	1
Rectum and Anus.						
Prolapse of rectum.	Sigmoidopexy.	1	—	—	—	1
Stricture of rectum (syphilitic).	Colostomy.	1	—	—	—	1
Rectal polypus (benign).	Removal per rectum.	1	—	—	—	1
,, polypi (multiple).	Colostomy.	1	—	—	—	1
Carcinoma of rectum.	Examination under anæsthetic.	—	1	—	—	1
,, ,,	Exploratory laparotomy.	—	—	1	—	1
,, ,,	Colostomy.	1	—	—	—	1
,, ,,	Abdominal resection.	—	2	—	—	2
,, ,,	Abdomino-perineal resection.	1	1	—	—	2
,, ,,	Perineal resection.	2	—	1	—	3

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Rectum and Anus—(Continued).						
Carcinoma of rectum.	Kraske's operation.	—	—	—	1	1
,, ,, recurrent.	Local removal.	2	—	—	—	2
Hæmorrhoids.	Radical cure.	19	2	—	—	21
,, with fissura in ano.	,, ,, of both.	2	—	—	—	2
Fistula in ano.	Division of external sphincter.	5	1	—	—	6
Fissura in ano.	,, ,,	—	1	—	—	1
Anal ulcer.	Excision.	1	—	—	—	1
Stricture of anus (simple).	Dilatation.	—	1	—	—	1
Imperforate anus.	Examination under anæsthetic.	—	1	—	—	1
,, ,, (baby)	Colostomy.	—	1	—	—	1
Ischio-rectal abscess.	Incision and drainage.	1	—	—	—	1
Spleen.						
Traumatic rupture.	Splenectomy.	1	—	—	—	1
Genito-urinary Operations—Kidney and Ureter.						
Traumatic ruptured kidney.	Nephrectomy.	1	—	—	—	1
Renal calculus.	Nephro-lithotomy.	3	—	—	—	3
Moveable kidney.	Nephropexy.	—	1	—	—	1
Simple kidney cyst.	Laparotomy, partial nephrectomy, and excision of cyst.	—	1	—	—	1
Renal pain—calculus?	Exploratory nephrotomy.	1	—	—	—	1
Interstitial nephritis with hæmaturia.	Exploration.	1	—	—	—	1
Renal epistaxis—malignant?	Nephrectomy.	1	—	—	—	1
Tuberculous kidney.	Nephrotomy.	—	1	—	—	1
Pyonephrosis.	Nephrectomy.	—	1	—	—	1
Perinephritic abscess.	Incision and drainage.	1	1	—	—	2
Ureteral calculus.	Removal by suprapubic cystostomy.	—	1	—	—	1
,, ,,	Uretero-lithotomy.	1	—	—	—	1
Tuberculous ureter.	Exploratory laparotomy.	—	1	—	—	1
Bladder.						
Acute cystitis.	Suprapubic cystostomy.	2	—	—	—	2
Tuberculous ,,	,, ,,	1	—	—	—	1
Vesical calculus.	Lithotrity.	2	—	—	—	2
,, ,,	Suprapubic lithotomy.	2	—	—	—	2
,, ,,	Median lithotomy.	1	—	—	—	1
Benign tumour (papilloma).	Suprapubic cystotomy and removal.	3	—	—	—	3
Malignant ,, (carcinoma).	,,	2	1	—	—	3
,, ,, ,,	Suprapubic cystostomy only.	2	—	—	—	2
Prostate.						
Cystitis due to enlarged prostate.	Perineal cystotomy.	1	—	—	—	1
Chronic prostatitis.	Suprapubic cystostomy.	1	—	—	—	1
Prostatic calculus with abscess.	,, prostatectomy.	1	—	—	—	1
Simple prostatic enlargement.	Internal urethrotomy.	1	—	—	—	1
,, ,, ,,	Suprapubic cystostomy.	4	—	—	—	4
,, ,, ,,	,, prostatectomy.	15	—	2	—	17
,, ,, ,,	Perineal ,,	4	—	—	—	4
,, ,, ,, and papilloma of bladder.	Suprapubic removal of both.	1	—	—	—	1
Carcinoma of prostate.	Suprapubic cystostomy.	1	—	—	—	1
Acute retention; enlarged prostate.	Catheterisation.	1	—	—	—	1
Urethra.						
Urethral stricture.	Dilatation.	3	—	—	—	3
Perineal abscess from stricture.	Incision and drainage.	1	—	—	—	1
Urethral caruncle.	Radical cure.	—	3	—	—	3
Testis and Scrotum.						
Hydrocele of tunica vaginalis.	Radical cure.	7	—	—	—	7
,, ,, ,, double.	Double radical cure.	1	—	—	—	1
,, ,, ,, septic.	Incision and drainage.	1	—	—	—	1

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Testis and Scrotum—(continued).						
Hæmatocele of tunica vaginalis.	Radical cure.	1	—	—	—	1
Cyst of epididymis.	,, ,,	1	—	—	—	1
Tuberculous epididymitis.	Epididymectomy and vasectomy.	2	—	—	—	2
Septic hæmatoma of scrotum.	Incision and drainage.	1	—	—	—	1
Acute abscess ,,	,, ,,	1	—	—	—	1
Spermatic Cord.						
Varicocele.	Radical cure.	3	—	—	—	3
Hydrocele of cord.	,, ,,	2	—	—	—	2
Penis.						
Phimosis.	Circumcision.	1	—	—	—	1
Hypospadias.	Plastic operation.	3	—	—	—	3
Carcinoma of penis.	Complete removal of external genitalia and inguinal glands.	1	—	—	—	1
,, ,,	Partial amputation of penis with removal of glands.	1	—	—	—	1
Ovary.						
Mammary carcinoma.	Double oöphorectomy.	—	1	—	—	1
Ovarian abscess.	Ovariotomy.	—	1	—	—	1
Ovarian abscess, with interval appendicitis.	Ovariotomy and appendicectomy.	—	1	—	—	1
Ovarian neuralgia.	Laparotomy.	—	1	—	—	1
Ovarian cyst.	Ovariotomy.	—	4	—	—	4
,, ,, double.	,, double.	—	3	—	—	3
,, ,, dermoid.	,,	—	2	—	—	2
,, ,, with twisted pedicle.	,,	—	2	—	—	2
,, dermoid ,, ,,	,,	—	1	—	—	1
Ovarian dermoid with twisted pedicle and interval appendicitis.	Ovariotomy and appendicectomy.	—	1	—	—	1
Ovarian cysts, malignant.	Panhysterectomy.	—	1	—	—	1
,, ,, ,,	Double ovariotomy.	—	1	—	—	1
,, cystic hæmatoma, double.	,, ,,	—	1	—	—	1
Broad Ligament and Fallopian Tubes.						
Old broad ligament cyst.	Enucleation.	—	1	—	—	1
Broad ligament cyst.	Supravaginal hysterectomy and excision of cyst.	—	1	—	—	1
Ectopic gestation.	Removal of gestation.	—	3	—	—	3
Pyosalpinx.	Drainage per vaginam.	—	1	—	—	1
,, double.	Double salpingo-ovariotomy and hysterectomy.	—	1	—	—	1
,, ,,	Sapingectomy and hysterectomy.	—	3	—	—	3
Uterus.						
Endometritis.	Curettage.	—	3	—	—	3
,, with ovarian abscess.	Supravaginal hysterectomy and ovariotomy.	—	1	—	—	1
Chronic septic uterus with fibrosis.	Curettage.	—	1	—	—	1
,, ,, ,, fibroids.	Vaginal hysterectomy.	—	10	—	1	11
,, ,, ,, ,,	Supravaginal ,,	—	4	—	—	4
,, ,, with double ovarian cyst.	Supravaginal hysterectomy and ovariotomy.	—	1	—	—	1
Acute septic metritis with pregnancy.	Vaginal hysterectomy.	—	1	—	—	1
Menorrhagia with pregnancy.	Supravaginal ,,	—	1	—	—	1
Fibroid of uterus—submucous.	Removal per vaginam (polypus).	—	3	—	—	3
,, ,,	Laparotomy and myomectomy.	—	1	—	—	1
,, ,,	Supravaginal hysterectomy.	—	10	—	—	10
,, ,,	Supravaginal hysterectomy with left tube and ovary.	—	2	—	—	2

TABLE II.—(*Continued.*)

Nature of disease.	Operation.	Recovered. M	Recovered. F	Died. M	Died. F	Total.
Uterus—(continued.)						
Fibroid of uterus with twisted pedicle and pregnancy.	Laparotomy and myomectomy.	—	1	—	—	1
,, uterus with twisted pedicle.	Supravaginal hysterectomy.	—	1	—	—	1
,, ,, with ovarian dermoid.	Supravaginal hysterectomy and ovariotomy.	—	1	—	—	1
,, ,, with interval appendicitis.	Supravaginal hysterectomy and appendicectomy.	—	1	—	—	1
,, ,, with inguinal hernia.	Supravaginal hysterectomy and radical cure.	—	2	—	—	2
Carcinoma of cervix of uterus.	Curettage.	—	1	—	—	1
,, body ,,	Vaginal hysterectomy.	—	2	—	—	2
Displacement—prolapse.	Ventral fixation—hysteropexy.	—	2	—	—	2
,, retroversion.	Modified Alexander Adams operation.	—	1	—	—	1
,, prolapse (procidentia).	Vaginal hysterectomy and plastics.	—	2	—	—	2
Vagina.						
Recto-vaginal fistula.	Plastic operation.	—	1	—	—	1
Vesico-vaginal ,,	,, ,,	—	2	—	—	2
Dyspareunia.	Dilatation of vaginal orifice.	—	1	—	—	1
Vulva.						
Carcinoma.	Excision with inguinal glands.	—	1	—	—	1
Back.						
Psoas abscess—tubercle.	Radical cure.	3	2	—	—	5
,, ,, ,,	Examination, abdominal.	1	—	—	—	1
Necrosis of lumbar vertebræ.	Sequestrotomy.	1	—	—	—	1
Fractured coccyx.	Removal.	—	1	—	—	1
Coccydynia and hæmorrhoids.	Removal of both.	—	1	—	—	1
Recurrence of kidney carcinoma in skin.	Excision, wide.	—	1	—	—	1

wounds of the abdomen alone—would have included an emphatic exception in cases presenting symptoms and signs of intraperitoneal hæmorrhage, and the useless discussions and dangerous divergence of opinion as to "when to operate" in cases of leaking or ruptured ectopic gestation would have been avoided.

The next indication for operation I have to offer is in connexion with *wound exploration*. It should, for example, be a rule that no wound of the abdominal wall should be left without full exploratory operation. The object of this is to see, or at least to feel, the whole track of the wound. If the peritoneum is intact it should, of course, not be opened, but if perforated the fact should be known and action taken accordingly. Foreign bodies and dirt should be discovered and removed always and everywhere—an important point.

There are some *abdominal injuries other than external wounds* which indicate early operation. A sudden severe and sharply localised blow—such as that received when a horse kicks the abdomen—is practically certain to cause a rupture of some abdominal viscus, usually the small intestine. It is time to teach that such a history affords, by itself, a definite indication for operation. All doubts in doubtful cases should disappear if there are increasing pallor, increasing thirst and restlessness, with increasing rapidity of pulse, suggesting hæmorrhage; or if there are continued severe pain, marked local tenderness, muscular rigidity, thirst, vomiting, and a quickening pulse, indicating a leak in the gastro-intestinal tract. Operations performed early in these cases are remarkably successful; performed late they had often better not be done.

Prevention of Sepsis.

Sepsis is still the great cause of surgical mortality. Seldom at the present day due to defects in technique or wound

treatment, it is from failure to remove early enough the source of sepsis that disasters result.

There would be no percentage of deaths from *appendicitis* if every case commencing with acute pain [2] and developing tenderness and rigidity of the abdomen, and quickening of the pulse was operated upon within 12 hours. Surgeons can scarcely be blamed for the present deplorable death-rate. In season and out of season I have spoken out for more than fifteen years, and in every paper which I have written bearing on the subject I have emphasised the importance of removing the inflamed appendix in time to prevent septic infection of the peritoneum, recovery from which can only follow a dangerous and prolonged illness, with the possibility of a ventral hernia at the end of it. There is no other definite indication for operation in appendicitis, and none other needed, if only the vista of risks ahead is duly appreciated.

The prevention of sepsis should also be the aim of the surgeon in operations for *perforating gastric and duodenal ulcers*. Statistics I have recently published [3] corroborate all recent information to the effect that if these ulcers can be closed during the first 12 hours—i.e., before sepsis has secured too firm a hold—the patient's recovery can be confidently anticipated. If, on the other hand, delay has allowed of the development of general septic peritonitis, the chances of recovery are small, and may be rendered even smaller by operation. The totality of reasons for or against operation in these cases requires careful consideration.

The dangers of serious and destructive sepsis depending on the presence of gall-stones, bladder-stones, and kidney-stones, constitute the strongest of reasons for their early removal.

To Deal with Mechanical Obstruction.

No more important or more definite indication for operation can be offered than this. When a calculus is causing obstruction the symptoms are so grave, and the results likely to be so destructive, that the diagnosis should carry with it the recommendation of operation.

In regard to *kidney and ureter stones*, X rays show not only the presence of a stone or stones, but also their size and position. Only the smallest which have arrived at the lower end of the ureter should be left to the chance of passing by nature's effort. Elsewhere their operative removal, by skilled hands, is attended with less danger to life and to the integrity of the organs concerned than is their escape by the processes of nature.

The same holds good of *gall-stones*. Their removal by operation from the gall-bladder is safe and easy, and the results are satisfactory. After they have escaped into the ducts, however, the operation for their removal is likely to be dangerous and difficult. The most skilled operator may fail to find some of them, and recurrence of the attacks, or imperfect recovery, the result of septic changes in the ducts, liver, and pancreas, are not uncommon.

Short-circuiting off an obstruction in the gastro-intestinal tract has of late years become a useful and "fashionable" operation. For example, there is no indication so suggestive of the need for gastro-enterostomy as that provided by an ulcerating stricture at or near the pylorus. Entero-anastomosis has also very properly taken the place of enterostomy and colostomy in many cases of irremoveable stricture of the intestine. Instead of removing hydronephrotic kidneys, plastic short-circuiting operations are frequently done on the pelvis and ureter. Jaundice due to irremoveable mechanical obstruction can be cured by cholecystenterostomy.

The need for operation in cases of *intestinal obstruction* is universally conceded, since few cases are due to other causes than removeable mechanical obstacles; *but* the need for early operation has not yet received the recognition it should have received, and this is because the necessary diagnostic rules for intestinal obstruction are hard to formulate, and because without definite diagnosis a sufficiently early operation is seldom strongly enough urged.

The dangers of strangulated hernia and acute intussusception no longer exist, since early diagnosis and prompt operation have evaded them. The dangers of acute intestinal obstruction arising from other causes are still deplorable because the difficulties of early diagnosis have led to delay, and delay in the proper treatment of these cases means death.

Twists (volvulus) of the viscera cause such urgent and definite symptoms at their commencement that it is often possible to make an early diagnosis. I think it is not too optimistic to hope that a time will come when operation may be done on these cases soon enough to prevent the avoidable loss by gangrene of intestine, testicle, or ovary.

To Remove a Focus of Disease.

This is the most important of all indications for operation. Much that has been stated above would come under this head. It is *the* indication for operation in septic cases. In tubercle and cancer it is of prime importance, for it is almost certain that both of these commence locally, and for a time remain localised. Excision undertaken early enough would prevent all further development. An operation too deferred, when either disease has spread beyond the limit of the primary focus, would offer a very different prospect of success.

Exploratory Operation.

No other surgical measure requires such care and judgment as this, if good rather than harm is to follow. It is not enough that there exists a doubt in diagnosis which can only be cleared up by such an operation. There should be a reasonable probability of something organically wrong, something which demands treatment, and something likely to prove amenable to the mechanical methods of surgery. The less these conditions are satisfied in any particular case the more clear it is that operation is unnecessary, that more harm than good is likely to be done, and that the patient is exposed to risks which cannot be foreseen. One success should not be regarded as fairly balancing many failures, and it should further be realised that the discovery of unsuspected disease is seldom to the advantage of the patient or to the credit of the surgeon.

Speaking personally, I have no hesitation in saying that nothing in my practice has brought me such unhappiness as has exploratory operation. After a roving commission in the abdomen, and the removal of gall-stones, of a diseased appendix, and of an ovarian cyst, all necessitating the separation of many adhesions, I have found patients who were not only no better, but louder than ever in their complaints after their pathology had been fully dealt with. This has occurred to me often enough to prove that it is no coincidence.

Above all else in surgery stands the need for definite pathological knowledge, for an exact diagnosis of the lesion to be dealt with, and for courage enough to do nothing when the abdomen is opened unless there is a clear indication afforded on general surgical principles.

If an operation has been undertaken it is necessary that it should be completed. There should be no limit to either its duration or extent, if the completion of it offers, from a scientific point of view, a chance of life. Incomplete operations are never satisfactory and are more disastrous in their results than the most heroic when thoughtfully planned and skilfully executed.[4]

Contra-indications to Operation.

Operations, unless absolutely necessary for good surgical reasons, should never be undertaken on patients in whom nervous symptoms predominate. There are many unfortunate individuals with gastric, or intestinal, or hepatic, or renal, or testicular, or uterine pains known to every surgeon, and only too willing to undergo operation. Some of them the operation will cure; the majority, though relieved by it, acquire some other ailment equally troublesome, and a powerful minority, "made worse," preach in season and out of it against surgeons and all their works.

Another class suffers from indefinite abdominal ailments and seriously defective health. Some have proptosed viscera, ptosis of the stomach or colon, movable liver or kidneys, mucous colitis, chronic appendicitis, prolapsed ovaries, intestinal adhesions, &c. Many ingenious operations have been devised for their cure, but fixations, appendicostomies, plications, appendicectomy, the separation of adhesions, have all proved dismal failures. The future will show how far Mr. Arbuthnot Lane's brilliant work on resection of the colon will fulfil its present promise. Allowing for this exception, it is safe to say that, like the class previously referred to, they are cured, or relieved, or made worse by one or many operations.

[2] The history of the initial pain may be the most important evidence of an acute abdominal emergency when the patient is seen later.

[3] British Medical Association Annual Meeting, 1911.

[4] See paper of mine, "Mistakes in the Technique of Abdominal Surgery," Edinburgh Medical Journal, July, 1893.

Meanwhile these cases are not at all for the surgeon. Faith healing, "Christian Science," and Lourdes have already a far greater percentage of cures than surgeons can show. Further competition in a race so uneven is bad for the credit of surgery.

There are certain palliative operations which are useful, but which should not be done except as a last resource. They are such as entail discomfort through departure from the plan of the normal exterior of the body—e.g., gastrostomy for malignant stricture of the œsophagus, and colostomy for inoperable stricture of the large intestine. When a patient is hungry, and recognises that without surgical aid he is going to die by starvation, then an operation will prolong his life, and he will be grateful for the result of a gastrostomy. Many patients with malignant stricture of the œsophagus can swallow enough to keep them going, never feel hungry, and have no great desire to live. Gastrostomy will prove no blessing to them.

No operation gives more relief or satisfaction to a patient with intestinal obstruction than inguinal colostomy, but this is an operation which has been much abused. Because it is easy and safe it has been exploited in the treatment of a variety of conditions, in which I have heard patients many times declare that "the cure was worse than the disease." Careful attention and a considerable time devoted to unsavoury details will do much to make these patients' condition tolerable; but to suggest, as is sometimes done, that the operation is a surgical triumph shows an optimistic disregard for what ordinary intelligent people think about it.

Preparations for Operation.

Except in cases of emergency, our rule is to admit patients to hospital two days before operation. Careful examination is made of the general condition, of the mouth and teeth, of the lungs and heart, and of the urine. On the morning before operation one ounce of castor-oil is administered, and previous to operation a soap-and-water enema. Immediately before the anæsthetic is administered the mouth is rinsed out and the nose cleansed.

The skin covering the abdomen is prepared the night before the operation, first by thorough mechanical cleansing with spirit soap and hot water, and then by the application of a towel wrung out of alcohol, which is worn till the operation. Latterly this has been removed on the operating table and the abdominal skin painted with a 4 per cent. alcohol or chloroform solution of iodine.

All over the world operative technique is now very much the same, and every surgeon aims at keeping his wounds germ-free. That this has not yet been accomplished to the satisfaction of the bacteriologists is universally acknowledged, but surgeons know also that the essentials for safe and successful surgery are simple, inexpensive, and able to be carried out everywhere, if Lister's teaching be followed. Until surgical operations can be conducted with the same certainty as are bacteriological experiments there is room for improvement, and the best surgeons will always be found anxious to adopt suggestions that appear to add something to the chances of asepsis.

Until recent years I used nothing but antiseptics for the preparation of instruments, dressings, and hands. At the present time, in addition to this, I wear an antiseptic overall, boots, gloves, sleeves, cap, and a mask. Everyone engaged in the operation—assistants and nurses alike—does the same. Visitors to the theatre wear sleeveless overalls and masks, while the floor at the entrance to the operating theatre is sprinkled with 1 in 1000 corrosive solution to fix any dust on their boots.

The sterilised *instruments* are covered with 1 in 20 carbolic lotion, and immediately before the operation begins this is diluted down to 1 in 60. The operation site is surrounded with sterilised towels, and on the top of these other towels, wrung out of 1 in 20 carbolic lotion, are placed so that instruments can be laid upon them.

The gloved hands are frequently rinsed in 1 in 10,000 corrosive solution during operation, and any possible contamination implies prolonged and careful cleansing in 1 in 1000 corrosive lotion before the final rinsing in 1 in 10,000.

Ligatures and sutures are all prepared by the theatre sisters. With few exceptions catgut and silkworm-gut only are required. We use thin silk for the outer suture in gastric and intestinal cases, thick silk for the stay sutures in fat abdomens or cancer cases, and silk occasionally to tie a pedicle. The catgut is chromicised by McEwen's method, then boiled in alcohol under pressure, and finally placed in iodine spirit for eight days before use. Prepared in this way, we have had no trouble with it during a period of four years. Silk and the *fishing gut* are sterilised and kept in alcohol.

Mops are made of three types—large square, small square, and long strips. Every mop has attached to it one foot of tape, and a white pot ball the size of a walnut. Two nurses count the mops before operation, and the number is written up on a window, to be seen by everyone. On no account must a mop be cut during operation, and the same two nurses make a second count when closure of the wound commences. To some this may appear more than care. These critics have not seen so many sponges, instruments, and mops left in the abdomen as I have, and consequently do not know so well how easy it is for even the most capable to make such mistakes.

Anæsthetics.—Subject to my approval the choice of an anæsthetic is left to a skilled anæsthetist. When I am entirely responsible I prefer chloroform till the laryngeal reflex is abolished, followed by ether in an Ormsby inhaler



The instrument nurse.

for the rest of the operation unless the respiratory movements of the abdominal wall become too vigorous, or rigidity prevents satisfactory manipulation, when a short return to chloroform is indicated.

Shock.—Though death from "shock" generally means death from hæmorrhage or sepsis, or from both, no one now doubts the separate and independent reality of shock. Little can be done when it has developed: much, on the other hand, to prevent its occurrence. The maintenance of body heat, avoidance of rough manipulations, morphine before operation, and care in regard to blood loss are the chief ordinary measures relied on. In feeble patients, or for prolonged operation, the slow intravenous transfusion of from one to two pints of saline solution (one drachm of table salt to one pint of water), at a temperature of 102° F., or continuous subcutaneous infusion of the same by the method of Mr. Arbuthnot Lane, are invaluable aids in warding off shock.

Incision.—The abdomen can be opened by an incision of any shape or position, but there are two incisions which inflict a minimum of damage on the abdominal walls, and which can also be most readily extended in case of need. These are the ideal incisions. The first is *straight* in the middle line. The second lateral and *oblique*, and runs parallel to the nerves in the abdominal wall.

I have always advocated incisions large enough to allow of sufficiently free access for easy manipulation, and in difficult cases to permit of inspection. These are secrets of good surgery no less in the abdomen than elsewhere, though sometimes forgotten. The longest incision will cause no subsequent weakness of the body wall if it is properly closed and healing is as satisfactory as it ought to be, while the shortest incision *can* allow of a hernia of the scar.

It is impossible to properly deal with such wounds as I have referred to by means of a single layer of sutures. The peritoneum should first be closed with a continuous suture of catgut. This is a most important step, because if any hole is left a portion of omentum—which should always be drawn down over the intestine—will find its way through and then enlarge and stretch the opening for further protrusion.

After the peritoneal suture a series of interrupted or stay sutures of silkworm gut, or silk, are passed through all the layers except the peritoneum, and their ends clipped on either side of the wound. They are inserted one inch apart, and through the skin one inch from its incised margin. The median line aponeurotic tendon or lateral muscles are brought into apposition by a thick strong cat-gut continuous blanket stitch, and the stay sutures are tied. Superficial silkworm gut sutures are used to secure perfect apposition of the skin edges.

Dressings.—Next the wound I use sterile gauze wrung out of alcohol, and over this a voluminous dressing of corrosive wood-wool, with the double object of maintaining heat and allowing of elastic compression by the many-tailed bandage.

After-treatment.

Nothing more clearly shows the advance of abdominal surgery than the changes which have occurred in respect to after-treatment.

All our hospital cases are now nursed in the general wards, and most of them get scarcely more attention than the fracture cases receive, for they do not need it. (Miss Walmsley, matron, reports that during 1910 only four patients were nursed by special nurses in my ward.) So long as these patients are sickly no food is allowed them—only water to drink. On the third or fourth day one ounce of castor oil is administered, and after this ordinary diet is gradually resumed. The dressing is changed, and the superficial skin sutures are taken out, on the tenth day. I often shiver when reading accounts of cases to learn that *all* the sutures were taken out on the tenth day. A fit of coughing, an attack of vomiting, a sudden gripe, may burst a wound open and allow intestine to extrude. This would almost certainly happen in cancer cases where the healing capacity is always deficient. Three weeks, as a rule, should elapse before the removal of the deep or stay sutures.

Thirst is always a troublesome symptom after operation. There is no good reason why patients should not be allowed to relieve it by drinking when they want to. If the water is cold, and it is for this they crave, too much should not be taken at a gulp. To be allowed a feeding cup constantly replenished with cold water, and to be sipping at it most of the time, gives them greater pleasure than anything else.

Sickness.—Any serious sickness can only be satisfactorily dealt with by washing out the stomach. A frequent result is that the continuous nausea and urgent vomiting which have resisted all the usual remedial measures tried, both cease after the first washing.

Morphia.—The pain following an abdominal section is usually greater than that associated with any of the ordinary or extraordinary illnesses of life, and my opinion is that it should be relieved. A long experience has convinced me that the advantages obtainable by the use of morphia exceed the disadvantages. Our rule is to give a quarter grain hypodermically the first night.

Bowels.—A trinity of symptoms follows every operation in which the peritoneum is opened: all patients are more or less sick, griped, and thirsty.

The gripes are relieved by the passage of flatus, and depend, I think, on irregular contractions of the muscular intestinal coat. Wearing a rectal tube may be an aid in mild cases, and a hot dry bran-bag over the dressing may give some relief. By the end of the second day, if flatus has not been passed, one ounce of turpentine suspended in a tumblerful of barley water, and followed by a pint of soap and water, may be administered as an enema. This can be repeated every two hours if necessary. On the fourth day one ounce of castor oil is given to all of my patients. Nothing else, so far as I have yet discovered, has the wonderful effect of this nauseous dose.

It is a good rule, at least in serious cases, not to give any food by the mouth so long as there is sickness, or until flatus has been passed.

In any case which is serious, either as the result of disease or of the operation, the continuous administration of normal saline by the rectum is an invaluable aid. The good effect of this is especially noticeable in cases of septic peritonitis, when the hollow-eyed, grey, Hippocratic face and the running pulse can be replaced in a few hours by a condition that indicates no grave illness.

Bladder.—The fashion of passing catheters in abdominal cases has largely disappeared, and with great advantage to the patient. A new house surgeon, however, requires to learn that a patient with no marked urinary symptoms may have a dry tongue and not be doing well because the bladder is not properly emptied. Especially with old people and women examination of the hypogastrium may offer a surprise in the shape of a distended bladder when only "the stomach" is complained of.

Prognosis.—In the majority of cases a prognosis can be offered before the patient leaves the operating table, since hæmorrhage, sepsis, and shock, the three great causes of death, are now to be regarded as complications of the operation, and seldom as the consequences of it.

The nurse.—In the after-treatment of abdominal cases nothing counts for so much as a good nurse. In a previous paper[5] my appreciation of this fact has been expressed:—

> Certain nurses have a knack of doing well with abdominal cases, and both patient and surgeon are lucky if they get hold of such a one. To be raised up comfortably and packed up skilfully with pillows at the back and under the knees into a half-sitting position for a time, even on the second day, is a great relief to most patients. Rolling over occasionally from the back to one side, then to the other, and back again, if it can be done without great trouble, as it can by a skilful nurse, is a change that most patients are grateful for. A little drink, a little well-timed sympathy and encouragement, even perhaps a gentle reproof on occasion, are things certain to make the difference between a happy and an unhappy patient, and I for my part believe that in the majority of serious cases the skilled attentions of an intelligent sympathetic nurse can, and do, account for the continuance of life and for escape from death.

If a patient has made entirely satisfactory progress up to the fourth day it is seldom that anything goes wrong.

Complications following Abdominal Operations.

Peritonitis.—A septic focus already present, which has resisted attempts to deal with it, may be the centre of a spreading infection and the cause of general peritonitis. It is possible, though now very rare, to have post-operative septic peritonitis from mistakes in technique.

The septic infection may be the result of leakage from a viscus damaged sufficiently to allow of its walls giving way later, *but* the most frequent cause, and one which should always be carefully borne in mind, is leakage from an unrecognised perforation. In separating adhesions of the stomach and intestines, or round the vermiform appendix, or in the pelvis, it is easy to make unwittingly a small opening in one of the hollow viscera, and to overlook it, unless the most careful testing is employed.

Whatever the cause of the peritonitis may be, it is usual to note nothing extraordinary till the end of the second or the beginning of the third day. The patient is usually depressed and sickly, the pulse steadily increases in rapidity, some distension of the abdomen, first noticed in the epigastrium, appears and the passage of flatus is interfered with.

The course now to be taken depends upon the diagnosis as to the cause, because another operation may give a patient the only chance left for life, or it may take away the only possibility of recovery. If the illness is the result of an overlooked and unrepaired leak a prompt operation may be life-saving. If the focus of infection cannot be removed or excluded—as in ordinary post-operative septic infection—prompt operation is likely to kill the patient.

[5] Abdominal and Pelvic Surgery, Edinburgh Medical Journal, January, 1904.

The best course in this serious condition, and one not without some hope, is to stop all food and drink by the mouth and the administration of all purgatives, to wash the stomach out frequently so long as there is sickness, to maintain the body heat by artificial means, including large hot applications to the abdomen, to administer as much fluid by the rectum as the colon will absorb, to maintain the heart's action by 1/20th grain injections of strychnine hypodermically every six or eight hours,[6] to give small doses of morphia hypodermically when there is marked restlessness, and if the patient recovers to keep a careful daily outlook for localised collections of pus in the abdomen. These should, of course, be evacuated as soon as discovered.

Pneumonia.—In the paper previously alluded to[7] the following words occur:—

> My impression is that pneumonia following operation in Newcastle Infirmary is much more common than elsewhere (it occurs in about 10 per cent. of my cases), but so far as I can judge it is the only serious illness *dependent on our overcrowded and insanitary building.* (Italics not in original.)

It is still true that pneumonia is more common in Newcastle than is ordinary elsewhere, but it is obviously not correct now to attribute it, as I did, to the overcrowded and insanitary building.

Some of it results from the administration of anæsthetics, especially ether, and from the inability to cough, owing to pain in the abdominal wound. The day after the operation these patients have some difficulty in breathing, some cyanosis, moist râles over the chest, quick pulse, and elevated temperature. If their treatment is undertaken at once it is possible to put a sudden end to the whole trouble. The accumulated mucus must be got rid of by coughing, and this is effected by raising the patient up in bed, supporting the abdomen with strong arms and hands, and then encouraging vigorous coughing.

Some of it is due to septic inhalation from the mouth, nose, or throat, and develops usually during the first week after operation. It has become more uncommon since we paid more attention to mouth, nose, and ether inhaler sepsis, and to prevention of the inhalation of vomited matter.

For the greater number of cases no satisfactory explanation has been found. The only suggestion I have now to offer is that the "change of air" in the infirmary has something to do with it. In the majority of Northumberland and Durham poor-class homes coal is so cheap that the fire in the kitchen is *never* out night or day. At night especially this room, with beds in it, approaches the temperature of an oven, while in the well ventilated wards of the infirmary it is but little warmer than outside.

It is the exception for these patients, unless very feeble, to die from their pneumonia.

Cystitis.—Since the use of catheters after operation has become infrequent, and house surgeons and nurses have known that they would be blamed should cystitis occur, this has become a rare event. It is fortunate, as I have known one patient who made an excellent recovery from operation for strangulated hernia, and another who had undergone a most successful perineorrhaphy, made chronic and apparently life-long invalids through post-operative catheter cystitis.

Intestinal obstruction.—Adhesions may form after any abdominal operation, and adhesions are the most common cause of intestinal obstruction, therefore after every such operation the possibility of their occurrence should be kept in mind.

The cases most likely to be concerned are those in which a local peritonitis was present before the operation—e.g., appendix abscess, or ovarian cysts with twisted pedicle—and it occurs with greatest frequency during the second or third week, when recovery seems to be assured.

I have already[8] drawn attention to the very great importance of early diagnosis and prompt treatment in this condition, because the evidence I have offered strongly favours my belief that all of these cases can be saved by an early operation, and that delay means death. If the trinity of signs—(1) severe paroxysmal pain, (2) inability to pass flatus, and (3) evidence of increased peristalsis—are present, the sooner an operation is performed the better. If there is doubt, one ounce of castor-oil, followed by an enema, is likely to clear it up by making the patient either worse or better, and so deciding for or against immediate operation.

Phlebitis.—One of the most disagreeable consequences of an abdominal or pelvic operation is femoral phlebitis. With extraordinary regularity it appears about the tenth day after operation, usually with a bad aching pain in the upper part of the thigh and extending down the leg, with a rise of temperature to 102° F., and with a feeling of decided illness, which lasts from a week to a month. Swelling of the whole leg soon follows. Rarely is the patient able to get about with any comfort in less than three months, and, as a rule, more or less serious traces of the trouble are left for the remainder of life.

A condition so serious surely deserves more careful study than it has yet received. The probabilities seem to be that it is due to sepsis, but it is certain that septic infection of the usual kind, and by the ordinary channels, has nothing to do with it, for it usually occurs in "clean cases which have healed straight away," rather than in such as are septic in the ordinary sense. The most strongly predisposing cause is anæmia from previous prolonged hæmorrhage, such as occurs in fibroids or cancer of the uterus, so that hysterectomy is one of the operations after which it may occur. The prognosis, so far as life itself is concerned, is good. However ill the patients may be it is rare for them to die.

It is also very rare in femoral phlebitis for clots to become detached and produce pulmonary embolism, possibly owing to the painfulness of the condition enforcing rest on the patient. So far as I have observed, pulmonary embolism much more commonly follows thrombosis of the saphenous veins or their tributaries than of the femoral trunk.

When the condition has occurred nothing does any good but rest. I believe that it may be prevented by rubbing the legs regularly and by exercising them several times a day in bed.

Parotiditis.—This is a very serious complication, though now comparatively rare. Its present rarity is due to the recognition of its cause—mouth sepsis—and to the use of means to prevent this.

Ventral hernia.—A certain percentage of patients—it should be a very small one—get a ventral hernia after abdominal operations. This may be unavoidable. It is so if the wound suppurates, it is so with fat muscular persons who are growing fatter, and it may be so with the wrecks of humanity who suffer from multiple hernia, proptosis of the viscera, and general laxity of all the tissues. The treatment is to cure, if possible, by an operation, and if not, to give support by means of a belt.

Where to operate.—So far as is possible, I operate only in a properly equipped hospital, because I *know* that the dangers of operation are many times multiplied if they are done at home. Painful experience has taught me that not only the avoidable mortality, but the avoidable accidents and complications in even a larger proportion are increased to an alarming extent by yielding to the patient's natural desire to remain at home. No statistics have, so far as I know, ever been offered to support the opposite view, and I think there are good reasons for this.

The objection has been advanced that the chances of a patient who is very ill are damaged by removal and the journey. Our statistics furnish a complete answer to this. The whole profession knows that the avoidable mortality following childbirth in home practice is more than double that in maternity hospitals. Is it not better that the public should be taught to hear truths through the profession, and take the responsibility of evading them, if they so desire, rather than that these truths should be "discovered" by them? It appears to me to be impossible to doubt that in this country in 25 years no woman will be confined, and no person have any operation done, except in a properly equipped hospital.

Newcastle-on-Tyne.

[6] In cyanosed cases I have seen improvement follow the introduction of one drachm of tincture of digitalis into the rectal injection.
[7] Edinburgh Medical Journal, January, 1904.
[8] THE LANCET, Jan. 31st, 1903.

THE NOBEL PRIZE.—On Dec. 10th at Stockholm the King of Sweden personally presented the Nobel Prize for medicine, chemistry, and physics respectively to Professor Allvar Gullstrand, Madame Curie, and Professor W. Wien.

VENEREAL DISEASE: ITS PRESENT AND FUTURE.

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(*Concluded from p. 1618.*)

HERE, then, is our problem. It has never been seriously faced. How are we to face it? Are we to follow the continental example and regulate the traffic in vice? Our answer must be an unhesitating negative. For a hundred years and more regulation in some form has been tried in most European countries. It was an old system, revived by Napoleon. It was not introduced to Russia till 1844, but from that date till 1888 it was universal on the continent. In Britain a similar system was partially introduced into military stations in 1864; it was twice amended, but public opinion became so hostile that by 1886 it was entirely done away. Opposition to it began in 1869, and the effects of this outburst of feeling in England have extended to the continent since that date. Italy followed suit in 1888; in most of the Swiss cantons regulation has been abolished, as it has also been in Denmark and Norway. All over the continent a great movement is on foot, which is bound soon to sweep away the system: in France, Germany, and Russia its days are numbered.

But since regulation—namely, restriction and compulsory examination of prostitutes—still finds favour here in some quarters, it is necessary that we should touch on this subject more fully. To begin with, we may state our opinion that regulation is wrong in principle and a failure in practice. Why is it wrong in principle? First, because regulation of any immoral traffic by the State is itself immoral. This is an objection of sound statesmanship, not of silly prudery. In regulation, certain duties are imposed on certain women, and the fulfilment of those duties implies the recognised right to carry on their traffic. The obverse of responsibility is privilege.

Secondly, the laws of regulation are unjust as between the sexes. The women are subject to pains and penalties while the men go scot-free. In justification it is alleged that the prostitutes are the source of all disease existing outside their ranks. For the most part this is true; but all these women have been infected by men. And the men must be regarded as primarily responsible, for it is the demand of men which creates the supply of women. But the system is as stupid as it is unjust. If you do not remove the infected men from circulation, who form the large majority of infected individuals, it is of no use to remove the women, either in this or in any other class of infection.

Thirdly, the system is unjust, not only between the sexes but between the classes; the lower or poorer class of women are penalised while the more well-to-do escape.

Lastly, apart from its unsoundness on the side of ethics and justice, the system of State regulation of vice is founded on a blunder. To combat disease it attacks prostitution. Now disease can be attacked as disease, but prostitution cannot be attacked as prostitution. Disease is due to one set of causes, prostitution to many. If all prostitutes were removed from London to-day their places would all be filled in a wonderfully short space of time. If you want to get rid of dandelions in your garden you do not go round cutting off their heads; you take them up by the roots. Prostitution is a noxious weed, which has for its roots moral, social, and economic conditions. Poverty is the cause which leads more than 50 per cent. of these women to sexual vice; it gives them a living. To many, indeed, seduction gives the start downhill; to others vicious surroundings, antecedents, parents, and relatives. But poverty is, beyond doubt, the chief factor.

With both sexes, overcrowding, which follows in the wake of poverty, leads—I had almost said drives—into promiscuous immorality. But, overcrowding apart, the main causes which operate with men are selfish wilfulness, false shame, ignorance, and alcohol. Wilfulness, because they go wilfully to satisfy their sexual appetite without thinking of the price that others must pay; false shame, because young men are ashamed to confess to their comrades sexual inexperience; ignorance, because there is a widespread view that chastity is prejudicial to health or induces sexual impotence—a most mischievous delusion; alcohol, because 80 per cent of venereal disease in man is contracted under the influence of alcohol, which numbs the higher faculties and leaves the blind physiological impulses unchecked.

Before you can suppress prostitution you must eliminate its causes; in time, we may hope they will be eliminated; but it is a long journey: in any case you cannot directly suppress prostitution; much less can you extirpate venereal disease by an attempt to suppress prostitutes.

For these reasons, then, we believe the principle of regulation to be wrong. Now for the practice. Can it be regarded as in any respect a practical success? No; it is a total failure. On this point the reports of the Brussels Conferences of 1899 and 1902 are eloquent. Professor Gailleton says: "It is absolutely no good." Professor Fournier, the eminent authority, who with Neisser opposes the abolition of regulation, can only say that "it does a little good"; while Pierson insists that whatever little good it does is far more than outweighed by its far-reaching evil effects. Moreover, the form of regulation which Fournier and Neisser desire is by no means the present system of "police des mœurs," but a form of scientific sanitary control. It is clear that at that conference no one could affirm the success of "regulation"; further, the comparison already made between England on the one hand, and France and Germany on the other, is not eloquent in favour of regulation, since in disease at least they have no advantage over us, who have no regulation.

Let us inquire into some of the causes that have made regulation a failure. When a girl first goes wrong, she does so, not as a regular prostitute, but clandestinely; in the first year of her irregular life she contracts disease; indeed, the age of maximum incidence in females is 18; so the mass of such girls, before the age of 20, are clandestinely spreading disease among their clients. In France it is believed that 66 per cent. of syphilis in females is contracted before the age of 22, and 7/8ths of all syphilis in prostitutes is the result of clandestine vice.

It might be thought that licensed houses would be at least relatively safe, and it is claimed that this is so in Paris; but there is much evidence in other capitals pointing in the opposite direction. From syphilis at least we should expect most of the women to be free, having already had it, since under most circumstances it is impossible to take syphilis twice; but unfortunately there seems no doubt that a woman, free herself from infection, may still act as a mediator of contagion, harbouring within her own body the germs which, harmless to herself, will yet infect another; so the disease may be carried by a woman who is herself without symptoms. Even apart from such considerations no medical man can, on the ground of ordinary inspection, give a guarantee that any woman is free either from gonorrhœal or syphilitic infection.

Hence the licensed houses engender in the individual a false sense of security, while from the national point of view they only deal at best with one-eighth of the disease. Add to this that the licensed house is not popular. As the stringency of regulation increases so do the numbers of houses and their inmates decrease. In Paris to-day the number of licensed houses is less than 50, while in 1860 there were 200; in the same period clandestine vice has more than doubled in volume. As for the character of these houses, we are told that they have two main uses: to supply the first debauch of the young man, and the later bestialities of the *roué*.

Thus from every point of view, whether individual or national, whether moral or physical, whether of theory or practice, the weight of all evidence is against the State regulation of vice. It has been tried for a century and failed. At the best it is an outworn system, dating from a time when the nature of venereal disease was unknown, its long persistence unsuspected, and its terrible consequences not even dreamed of, while in the interval economic conditions also, specially in regard to women, have so altered that sexual vice at the present day furnishes a different and more complex problem. Thus it is undesirable, as in view of public opinion it is impossible, that State regulation should be established in this country.

Prostitution is an evil of which no Act of Parliament will ever rid us; its roots lie deep in the moral, social, and economic conditions, which are only capable of very gradual

improvement. But with venereal disease the case is widely different. Venereal disease is not synonymous with prostitution; syphilis, for instance, was not with us till Columbus discovered America in 1492. It is a contingent evil, not a necessary one; as it came quite lately in the history of European prostitution, so it may disappear long before that history is closed. But if this result is to be obtained we must treat disease as disease, since it is disease that we wish to combat, and not, according to the older fashion, treat prostitution as a crime. We must strive to eliminate venereal disease on the same principles as we seek to destroy other infections, adopting such methods as are specially appropriate to its peculiar character.

There are, however, certain popular objections against launching a campaign of extirpation against venereal disease, and in dealing with these we shall define our moral attitude on the subject.

The first is that such diseases come as a divine retribution for self-indulgence. This will not bear examination. Divine retribution must be self-consistent. Now in the case of syphilis such retribution was not instituted, in Europe at least, till the end of the fifteenth century, and 400 years is but a page in the history of vice. Divine retribution must be just in its incidence. But these diseases fall on the innocent and guilty alike—innocent wives, innocent children, innocent doctors. Of all women who suffer from syphilis, according to Fournier, 20 per cent. have taken the disease innocently from their husbands; Schrank considers the proportion higher in Vienna. In gonorrhœa the proportion is about the same. In the case of married women with syphilis, 95 per cent. contract it innocently from their husbands (Blaschko). In such marriages the first child (Fournier) is always fated to death in the first year of life, if ever it comes to birth at all; of all children of such parents 50 per cent. suffer the same fate; some of the later offspring may be free of disease; if they are not so they may even hand it on to the third generation. Syphilis may also be innocently contracted by social, apart from sexual, contact, by a kiss, or by common use of many ordinary utensils. Doctors are often infected while discharging their proper duties. Infants infect wet-nurses, and nurses children. Such is the condition of syphilis of the innocent to-day—less terrible now than in former years, when the initial virulence was greater than to-day, and less terrible than in Russia at the present time.

In the case of gonorrhœa, which is so lamentably common in towns abroad as to be almost universal in men before 30 years of age, the young husband frequently transfers it to his wife, who in consequence is liable to disablement, sterility, or even death. If there be a child, it is liable to infection of the eyes at birth, which unless promptly dealt with, may result in total blindness. In Prussia 30,000 such blind persons are to be found. Children also are not infrequently infected about the genitals by infected linen, and are liable to have their health and career ruined.

On the whole, we may say that about 8 per cent. of adult venereal disease is innocently contracted, as well as all venereal disease in children. How can these things be regarded as an exhibition of retributive justice? From Abraham onwards good men have recoiled at the idea of God punishing the innocent with the guilty. The Book of Job, 2500 years ago, forcibly rejected the idea of disease as the vengeful visitation of God; the later prophets rejected it; and the greatest of all Teachers refused to admit disease as representing divine retribution.

But, authority apart, no one can look on syphilis and gonorrhœa day by day and still adhere to the hypothesis of retributive justice. If it were true, we ought to refuse to cure the disease, except where the divine justice had plainly miscarried; but I think no such hardened mediævalist exists. Even for those whom we call guilty, the vast majority being girls from 16–23 and boys from 18–25, is it common justice that their lives should be blasted for an early—often the first and only—act of ignorant, procacious folly? I defy any man who is conversant with such things to say that the punishment fits the crime. We need not condone the offence to stand aghast at its result. If, then, we admit the cure of venereal disease at all, it is our bounden duty, both in logic and morals, to press forward by all proper means, not only to the diminution of vice, but to the extirpation of disease.

But again the objection comes: If vice is made safe from disease, it will increase by leaps and bounds. This we believe to be pure fancy. Did vice decrease when the monstrosity of syphilis made its sudden and appalling invasion? Is there any reason to think that, if venereal diseases were destroyed to-day, there would be an increase of vice to-morrow? We believe not. Few, if any, people are restrained continuously from vice by fear of disease. Partly, no doubt, because they are ignorant of the facts; yet venereal affections are by no means unknown among advanced medical students. And if fear or knowledge could act as deterrents, both fear and knowledge are drowned in alcohol, the almost invariable companion of illicit sexuality. Fear of disease may act as a reinforcement of higher moral considerations, but can never become a substitute for them.

"Go and sin no more." The words may serve to recall to our minds the true principle. First cure, then reformation. The healing of disease is among the most powerful weapons in our moral armoury; conversely, it is true that persistent venereal disease is, specially for women, the most insidious enemy of moral reform. There are, we are told, in the United Kingdom 284 rescue homes for women. These do excellent work; but they do not deal with *diseased* women. Diseased women have little chance of reform, though it is only by bad luck that they are in a worse position than their more fortunate sisters. Disease and its stigma are too often the chain which binds women to the life of vice, while its cure will often restore the dormant self-respect. On these grounds we reject the view of disease as a wholesome moral corrective, not only as untrue, but as the exact reverse of truth. We have spoken at length on these two ideas—disease as retributive and fear as deterrent—because we believe them to be radical errors, plausible and popular, no doubt, yet errors; which unless removed will, like suckers on the rose, sap away vitality from the tree of effort and prevent it blossoming into vigorous action.

Agreed, then, that we must attack these diseases directly, not to the exclusion of, but in addition to, other means of moral improvement. How are we to set about it?

First of all, we must have accommodation. As regards beds for such patients as need them, the general hospitals cannot and do not, as a rule, take them in. The Lock Hospital in London has 136 beds for females, and 27 for males; other lock hospitals elsewhere have about 70—possibly 250 in all. This cannot even touch the fringe of our needs. And the charitable public will not subscribe to the cure of venereal illness; it must be done by the State. Certainly a large proportion can be treated, and even efficiently treated, as out-patients; but the general hospitals, which are best suited to this purpose, have no special accommodation or special arrangements, such as are imperatively required for properly dealing with these diseases.

Each general hospital, then, should have special wards, and special arrangements in the out-patient department. Since we wish to attract patients to their own cure, all treatment should be free to all patients, the expense being borne by the State. Suitable hours should be arranged so as to attract patients without the loss of a day's work. For this purpose also dispensaries should be provided with suitable apparatus. In all such places measures must be taken to ensure privacy, decency, and self-respect; in particular, privacy from other patients should be secured.

As regards the medical staff, there should be a special course in venereal diseases and their treatment, with a special certificate attached, which should be required for any such appointment. As in the army, so in the civil service, this would lead to the treatment of these ailments being both effectual for the patient and honourable for the doctor. Printed instructions, calculated not to disclose to others the nature of the disease, should be given and read aloud to each patient, so that he shall certainly understand them. Proper appliances should be at hand, so as to commence and teach the required treatment. The sanatoriums which are now in contemplation should have their use extended to venereal disease. Many cases require such treatment. These ailments are certainly not less important to the nation than tuberculosis.

Before leaving the question of hospital reform and extension, we ought to mention the cure for syphilis known as salvarsan, or "606," recently introduced by the genius and labour of Ehrlich. This, so far as our best information goes, is destined to play a leading part in the arrest of syphilis. It offers a definitive cure by means of

one, two, or three injections, but it has its limitations and its necessities. Limitations, in that cure becomes less certain, and less immediate, in proportion as the disease has by neglect got a stronger hold on its victim. In other words, the patient must come without delay for cure at the first sign of infection. (This holds equally true of gonorrhœa; though the methods are less specific, they are fairly certain to cure if undertaken early and vigorously.) Our necessity lies in the direction of accommodation. The new treatment involves intravenous injection, after which the patient has to be under supervision for at least one night. If every hospital had a special ward, this need would be met.[1]

But how shall we get the patients to come for early cure? The only way that I can see is to offer free treatment, respect of privacy, and efficient attendance. Some will ask, Why not place venereal diseases in the same category with other notifiable infections? This cannot be done to its full extent, inasmuch as these infections differ from others. No one is ashamed of having scarlet fever, small-pox, or typhoid, but here it is otherwise. Notification in the full sense—communication of name and address to the authorities, who in their turn see that the patient is treated—is not practicable. It would certainly lead to concealment by the patient, and would hardly even command the assent of the profession.

But notification without names we must have. It is the only way of finding out the strength of the enemy. We should then at once begin to know our position and be able to form an estimate of our progress. At present we are simply floundering. Notification of this sort would not frighten the patient away nor wound the doctor's conscience. It would give us no immediate hold over the patients, yet if it were found that a large proportion were not submitting to effectual treatment, some method might then be devised for enforcing it. But at the outset, until public opinion forms, we must set our faces against any scheme which would frighten away the very people whom we wish to attract. This idea of nameless notification is not a new one. It has been variously adopted in Denmark and Norway, in Vermont and California; a Bill to the same effect is introduced now in New Zealand. If these methods were adopted we should be on the way to fighting venereal disease effectually.

But this is not all. We have other enemies. Foremost is the quack, who has a vast *clientèle*. Treatment of venereal disease, actual or suspected, by any but a registered practitioner should be made a penal offence; all advertisements of cure should be rigorously suppressed. In venereal disease there is no place for fancy cures; they are every way to the public detriment.

That persons afflicted with venereal disease should come early for treatment, implies a certain knowledge and understanding on the part of the general public. Such understanding is, in this country, at a lamentably low level. Boys and girls grow to puberty in complete ignorance of the physical facts of life, of the functions which in their bodies are coming to maturity. During this stage, for both sexes, ignorance means misery; and while they do not care, from natural reserve, to consult their parents, the parents in turn are generally too ignorant, even when asked, to give the needed information. Later on, when forewarned would mean forearmed, as soon as blind sexual impulse drives to indiscretion, there follow, not only regret and remorse, leading back to virtue, but blighting disease which aggravates, not heals, the moral wound.

Boys and girls as they attain puberty must be taught the elements of reproductive activity in plants and animals, leading up to that of the human species. At every technical, secondary, and public school they should receive lectures from properly qualified persons. They must be taught that personal chastity has no disadvantage, either for the sexual organs or the body as a whole; that this alone will fit them to be good husbands, good fathers, good citizens. Similarly public lectures should be given in all towns, teaching the populace generally the value of chastity and the dangers of disease, striving to raise, not only intellectual standards, but also moral tone, and inculcating the imperative call for early treatment on the first suspicion of disease.

By these means both the prevention and cure of venereal ailments could soon come within reach. Many other means are suggested which for the time being do not command our approval. The raising of the age of consent, in itself a desirable thing, would probably quickly prove a dead letter. Others demand universal certificates of health before marriage; before this could be effected there would have to be a public demand for such legislation; at present we must depend on voluntary action. The parents of every girl should obtain thorough assurances that their future son-in-law is free from venereal disease; ignorance alone stands in the way of this most necessary precaution. Lastly, as regards compulsory detention in refractory cases, some means could be found at a later date of compassing this end; but at the outset it would have the double danger of being inoperative on the one hand, and of frightening away the patients on the other.

A summary.—From its character venereal disease is a danger to every nation in which it is prevalent. Gonorrhœa lowers the birth-rate, as well as brings disaster on its victims. Syphilis is a terrible and insidious disease, causing huge infantile mortality and ruining the lives of many of the survivors. In the army and navy its incidence is known, and enlightened and successful methods for its diminution are being pursued. As to the civil population we have no information and no policy. No policy, however, is better than a bad or immoral policy. We must in no case adopt State regulation, which is both unjustifiable in theory and futile in practice.

As to the magnitude of the problem, an estimate has been given you of 200,000 fresh cases annually for London and half a million for the United Kingdom. The meaning of this latter figure will take shape in your minds when you consider that if this number of persons were put shoulder to shoulder, two feet for each person, this wretched army would cover a length of 190 miles, or more than the distance from London to York.[2]

If we are to face this business we must treat the disease as disease; we must abandon outworn philosophies of divine retribution and fantastic fears that decrease of disease will spell increase of vice. Banish these false thoughts which kill enthusiasm. We must set about to cure these plagues, not, as at present, grudgingly and of necessity, but heartily and of set purpose.

To this end it is suggested that there should be reform in hospital accommodation, both in- and out-patient; that members of the special staff should have special training; treatment should be free to all and at convenient times, with adequate provision for up-to-date methods; public ignorance in these matters should be remedied by all possible means; the quack and all his works should be suppressed; and lastly, notification should be insisted on, without names indeed, but with a full account of age, sex, date of infection, duration of treatment, and result thereof. At first there would be an apparent increase in the number of patients, but this would soon give way to decrease, and with a decrease in disease there would be a decrease of vice.

The present time is favourable for the commencement of a campaign against venereal disorders. Gonorrhœa can be cured in its early stages, and its present incidence might be enormously diminished; against syphilis we have in our hands a specific, by means of which, rightly used, this disease might in a short time be eliminated. If full advantage were taken of these facts the economic and, as we think, the moral gain to the community, resulting from the diminution of disease, would quickly, amply, and repeatedly repay the cost of such an effort, for which the means are at hand and the time is ripe.

[1] On this whole subject see "Syphilis" by McIntosh and Fildes. Edw. Arnold, 1911

CASE OF RAPID INVOLUTION OF A UTERINE FIBROMYOMA AFTER PARTURITION.

BY REGINALD L. E. DOWNER M.B., B.S. LOND., M.R.C.S. ENG.

THE following case, showing, as it does, the total spontaneous disappearance of a fibromyoma of the uterus, is of some interest.

The patient, aged 25 years, was expecting her first child, and on the first occasion that I saw her was already in labour. The fœtus was in the first vertex position, but a somewhat puzzling tumour was present in addition, situated at the uppermost part of the fundus uteri, fairly mobile, hard, smooth, dull to percussion, of the size of a cricket ball, and

[2] The Hon. Sydney Holland will pardon a plagiarism.

suggesting at first sight some kind of monster or fœtal abnormality. Labour proceeded normally, however, and the patient was delivered of a healthy child. There was no post-partum hæmorrhage, and no difficulty with the after-birth. As soon as the uterus was empty, and contraction and retraction were well established, I was able to devote attention to the tumour, which retained all the characteristics previously noted.

As I saw the patient day by day, the uterus descended into the pelvis, and the puerperium was uneventful. The tumour sank with the uterus, and maintained its relative position thereto. It could be moved to a small extent over the uterus, and one could feel that it was attached to it by a short thick pedicle. Moreover, it steadily shrank, so that by the tenth day, when just above the symphysis pubis, it was no larger than a golf-ball. Ten days later it could be felt bimanually only, and was smaller still.

The patient was rather concerned about the presence of the swelling, which she herself had been able to feel during the early days of the puerperium, and which was a little tender on manipulation, but I reassured her, and promised to examine her again later. About two months after labour, therefore, I saw her. Nothing abnormal could be felt per abdomen. Per vaginam the uterus was anteverted, and the sound, with concavity forwards, passed 2¾ inches. Bimanually the uterus was felt to be a little thickened, but no tumour of any sort could be discovered. The patient was in excellent health and very relieved to hear that the swelling had departed.

I take it that the tumour I had originally discovered was a subserous pedunculated fibromyoma of the uterus. It was not composed of fæces, for it had not the consistency of these, and a fæcal tumour would hardly descend and shrink *pari passu* with the uterus. Another rare kind of swelling found in connexion with the uterus during labour (but easily and immediately excluded in the present case) is that due to the extrusion of a fœtal part after uterine rupture.

The condition as felt after the birth of the child suggested the signs that one might expect in that very rare condition hour-glass contraction of the uterus, but the persistence of the tumour after the birth of the placenta and the absence of post-partum hæmorrhage would have been sufficient to dispel such a notion, even had the condition during the earlier stages of labour not been observed.

One is forced to the conclusion, then, that a fibroid of the size of a cricket ball entirely disappeared in the course of two months during the process of involution. This, I imagine, is a very rare eventuality, but it does occasionally happen, and as Haultain[1] says, "This happy result is probably attained by firm uterine contractions impairing the blood-supply of the growth, and causing a degeneration of the muscle fibres analogous to that which occurs in the normal puerperal involution."

A year later the patient again became pregnant, and at the present time, gestation having proceeded for five months, there is no sign of any reappearance of the tumour.

Woking.

THE USE OF CALCIUM SALTS AS A PROPHYLACTIC AGAINST SERUM RASHES.

BY MAURICE A. CASSIDY, M.A., M.D., B.C. CANTAB., M.R.C.P. LOND.,

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IN the diphtheria ward at St. Thomas's Hospital it has been the custom during the last few years to administer calcium salts with the object of influencing the severity of antitoxin rashes. In order to ascertain the effect, if any, of this treatment, I took 62 consecutive cases and administered calcium to alternate ones, irrespective of the extent of membrane or dose of serum. The chloride was the salt used in most cases, but the lactate was given occasionally; the average dose was 5 gr. (maximum, 10 gr.; minimum, 3 gr.), given three times a day, omitting every third day. These doses may be considered small, but it must be pointed out that only 8 of the cases were more than 10 years of age. In each case rashes were carefully looked for, and, when present, noted as being "faint," "moderate," or "severe." Of these 62 cases, 12 died in less than 12 days after admission, and are therefore excluded. The results observed on the remaining 50 cases are tabulated below.

[1] Allbutt, Playfair, and Eden: System of Gynæcology.

Age.	Total dose of serum.	Dose of calcium.	Rash.
4	5,000	10 gr.	None.
6	8,000	None.	,,
5	26,000	5 gr.	Moderate 17th and 18th days.
4	14,000	None.	Faint 7th day.
3	24,000	5 gr.	Faint 8th day.
3	18,000	None.	Faint 13th day.
7	8,000	5 gr.	Moderate 8th and 9th days.
1	28,000	,,	Severe 5th to 11th day.
3	12,000	None.	None.
2	16,000	,,	,,
25	16,000	10 gr.	Severe 9th and 10th days.
25	20,000	None.	None.
26	24,000	10 gr.	Severe 7th to 11th day.
5	26,000	None.	Severe 9th to 14th day.
2	20,000	5 gr.	Moderate 14th to 16th day.
5	26,000	None.	Faint 7th to 9th day.
13	12,000	8 gr.	Faint 9th to 11th day.
2	14,000	3 gr.	Faint 12th day.
4	12,000	None.	None.
6	20,000	8 gr.	,,
1	14,000	4 gr.	Severe 7th and 8th days.
2	6,000	None.	None.
2	6,000	5 gr.	Severe 6th and 11th day.
5	12,000	None.	None.
6	6,000	5 gr.	Faint 6th and 7th days.
1	6,000	None.	None.
4	6,000	5 gr.	,,
1	6,000	None.	,,
25	12,000	,,	Moderate 7th to 12th day.
3	24,000	5 gr.	Moderate 8th to 12th day.
4	2,000	None.	Faint 6th day.
6	20,000	,,	None.
5	2,000	,,	,,
6	2,000	,,	Faint 7th day.
3	2,000	,,	Faint 8th day.
1	20,000	4 gr.	Severe 8th to 11th day.
1	2,000	None.	None.
5	8,000	5 gr.	Moderate 7th and 8th days.
19	12,000	None.	None.
10	14,000	5 gr.	,,
2	22,000	,,	Severe 12th to 14th day.
2	2,000	None.	Faint 4th to 6th day.
22	16,000	,,	None.
5	20,000	,,	,,
1	8,000	3 gr.	Severe 8th to 11th day.
7	12,000	None.	Severe 6th to 14th day.
5	12,000	,,	Severe 6th to 14th day.
4	26,000	5 gr.	Faint 7th to 9th day.
5	20,000	,,	Faint 8th day.
1	8,000	3 gr.	Severe 8th to 11th day.

The above table may be summarised as follows:—

—	Average dose of antitoxin.	No rash.	Faint rash.	Moderate rash.	Severe rash.	Average duration of rash when present.
23 cases treated *with* calcium ...	16,000	4	6	5	8	8·4 days.
27 cases treated *without* calcium	11,000	16	7	1	3	3 days.

Calcium chloride is a nauseating drug and it is difficult to persuade children to take it; further perseverance in this direction would seem to be unnecessary if the above figures are to be trusted. I am indebted to the physicians of St. Thomas's Hospital for permission to publish these figures.

Queen Anne-street, W.

A DIPLOCOCCUS FROM THE URINO-GENITAL TRACT.

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AND
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THE organism we describe in this communication is one which is not infrequently met with in the urino-genital tract, yet appears to have escaped notice in the standard works on bacteriology. It is a diplococcus in no way allied to the pneumococcus, yet the two organisms may be, and indeed have been, confused.

Distribution.—We have isolated the organism from the urine of women, children, and much less commonly male adults, as well as from the vagina, and we have obtained pure cultures of it from pus from the interior of the uterus. It appears to be particularly common in the urine of small children; in an examination of carefully taken catheter specimens from 11 children with epidemic diarrhœa we met with it in 8 cases.

Morphology.—The organism appears in films from the tissues as a diplococcus. It may be present in the pus in enormous numbers, and is readily taken up by the leucocytes. In broth media it is found in pairs and short chains. Lanceolate and bacillary forms are very common both in solid and liquid media. The organism retains the stain by Gram's method. Neither in the tissues nor in cultures have we seen any appearance of a capsule.

Cultural characters.—Serum agar, agar slopes, and agar plates gave translucent pin-point colonies of the streptococcal type. The colonies are frequently somewhat coarser in the first cultures on agar plates, the subcultures yielding a profuse growth of very delicate colonies. Gelatin slope gives a profuse growth without liquefaction. Broth yields a general turbidity. Litmus milk is turned acid and completely decolourised in 24 hours, while we have observed this change to occur in six hours. A solid clot is generally formed in about three days. The complete and rapid decolourisation of litmus milk is the most noticeable and constant cultural characteristic. Neutral red broth is unaltered by some strains, while others produce a green fluorescence. Litmus salicin, dextrose, lactose, mannite, maltose, and saccharose are all acidified in from 24 to 48 hours. Litmus raffinose remains neutral for 24 hours, but as a rule becomes decolourised later. His's serum inulin medium is unaltered, but the organism grows well in it. The coccus grows abundantly on subculture, on all the ordinary media, and retains its vitality. An agar culture kept at the laboratory room temperature for three months grew readily on subculture and gave all its original cultural characters.

Pathogenicity.—The organism may be present in the urine without other evidence of disease. In one case it was obtained in pure culture from the urine of a man, aged 25, with a pyonephrosis and abundant pus in the urine. In another case it was the sole organism found in the persistent cervical discharge of a woman suffering from peritonitis who recovered without surgical interference after treatment by a vaccine prepared from the coccus.[1] The agglutination test performed with the sera of two patients from whom the organism was isolated was in both instances negative.

The following inoculations were made into animals. A suspension of 3 c.c. of normal saline solution was made from an agar culture. Of this 0·5 c.c. was injected intraperitoneally into each of two mice. One mouse became ill and was killed in 24 hours, the other died suddenly ten days later. No evidence of disease was found in either animal, but the organism was recovered from both in pure culture from the blood stream and from the peritoneum. Two c.c. of the same suspension were injected into the vein of a rabbit and no effect was produced. A third mouse was inoculated with the organism recovered from the first mouse without ill-effect; it was killed four weeks later, but the coccus could not be recovered from the tissues.

Remarks.—In its staining properties, its morphological appearances, and in the nature of its colonies on agar this organism closely resembles the pneumococcus, yet in every other respect the two bacteria are widely different. It should hardly be necessary to insist that the diagnosis of a pneumococcal infection can only be made after full cultural and other investigations, yet we venture to thiuk that the frequency with which the pneumococcus has been reported from the urine and from vaginal discharges depends upon the mistaken identity of that organism with the one we have described; in fact, we have evidence that this mistake does occur. The organism is one not infrequently met with, and may be unaccompanied by any evidence of disease. In a certain proportion of cases, however, it is associated with the ordinary phenomena of inflammation and may be the sole organism detected. The coccus appears to have little or no pathogenic action on mice or rabbits.

[1] The husband of this patient suffered from a urethral discharge, but evaded, possibly unwisely, a bacteriological examination

SPLENOMEGALIC POLYCYTHÆMIA WITH CYANOSIS.

(OSLER'S DISEASE OR MALADIE DE VAQUEZ.)

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A CASE of this extremely rare disease is worthy of record.

In March of this year I was called to attend a patient aged 56; he was stated to be suffering from "a cold on the chest." At first sight the thing that at once struck one was the patient's extreme cyanosis. The lips and ears in particular were nearly black, and the whole countenance was livid. The patient was seated comfortably in a chair, and instinctively one felt, without being able, perhaps, to trace the steps of the mental process, that one was face to face with something that did not "fit in" with any ordinary condition.

The respirations and general demeanour of the patient at once put out of court any suggestion of acute respiratory or cardiac trouble. The cyanosis was not the distinctive colour of that of congenital heart disease, which, so far as I know, is simulated by no other pathological condition. Advanced emphysema, although we know it may be accompanied by extreme cyanosis and comparative comfort, was negatived by the obvious absence of anything approaching an emphysematous shaped chest. One could see at a glance that there was no clubbing of the fingers.

The patient's immediate history was unimportant. He resided on the south coast, and had been in town for two or three weeks' change. Some days before he had caught a cold which had settled on his chest. He was spitting up some mucus. His past history was as follows. For many years he has suffered from migraine. The attacks were very severe and prostrated him for two days at a time. Fifteen years ago he had some œdema of one ankle and leg, and consulted Dr. Frederick Taylor for that and the migraine. Dr. Taylor told him that he was sound organically, and under treatment the œdema disappeared and he derived marked benefit so far as the migraine was concerned. About nine years ago he consulted the late Dr. J. F. Payne, who corroborated what Dr. Taylor had said. Some two or three years later he again saw Dr. Taylor, who examined him and pronounced him free from organic disease. Up to six or seven years ago, then, we are justified in assuming that the present disease had not manifested itself.

About four years ago he had a sudden attack of vertigo and lost consciousness for about one minute. At intervals since he had occasionally felt giddy, but had never again "lost himself." For several years his friends have been remarking that he was getting "a better colour," having previously been pale in complexion. His life has been regular and his habits abstemious. He does not smoke. Beyond coughs and colds occasionally, he has had no other illnesses, and up to the time of my seeing him had not the remotest idea that anything was wrong. To slight dyspnœa on exertion and so ne constipation he paid no attention. The patient had never been abroad.

On examination there was general cyanosis, most marked in the ears and under mucous membranes. The gums, tongue, pharynx, and inside of the mouth generally were of a deep purple colour. The gums bled with extreme ease,

and when the patient coughed a little blood came with the expectoration, but was not really mixed with it, and obviously emanated from the pharynx. The conjunctivæ were deeply injected.

Chest.—Lungs normal. There was no emphysema, which must be emphasised in view of the nature of the case. A few coarse rhonchi were heard, but beyond this nothing abnormal.

Heart.—The upper limit of dulness was at the third rib. To the right it did not encroach beyond the right edge of the sternum. The apex beat was in the fourth space just internal to the nipple line. The dulness extended beyond the region of the apex and was of great extent, passing out to the mid-axillary line. In view of the position of the beat being in the fourth space and internal to the nipple line the suggestion was that the heart was pushed up from below, and that the dulness beyond the nipple was caused by some organ other than the heart. A soft systolic murmur was heard at the apex, but there were no symptoms arising from it.

Abdomen.—Having found nothing in the chest to account for the cyanosis, one next examined the abdomen. The right side was flaccid and nothing abnormal was felt, but the left side was very rigid apparently. This rigidity was soon proved to be due, not to the muscles, but to an enormously enlarged spleen which extended forwards to the middle line, backwards into the flank as far as the posterior axillary line, and downwards nearly to the pubes. The notches could easily be felt. There was no tenderness, and the surface was smooth, firm, and unyielding. The edge was quite hard and sharply defined. The patient had not the remotest idea that there was anything abnormal about his abdomen.

This cleared the ground considerably. It was obvious that the symptoms and physical signs were not satisfactorily accounted for by one disease. The patient had a chronic disease, almost certainly intimately connected with the spleen, and the cough and cold were an independent and transitory affection in no way related to the cyanosis.

Nervous system.—There was no evidence of organic disease. The knee-jerks, plantar reflexes, &c., were normal. No anæsthesia existed.

Circulatory system.—The radial was slightly thickened, but not beyond the limit of health for a man of the patient's age. The blood pressure was 140–160 mm. Hg. The flow of blood was sluggish, the viscosity being increased.

The urine contained a faint trace of albumin.

Blood examination.—This was carried out on two occasions, the second being used as a check on the first. The two reports were substantially the same: hæmoglobin, 110 per cent.; red blood cells, 8 500,000 per c.mm., or 170 per cent.; color index, 110/170—0·6; white blood corpuscles, 20,000 per c.mm. The red cells were moderately regular in size and shape, the average diameter being about 8μ, and poikilocytes not being seen. The stain was moderately well retained by the cells, while abnormal staining and nucleated forms were not seen.

A differential count of white corpuscles gave the following results: polymorphonuclear neutrophiles, 92 per cent., or 18,400 per c.mm.; small lymphocytes, 6 per cent., or 1200 per c.mm.; large lymphocytes, 1·2 per cent., or 240 per c.mm.; eosinophiles, 0·8 per cent., or 160 per c.mm. Mast cells and myelocytes were not seen.

There was thus evidence of a polycythæmia with marked polymorphonuclear leucocytosis, accompanied by great enlargement of the spleen and marked cyanosis.

I had never before seen a case, and explaining the ascertained facts to the patient I suggested that we should have a consultant to see him before he returned home. He agreed, and Dr. Herbert Hawkins visited him. I explained to Dr. Hawkins exactly what I had found on examining the patient, and directly I showed him the blood report he expressed his opinion that the clinical and microscopical examinations supported each other, and he identified the disease as Osler's splenomegalic polycythæmia with cyanosis. His subsequent examination of the patient confirmed his view. Dr. Hawkins had seen two cases, one of which was under his care and the other under Dr. T. D. Acland. Concerning treatment, he had found systematic bleeding unsatisfactory, and as the patient would be returning home as soon as his temporary trouble was over, it did not appear to be worth the trial. I had been giving the patient iodide, and Dr. Hawkins suggested his taking it in the form of iodalbin, gr. v. t.d.s., for a month at a time with a week's intermission.

About ten days later the patient was able to return home. I heard from him at intervals. He was keeping well, carrying out instructions as regards food, drink, exercise, &c., and had had only one attack of migraine since March. I went down to see him in September and found that his health was good. The cyanosis was not so marked. The spleen was, if anything, *slightly* smaller, but there was no marked alteration in size. The cardiac condition was quite satisfactory. The murmur was giving rise to no symptoms. Any evidence of hypertrophy was extremely slight. The difficulty of accurately percussing out the cardiac dulness of course remained. *The lungs were perfectly normal.* I saw him again in October. His condition was still the same.

The condition is one of great interest. Unfortunately, treatment is of very doubtful benefit. The patients may go on comfortably for a number of years apparently, but the termination seems to be pretty certainly cerebral hæmorrhage. With regard to venesection, it would appear rational to try its effect should the blood pressure become dangerously high or the attacks of temporary unconsciousness frequent. I venture to suggest that this treatment would be likely to prove of more avail than the exhibition of nitroglycerin and its allies, *especially in cases unaccompanied by arterio-sclerosis.*

For the diagnosis of the disease Sir William Osler requires chronic cyanosis, polycythæmia, and enlargement of the spleen, and the absence of advanced emphysema and chronic heart disease. I believe that in all his cases included under the heading of this disease emphysema and chronic heart trouble were absent. A little discrimination is required here, however, because I believe it is a fact that as the disease (polycythæmia) progresses unequivocal and very serious cardiac lesions develop. A case might be rejected because of chronic heart trouble, while really the cardiac condition was the result of the blood disease. In an early case with a mitral systolic murmur, is the bruit of a hæmic nature?

With regard to the pathology of the disease, it appears to be pretty clear from the presence of normoblasts and megaloblasts that there is an active production of erythrocytes, and "some of the few post-mortems have demonstrated increase of the marrow, and one at least has confirmed Widal's view that the splenic enlargement is due to the resumption by the spleen of its fœtal property of production of erythroblasts" (Adami's "Principles of Pathology"). Dr. Parkes Weber says it is due to an "increased erythroblastic activity, involving a great part, but not necessarily, the whole, of the bone marrow." At any rate, what is *unknown* is the stimulus that stirs the bone marrow into increased activity.

The argument that the disease is due to diminished destruction of red cells seems to be generally regarded as a slender one. Large collections of disintegrated red cells have been found in splenic pulp, and in eight cases urobilin in the urine in sufficient quantities to suggest an excessive breaking down. The argument that the spleen fails in its function of destroying red cells consequently does not hold good. On the other hand, the evidence in favour of an increased formation of red cells is considerable and direct. In fact, "in every case of the disease in which the bone marrow has been examined microscopically it has been found that the yellow marrow, normally found in the long bones, has been transformed into red marrow relatively free from fat and showing active formation of red cells" (Mackey). Vaquez says that in every case of a true polycythæmia there is increased formation of red corpuscles, associated with continuous and frequently progressive increase of number in the circulating blood.

In a synopsis, by Dr. L. G. J. Mackey, of just over 40 recorded cases there are admittedly a considerable number that do not fulfil the required conditions which would justify their inclusion. Apart altogether from the many cases of *relative* polycythæmia from various causes, there are undoubtedly many cases of true polycythæmia from congenital heart disease, acquired valvular disease, especially mitral stenosis, adherent pericardium, &c., which may not be included under the heading of Osler's or Vaquez's disease. There must be (to repeat) true polycythemia, with enlarged spleen and cyanosis, in the absence of emphysema and chronic cardiac conditions. That there is such a condition is proved by the cases collected by Sir William Osler and others, each of

which, few though they be, conforms to the requirements laid down.

Clapham Park, S.W.

OVARIAN CYSTOMA OF UNUSUAL SIZE COMPLICATED WITH VENTRAL HERNIA AND ASCITES.[1]

BY H. MACNAUGHTON-JONES, M.D. Q.U.I., M.A.O., F.R.C.S. IREL. & EDIN.

THE following is a note of an ovarian cystoma of unusual size; it was the largest tumour of its kind I have ever seen. Possibly some of those present will have dealt with larger, and in patients of still more advanced age. I was indebted to Dr. W. C. Dowling Prendergast, of Hanley, for the opportunity of seeing the patient and for this short history of her condition antecedent to operation.

Age 67; married; no children; first noticed a swelling in the abdomen 12 years ago; has been under his care for 11 years (I may here interpolate that the patient determinedly refused to take the advice repeatedly given to submit to operation); has worn an abdominal belt for some years for a ventral hernia, and some four years since this latter increased in size and became very prominent. Her general health was fairly good; the bowels kept regular. The immediate cause of her submission to an operation was the huge size of the abdominal swelling, which prevented all attempt at locomotion. "The walls over the umbilical hernia were thinned to such an extent [Dr. Prendergast also says in his report] that he feared rupture of the abdominal wall."

The condition of the patient immediately before operation, when I first saw her in her own house, for she could not be removed, was not an inviting one, and I dreaded even her removal into an adjacent room prepared for the operation. She was under the influence of scopolamine-morphia which had been administered on the previous night and again that morning, and an injection of strychnine and atropine had been given an hour before. The anæsthetic was most skilfully administered by Mr. A. P. Square. The girth of the abdomen in the prone position by careful measurement at its greatest circumference was 57½ inches. The abdominal muscles for a considerable extent had separated and the wall was thinned out with a diffused rupture which included an area of several inches in circumference above the umbilicus.

The peritoneum was firmly attached in front to the sac of the cyst, and both, for some extent, were adherent to the abdominal wall. In detaching the peritoneum before puncture from the wall of the sac a quantity of ascitic fluid escaped. Dreading the effect on the anæsthesia through the sudden relief of pressure, the abdominal wall at either side was held well up and the remaining ascitic fluid very slowly drained off. The rest of the operation was simple. The huge cyst was emptied and removed, and the patient was in a good condition when placed in bed.

The operation was performed on April 21st, and on May 3rd Dr. Prendergast reported the patient as "full of life and spirits," and a fortnight afterwards she was in her garden daily. On Oct. 27th last he saw her, when she was "well and able to do her shopping."

Harley-street, W.

[1] A note read at a meeting of the Obstetrical and Gynæcological Section of the Royal Society of Medicine on Nov. 3rd, 1911.

LIVINGSTONE COLLEGE.—The annual report and statement of accounts of this college shows a decline in the number of students attending the college, with the result that there is now a financial deficiency of £500. It is hoped that this debt will be speedily removed, and that the result of the Livingstone Centenary Fund in connexion with the centenary of the birth of Dr. Livingstone, which will occur in 1913, will place the college in a better position. Twenty-seven students entered for not less than one term during the year. The report makes reference to the appointment of a board of missionary study, as a result of the World Missionary Conference held in Edinburgh last year, which it is hoped will lead to greater attention being devoted among other things to the necessity of elementary medical training for missionaries.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on Dec. 8th, with Sir WILLIAM OSLER in the chair.

Mr. HERBERT TILLEY showed four cases illustrating surgical treatment of Chronic Empyema of the Nasal Accessory Sinuses. Case 1 was a male, aged 71, who sought relief for double vision, and complained of no other symptoms. A small, tense swelling was observed between the right eyeball and the inner half of the "orbital arch." There was distinct proptosis of the eye. Examination of the nasal cavities revealed a free discharge of pus from all the sinuses on the right side. At the operation an incision was made immediately below the right eyebrow and along its whole length, and terminating just above the internal canthus. The swelling above referred to was found to be part of the wall of the frontal sinus empyema, which by destroying the roof of the orbit had forced its way anteriorly. The anterior wall of the sinus was completely removed, when it was found that the whole posterior wall of the sinus had been destroyed, exposing a large area of dura mater, while the floor of the sinus consisted of the contents of the orbit. The right maxillary antrum, ethmoid, and sphenoid sinuses contained pus, and were freely drained by the usual surgical methods adopted for these bony cavities. The patient made an excellent recovery, with very slight deformity. The curious feature of the case was that in spite of the extensive destruction of the bony walls of the frontal sinus, he never suffered from headache, or complained of any purulent nasal discharge. His one trouble was "seeing double." The second case was a female, aged 30, admitted to University College Hospital in July, 1911, for inflammation of the "right eye and face" of five weeks' duration. On admission there were intense inflammation and swelling of the right side of the face, extending from the frontal eminence to the level of the right angle of the mouth. The right eye was proptosed and the globe hidden by swollen, œdematous, everted conjunctivæ. The upper eyelid was swollen, œdematous, and of a purple colour, and just below the inner angle of the eyebrow was a pus-discharging fistula leading backwards to the posterior and inner region of the orbit. A purulent discharge was seen in the right nostril and in the naso-pharynx. The temperature was 102° F. The mental condition was obtuse. The patient looked very ill. An operation similar to that in Case 1 was carried out immediately. A large collection of pus was opened on the inner side of the orbit and sequestrum removed from the posterior ethmoidal cell region. The antrum was opened in the canine fossa and found to be full of caseated pus; the inner antral wall was removed to provide for free and permanent drainage. The patient's recovery was retarded by symptoms of pleurisy, which eventually cleared up. Only slight deformity was to be noted in the region of the frontal sinus, in spite of free removal of all its anterior wall. The third case was that of a female, aged 13, who was admitted to University College Hospital for acute swelling and œdema of the left upper eyelid and lower frontal region. The temperature was 102° F. She had some headache and malaise. There was no discharge of pus from the left nostril and none to be seen in the left nasal cavity. The same operation was carried out as in Cases 1 and 2. About a drachm of pus was found between the eyeball and the lateral mass of ethmoidal cells. The frontal sinus also contained pus and was freely opened and drained. Rapid recovery took place, with little deformity. The condition was uncommon in children. The fourth case was a male, aged 60, whose left frontal sinus was opened from the outside because of severe headache associated with empyema of that sinus and the corresponding antrum. Killian's operation was performed—i.e., the anterior wall and floor of the sinus were removed, with the exception of that portion of the orbital arch which formed the junction of the wall and floor of the sinus. By leaving that bridge of bone very little deformity resulted, as was seen in that case.

Mr. H. MORRISTON DAVIES showed a case of long-standing Dislocation of the Patella (? traumatic) and Osteo-arthritis of the Knee-joint treated by operation 18 months ago. The patient was a widow aged 55. Forty-eight years ago she fell down and dislocated her right patella. Since then the patella had remained on the outer side of the knee. There was no history of poliomyelitis, and the electrical reactions did not suggest that the original dislocation was due to paralysis. Thirty years ago the patient began to be troubled with pain in the right knee, and ten years ago she was unable to stand or walk without the aid of a special splint and crutches. At the time of her admission to hospital in May, 1910, there was considerable genu valgum of both legs; the right patella was lying to the outer side of the joint with the anterior surface looking directly outwards. The condyles of the femur were easily palpated and marked osteo-arthritic changes could be recognised. With the leg fully extended it was possible only partially to replace the patella. The patient was unable to lift the limb off the bed or to extend it against resistance. There was considerable wasting of the quadriceps femoris, and especially of the vastus internus; the knee-jerk, however, was obtainable. The main steps in the operation, which was performed on May 27th, 1910, were:—1. The opening of the knee-joint and the removal of a large part of the anterior and inferior surfaces of the external condyle, so as to allow the patella to ride over the lower end of the femur when the joint was flexed. 2. The division of the extension of the quadriceps femoris on the outer side. 3. The freeing of tendons of the gracilis and semi-tendinosus muscles from their insertions in the tibia, and the stitching of the cut ends of those to the inner side of the patella. The tendons were passed under the sartorius and enclosed in folds of the capsule. 4. The longitudinal pleating of the capsule so as to tighten it on the inner side of the joint. Massage and passive movements were begun on the fourth day, but a fortnight later adhesions in the joint had to be broken down. On June 20th the patient could flex the knee to a right angle and could lift the leg off the bed. She left the hospital wearing only a bandage as support. The patient celebrated the first anniversary of her operation by going to a dance and dancing hard. She can now run up and down stairs and work all day long without pain or undue fatigue. The actual result from a cosmetic point of view might be still further improved by curing the genu valgum, but considering the patient's age and the satisfactoriness of the limb there was no indication for the further operation.

Mr. HENRY CURTIS showed a case of Acute Periostitis of Rib, with separation of sequestra (non-tuberculous, non-traumatic). The comparative rarity of the condition seemed to justify the record of the case. The patient, a Hebrew boy, aged 14, was admitted to hospital on March 31st, 1911, for pain in the chest. He first complained of pain over the heart, compared with the "sticking of needles," on the previous Monday, and it became steadily worse. On admission the facial expression was anxious, with a hectic flush on the cheeks, furred tongue; temperature 102·5° F., pulse 112, respiration 28. There was no constipation. The right chest, front and lower axilla, were fuller than the left, and slight but distinct œdema was observed, with widely diffused marked tenderness, which extended well over the contiguous upper abdomen, in the right hepatic region, where there was considerable rigidity. There was some loss of note over the right front below, but no abnormal breath sounds. There was a leucocytosis of over 20,000. A diagnosis of empyema or acute abdominal suppuration—e.g., subphrenic abscess—were possibilities, but exploration of the chest negatived empyema; a second needle puncture struck what appeared to be bare rib, evacuating pus. Following the needle down by an oblique incision downwards and forwards along the line of the fifth right rib pus was found welling out in large quantities from beneath detached, thickened, congested periosteum, between it and the rib. Free drainage was effected above and below. The wounds closed by May 17th, but two sequestra were removed on Sept. 19th, one from the upper one in the anterior axillary line, the second from the anterior wound in the parasternal line; the third, and largest, sequestrum was removed from the lower wound on Nov. 11th, both incisions now being soundly healed. The pathologist's report negatived tubercle, a pure culture of staphylococcus pyogenes aureus being obtained.

Mr. E. M. CORNER and Dr. L. GRANT showed a case of Healed Double Empyema in a male patient, aged 29, who was admitted with both pleural cavities containing pus to the Passmore Edwards Hospital, Wood Green, under the care of Dr. Grant, on Sept. 11th last. A rib was resected on the right side, as that side contained most fluid; three pints were withdrawn. On the next day (the 12th) 1 pint of pus was withdrawn by aspiration from the left side, and on the 13th a rib was resected on that side. The left side healed and closed in 11 weeks, the right side in about 10½ weeks. Since then the man had made steady progress, adding 3 lb. to his weight the week previous to the last time he was seen. His heart was still displaced and the pulse-rate was still rapid.

Mr. R. P. ROWLANDS showed a case of Anterior Gastro-jejunostomy, Perforated Jejunal Ulcer, Detachment of Jejunum, Excision of Ulcer, Gastro-duodenostomy. The patient was a man aged 30. In June, 1905, anterior gastro-enterostomy was performed elsewhere for pyloric obstruction. He had had complete relief for four and a half years. Then he had pain in the abdomen to the left of the navel, partly relieved by food. The patient became wasted and for three weeks before perforation the pain was unusually severe. On Sept. 2nd, 1910, at 6.30 P.M., during micturition, suddenly he felt a terrible burning and sharp, aching pain running downwards from the navel to the pubes. The pain was not relieved by morphia. The patient was admitted to Guy's Hospital seven hours after perforation and the abdomen was opened half an hour later. A large amount of sero-purulent sanious fluid and gas escaped. The pelvis, both flanks, and the subdiaphragmatic space on both sides were full of sero-purulent liquid. Anterior gastro-jejunostomy without entero-anastomosis was found; the proximal limb of the jejunum was greatly dilated and hypertrophied. There were dense adhesions between its gastric end and the parietes, indicating old perforation. A large perforation was found in the distal limb 1 inch below the gastro-jejunal opening. The latter was only three-quarters of an inch in diameter. The perforation was closed, the abdomen washed out, and a tube inserted at the lower angle of the wound. The patient did well while in hospital, but soon afterwards symptoms returned in spite of continued medical treatment. He was readmitted once for prolonged medical treatment. He improved a great deal, but had not been out many days before the old pain and vomiting returned. There was burning pain and a feeling of bursting. At the operation in May, 1911, the jejunal ulcer was found adherent to the liver, detached, and thus opened. The pylorus was almost occluded and adherent high up and far back. The jejunum was then detached from the stomach. There was ulceration round the stomach. The jejunal ulcer was excised. The large jejunal wound was closed transversely without narrowing of the lumen. The gastric wound was enlarged up and to the right, and joined to a similar opening made in front of the first and second part of mobilised duodenum. The symptoms had abated. The patient had gained weight, although at work for several months.

Mr. ROWLANDS also showed a case of Gastric Carcinoma; partial gastrectomy two years ago. The patient was a male aged 51. He had had gastric symptoms for four months: vomiting, anorexia, indigestion, constipation, chronic hæmatemesis and melæna, very severe anæmia, and wasting; he had lost 22 lb. in 15 days. An operation was performed in November, 1909, when extensive, but not complete, gastrectomy was done, the duodenum was closed, and gastro-jejunostomy performed. The patient was now quite well and working. At first he could only take small meals; the small remainder of stomach had dilated.

Mr. C. GORDON WATSON showed a case of Excision of a Large Myeloid Sarcoma of the Ischium. The patient was a male aged 51. He had been operated on 12 years ago at St. Mark's Hospital for ischio-rectal abscess. On June 17th, 1911, he was admitted to St. Mark's Hospital complaining of "return of the abscess." On examination there was an elastic swelling bulging into the ischio-rectal fossa, the rectum, and adductor region of the thigh. The tumour was about the size of a cocoanut, was fixed to the pelvis and deep to the thigh muscles, which were wasted. Marked egg-shell crackling was obtained on firm pressure all over the tumour. X ray examination showed that the tumour had a bony shell and was attached to the ischium and pubes. An exploratory incision, followed by microscopic examination, proved the tumour to be a myeloma. On July 7th

he had an operation at the Metropolitan Hospital, when ligature of the internal iliac artery was done. On July 10th the tumour was excised with the patient in the lithotomy position. The greater part of the ramus of the ischium, the tuberosity, and the descending ramus of the pubes were removed with the tumour. The adductors were very adherent to the tumour, and were divided, together with the hamstrings. The sciatic nerve passed over the surface of the tumour, but was not injured. The internal pudic artery was ligatured. A portion of the right crus of the penis was removed. The hæmorrhage was not serious. The tumour was composed of soft vascular tissue, with a thin, bony shell, and consisted of giant cells. The recovery was good; the patient had good use of all his thigh muscles and walked well without pain.

Mr. P. TURNER and Dr. C. E. IREDELL showed two cases of Rodent Ulcer treated by fulguration. The first case was that of a male, aged 56, who was admitted to Guy's Hospital on May 29th, 1910, for a large rodent ulcer which had perforated the right cheek from the anterior border of the masseter to the angle of the mouth, and had also invaded the muco-periosteum of both the superior and the inferior maxillæ. The disease appeared 19 years before in the form of a pimple which did not give rise to any trouble until five years ago, when it began to ulcerate. In 1907 he had X ray treatment under which the ulcer cicatrised. About a year before admission the scar broke down and the ulceration rapidly extended. Radium and X ray treatment were tried for six months, but without benefit. On June 2nd chloroform was administered and the ulcer curetted and scraped, when a large backward extension deep to the masseter and involving the mucous membrane of the cheek was found. When the ulcer had been thoroughly scraped the resulting raw surface was cauterised by the use of the high-frequency current (diathermy). After 10 days a number of superficial sloughs separated, leaving a healthy granulating surface. A sequestrum also separated from the superior maxilla, leaving a large opening into the antrum. The ulcer completely cicatrised in about three months. The obturator for the gap in the cheek was suggested and designed by Mr. F. J. Pearce, assistant dental surgeon to Guy's Hospital. The second case was that of a male, aged 57, who came under observation in 1908. In 1896 the patient noticed a small sore on the left cheek, about half an inch from the ala of the nose. In 1898 it was excised, and recurred two years later. It was then scraped, and later cauterised on several different occasions. In 1902 X ray treatment was started, and he had several hundred treatments. When first seen he had an ulcer about an inch in diameter on the left cheek, equidistant from the left side of the nose, eye, and lip. He was treated with 22½ mg. of radium, having upwards of 50 applications of 36 hours each during the three succeeding years. A piece of lead 1 mm. thick was placed between the radium and the patient. He also had three treatments with carbon-dioxide snow. In October, 1910, the ulcer, which had never healed up, seemed to grow more rapidly, and in January, 1911, he was seen by a surgeon, who suggested removing the whole of the superior maxilla. At that time the lip was becoming involved and also the ala of the nose. The patient refused the operation suggested and was seen again in May. The left upper lip was then destroyed and a good deal of the left side of the nose. The ulceration had also spread on to the left malar bone. The patient was anæsthetised and the edges of the ulcer were cauterised by the method of using high frequency known as diathermy. The right eye being blind, the patient was most anxious that no harm should be done to the left eye, and therefore the part of the ulcer near the inner canthus was left untreated. Since the operation there had been no spread of the ulcer except towards the eye. The patient was shown as an example of treatment by diathermy.

Mr. V. ZACHARY COPE showed a case of Achondroplasia in a male, aged 9, who was about the size of a child of 5. He was intelligent for his age. The stunted growth was noted since he was about 2 years old. All his limbs were much shorter than normal, and the long bones exhibited marked enlargements in the region of the epiphysis, which radiography showed to be due mainly to thickening and irregular ossification of the end of the diaphyses. There were no curves like those of rickets. The fingers and toes were short and thick. The vault of the skull was well developed; the base rather smaller than normal. There was very slight bending of the ribs. The head of the fibula was higher than normal on both sides and took part in the knee-joint on one side. Three brothers and two sisters were well developed. The boy was the youngest child; the mother was aged 41 at his birth. She had a marked enlargement of the right lobe of the thyroid, which had been present as long as she could remember. The case was suggestive of a relation between achondroplasia and derangement of the thyroid.

Mr. W. G. SPENCER showed a case of Congenital Specific Stenosis of the Fauces and Pharynx in a young woman who showed persistent nodes and a gummatous scar on the scalp. In June she was admitted under Mr. Arthur Evans for severe ulceration of the fauces and pharynx. Tracheotomy was done and salvarsan administered, after which the ulceration rapidly healed, resulting in stenosis. Mr. Evans then performed a plastic operation upon the soft palate and fauces; the tracheotomy tube was then left out, and the patient was discharged on August 19th, breathing and swallowing well. On Oct. 15th she was readmitted under Mr. Spencer with dyspnœa, hardly able to swallow fluids. After reintroducing the tracheotomy tube it was found that the naso-pharynx would allow of the passage of only a very small catheter, whilst a No. 10 passed with difficulty through the fauces and pharynx. On gently dilating to admit a finger the fauces and pharynx, down to the larynx, were found to be changed into a very dense ring in which the vessels of the neck had become involved. Therefore a No. 10 œsophageal tube was passed through the left nostril down the pharynx, through which the patient was at first fed, but soon she swallowed beside it. Later, a full-sized œsophageal cannula was passed, beside which the patient could now swallow ordinary hospital diet, and had rapidly put on flesh. She could herself take out the tube when she went out of doors, and put it back before a meal. For the present, therefore, the necessity for gastrostomy had been avoided. The tracheotomy tube would be required permanently. The very dense and extensive fibrosis which had followed the rapid healing of the ulceration after salvarsan was a disappointment.

Mr. V. WARREN LOW showed a case of Multiple Melanotic Sarcomata of the Skin, possibly secondary to a melanotic sarcoma of the skin removed 18 months ago. The patient was a woman, aged 34, who had always had a mole on the inner side of the left leg below the knee. Three years ago this was knocked off and bled and a scab formed. When that either fell off or was removed a raw, bleeding surface remained. Gradually a dark, reddish swelling began to form. The patient was first seen in April, 1910, when the tumour had reached the size of a pigeon's egg. It was pigmented and presented a raw surface covered by a scab. There were also several small, pedunculated, and pigmented tumours attached to the skin on the left thigh. The left femoral glands were enlarged. On April 11th, 1910, the tumour was excised with a wide area of skin around. The femoral glands were also removed and the three pedunculated moles on the left thigh. The material excised was examined microscopically by Mr. E. H. Shaw. The main growth proved to be a melanotic sarcoma; the glands contained secondary deposits similar in character to the growth. The pedunculated tumours showed the ordinary character of simple moles. In January, 1911, the woman again came to the hospital with some small nodules in the scar of the old wound; these were removed and microscopically showed the same characters as the original growth. Shortly afterwards a number of small superficial pigmented tumours began to make their appearance on the left leg below the knee, and this occurrence still continues. At first these made their appearance as small reddish spots in the skin; they rapidly increased in size and became pigmented; they generally projected above the level of the skin, but lately a few small subcutaneous tumours had appeared. During this period the glands in the groin had again enlarged, and now a large mass of glands could be felt in the left iliac fossa extending to the brim of the pelvis. The more superficial glands appeared darkish in colour under the skin. The patient had been treated for three months by X rays by Dr. Robert Knox, who stated in his report that there had not been any improvement. The patient also had some unpigmented moles on the left side of the neck and on the right scapula; a small pedunculated tumour had also appeared on the left thigh in the vicinity of the scars of those removed 18 months ago. The patient, who appeared to be otherwise healthy, was

married and had two children, one of whom had had a large mole removed below the right eye.

Mr. SHAW said that the microscopical sections showed the main growth of the leg (which was soft, pedunculated, white for the most part, with black patches in places, and measured 1¼ in. in diameter) roughly divided into two parts; the outer part was partly covered by an irregular layer of squamous epithelium. The cells of the tumour were arranged in masses separated by connective tissue; they were small and large in size, and very variable in shape, some round and many spindle in outline. All the stages of transition from round to spindle-shape were well seen. Many cells were deeply pigmented, and in some instances whole masses of cells were of a golden brown colour. Many of the pigmented cells were very large, and some contained two or more nuclei. The deeper part of the tumour was composed of smaller cells, mostly round in shape; among these were many well-formed blood-vessels, separated from the cells by a ring of loose connective tissue. The arrangement and character of the cells in the outer part were like those seen in "fleshy" moles, and the tumour undoubtedly arose from one of those. It was now a mixed round and spindle-celled melanotic sarcoma. In the inguinal gland the gland tissue was almost entirely replaced by growth. The growth was composed for the most part of round cells; spindle cells were present in places. Masses of pigmented cells were seen here and there. The tumour was a typical sarcoma. There were two very small moles with wide pedicle. They were covered with squamous epithelium: beneath that there were groups and columns of cells, rounded in shape. Many of the cells contained two nuclei and some contained three or four. The groups were separated by well-formed connective tissue; many cells lay free in the loose tissue just under the epithelium.

Mr. C. A. BALLANCE showed a patient on whom he had successfully performed the operation of Ligaturing the Innominate Artery for Subclavian Aneurysm.

SECTION OF ANÆSTHETICS.

Methyl and Acetone Chloroform.—The Pioneer of Anæsthesia by Ether Inhalation.

A MEETING of this section was held on Dec. 1st.

A letter from the editor of the British Pharmacopœia was read asking for an expression of opinion of the Section of Anæsthetics on the propriety of making methyl chloroform (as well as ethyl chloroform) official in the Pharmacopœia.

Dr. DUDLEY BUXTON said that chloroform prepared from methyl alcohol was, he believed, clinically as good as that obtained from ethylic alcohol. No appreciable difference had been detected throughout a trial, undertaken at his instance, of chloroform made from methyl alcohol and from acetone.

Dr. V. B. ORR said that Westminster Hospital used ethyl $CHCl_3$, but there was no difference detectable between ethyl and methyl $CHCl_3$. He thought a difference could be detected in the case of acetone $CHCl_3$.

Mrs. DICKINSON BERRY suggested that both methyl and acetone $CHCl_3$ should be added as official.

Dr. G. A. H. BARTON said he preferred methyl chloroform; he did not think acetone so good.

Mr. R. GILL said that provided there was purity of production there was no distinction, but that at St. Bartholomew's Hospital they used ethyl $CHCl_3$.

Dr. W. J. MCCARDIE said that as the end produce of manufacture was $CHCl_3$, it did not matter from what source it was obtained. At the Birmingham General Hospital he used methyl and acetone $CHCl_3$ indifferently.

Dr. HERBERT SCHARLIEB said that he had had various brands of chloroform prepared from all sources and he was convinced there was no difference at the time of administration or afterwards.

Mr. R. E. APPERLY thought that more acetone $CHCl_3$ was required to produce anæsthesia than in the case of ethyl or methyl $CHCl_3$.

Mr. H. E. G. BOYLE was convinced that ethyl $CHCl_3$ was less dangerous.

After Mr. GILL had asked whether the question was sufficiently important to be referred to a special general meeting of the section it was decided—

(1) That methyl $CHCl_3$ was sufficiently important to be included in the British Pharmacopœia; and (2) that acetone $CHCl_3$ should also be recommended to be included.

Dr. DUDLEY BUXTON read a paper the subject of which was Crawford Williamson Long, the Pioneer of Anæsthesia by Ether Inhalation: the Use of Ether 1842 and 1911. He pointed out that Long sprang from a family of strong intellectual bias, was himself at once an exceptionally able man, imbued with professional horror of advertisement and of premature exploitation of hastily carried out professional research. At the time of his first experiences with ether inhalation (1841) that drug was unknown except as an exhilarant, for which purpose it had been employed by Beddoes, Pearson, Warren, Cullen, and others. In this way it was employed by Long instead of nitrous oxide gas, the inhalation of which was a common pastime among the youth of England and the United States. Long, observing that the pain of bruises and bangs was not felt after breathing ether, was led to employ it to produce full surgical anæsthesia. This he did in 1842. Subsequent successes led to remonstrances from neighbouring medical men, who feared a disaster, since Pereira and others had taught that the stupor of ether was highly dangerous. Since Long practised in a small village out of touch with surgical centres, he refrained from publishing his work, although it was known throughout the State of Georgia. When Morton sought to obtain sole credit from Congress and a pecuniary reward for his public exhibition of his nostrum letheon, which was in fact sulphuric ether, Long was pursuaded by his friends to send a succinct account of his cases which had been done four and a half years earlier. He refused to court further recognition, and for many years Long's name was seldom associated with the great discovery of anæsthesia. Dr. Buxton's paper was illustrated by a series of interesting photographs of the original documents proving the justice of Long's claims to be accepted as the first person to suggest the use of ether for anæsthesia and the first person actually to employ it. Besides tracing Crawford Long's career, a full account based on the protocols was presented of the actual work done and the state of medical thought concerning mesmerism and other attempts at the achievement of painless surgery. The methods of using ether between 1841 and 1911 were considered and comparisons instituted, a final appeal being made that those who practised anæsthesia should supplement their practical skill by research so that the art should follow the extension of the science.

LARYNGOLOGICAL SECTION.

Exhibition of Cases and Specimens.

A MEETING of this section was held on Dec. 1st, Dr. STCLAIR THOMSON, the President, being in the chair.

Mr. J. EVERIDGE (introduced by the PRESIDENT) showed a Pedunculated Intrinsic Growth of the Larynx in a man aged 41. The case was shown at the last meeting. The growth had been removed, and the section under the microscope showed that it was a granuloma.

Dr. W. JOBSON HORNE showed a series of three cases of Specific Disease of the Tongue, Palate, and Fauces, one of the cases manifesting fenestræ the result of the disease in the posterior pillars of the fauces.

Dr. G. WILLIAM HILL showed a patient with Fixation of the Left Vocal Cord and Tracheal Tugging from Aortic Aneurysm, which gave rise to an interesting discussion initiated by Mr. W. PERMEWAN (Liverpool), who expressed the opinion that undiagnosed cases of recurrent paralysis of the left vocal cord would be more frequently found to be due to aneurysm than to any other cause—an opinion which was not, however, allowed to pass unchallenged.

Dr. HILL also showed some Pieces of a Chestnut he had removed with the aid of upper bronchoscopy from an infant 13 months old. The case was one of the youngest on record.—Several members advised lower bronchoscopy at such early ages in order to avoid the glottic œdema which is liable to follow the passage of the tube through the infantile glottis.

Dr. W. H. KELSON showed a case of Tuberculous Disease of the Larynx in a man, aged 37, to illustrate the fact that in tuberculous disease the larynx did not heal *pari passu* with the lung.

Dr. KELSON also exhibited a case of Abductor Paresis in a man, aged 44, with tuberculous disease of both apices, regarding which several members expressed dubiety as to the presence of any abductor disability.

Dr. DAN MCKENZIE showed a woman, aged 57 years, who had suffered from Prolonged Laryngeal Stenosis from some obscure inflammatory cause (? pneumococcus infection). The

practical interest in the case lay in the fact that in the early stages sarcoma of the pharynx had been closely simulated.

Dr. MCKENZIE also showed another Laryngeal Case of Doubtful Diagnosis.—This was considered by most of the speakers to be an example of simple pachydermia.

Mr. HERBERT TILLEY showed a large Suppurating Bony-walled Air Cell of the Right Middle Turbinal which had been associated with chronic empyema of the corresponding antrum.

Mr. TILLEY also showed an old man in whom an External Fistula of the Frontal Sinus had been cured by intra-nasal treatment.

Mr. GEORGE WILKINSON (Sheffield) exhibited a case of Unilateral Paralysis Affecting the Face, Pharynx, Larynx, and Tongue, acute in onset and diagnosed as due to acute polio-encephalitis.—The danger to the ear in bathing is well known, although it is not so frequently guarded against as it ought to be, but that the nasal sinuses may become infected in the same way has hitherto escaped notice. Mr. Wilkinson, however, in his notes of three cases illustrating Infection of the Accessory Sinuses by Entry of Water into the Nose during Bathing, and of a fourth case having possibly the same origin, drew attention to a point in etiology of which more would doubtless be heard.

Mr. WILKINSON also reported a case of Osteomyelitis from Acute Frontal Sinusitis.

Mr. E. W. BAIN exhibited a Papilloma growing from the Inferior Turbinal, a specimen which was not, however, considered to be an example of this uncommon type.—A discussion upon the rare squamous papilloma of the nose followed.

Dr. T. JEFFERSON FAULDER and Mr. W. H. HARMER showed a case of Pharyngeal Tuberculosis, with tuberculous lesions of other parts, which was under treatment by injections of tuberculin. The appearances of the pharyngeal ulcers were so unusual as to arouse considerable comment. It appeared that the tuberculous disease had spread from the tonsils to the pharyngeal wall after simple tonsillotomy some years ago, an event which many of the members regarded as strengthening the case in favour of entirely enucleating tonsils; and the same opinion was expressed in the discussion on a case shown by Dr. E. A. PETERS of an Irregular Growth from the Tonsil which had appeared in spite of an operation upon the tonsils seven years previously.

Dr. HILL showed two cases of Carcinoma of the Deep Pharynx prior to their treatment with radium.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Sterilisation from the Eugenic Standpoint.

A QUARTERLY meeting of this association was held at the rooms of the Medical Society of London on Nov. 21st, Dr. WILLIAM DAWSON, the President, being in the chair.

Before proceeding to the business of the day, the PRESIDENT referred in sympathetic terms to the decease since the last meeting of Dr. George Fielding Blandford, who was one of the oldest members of the association and a familiar figure at most of its meetings, where everyone listened with the greatest respect to his remarks. Dr. Blandford was a past President of the association, and had always taken a deep interest in lunacy legislation. The funeral was attended by some members of the association and a wreath was sent. He proposed that a vote of condolence be forwarded to the relatives This was carried in silence by the members rising. He also referred to the death of Dr. James Murray Lindsay, another very old member, who had also been President of the association. During his presidency a very successful meeting was held at Buxton 18 years ago. Dr. Lindsay took a great interest in the pension question. A proposition that a letter of condolence be sent to the relatives of Dr. Lindsay was carried in the same sympathetic manner as was the former vote.

A very interesting paper was read by Dr. GEOFFREY CLARKE on Sterilisation from the Eugenic Standpoint. The paper was largely based upon a laborious investigation and analysis of the cases in the Long-Grove Asylum, Epsom. Dr. Clarke passed in review the recent discussions which had taken place concerning the elimination of what were called the unfit members of the community and the measures by which it was proposed to carry this out. The advocates of sterilisation averred that present-day medical and hygienic care resulted in keeping alive a greater proportion of weaklings than formerly; but it must be remembered that there were many others whose early years were full of ailments and a source of anxiety to their parents, but who yet blossomed into vigorous and healthy adults. The great question which required answering was, Had the advances in science tended to impair the mental and physical qualities of the race? He contended that the arguments and conclusions of stock-breeders could not be applied to human beings; the mental as well as the physical had to be reckoned with, and he did not think knowledge had yet advanced sufficiently far to enable anyone to say to certain people that they must not be permitted to reproduce their kind. Insanity was not a definite disease, but a variation from the average normal standard, the standard itself varying with the country and time, and even in different places in the same country—i.e., a person might not be able to stand the stress and surroundings of a London slum, but could live a successful life in a quiet country place. Moreover, there was a large class of mental degenerates who were yet not insane. If sterilisation were to be adopted it should take place in some forms of mental disease quite apart from the eugenic standpoint. He thought it had yet to be shown that any practicable scheme of sterilisation would materially diminish the normal rate of increase of insanity. He did not think that any hope of a material decrease of insanity was justified on the statistics at present available. There was great need of a better record of family histories which should be kept quite separate from the present statistics that had to be furnished, and which he regarded as useless for such an inquiry as the present one. At present the defective histories swamped the good ones. What was needed was full information, even if only a few families were taken, giving the normal as well as the abnormal.

The PRESIDENT congratulated Dr. Clarke on his paper, which was an attempt to place upon reasonable, scientific, and arguable lines the statements that had been made with regard to inheritance of insanity. At present there was much loose talk on the subject, and that made reliable statistics all the more necessary.

Dr. T. E. K. STANSFIELD, who had read a paper on a kindred subject at a recent meeting of the South-Eastern division of the association, said that all who had to do with asylum work would feel that something ought to be done to stem the flow of the insane and the unfit. Some years ago he suggested to the London Asylum Committee that there should be a special officer appointed whose function should be to go to the homes of these people, see the relatives, and estimate the amount of insanity, of course uncertified, present among them. He still hoped that something of the kind would be done.

Dr. M. EDEN PAUL agreed that there was not yet sufficient knowledge nor enough detail in family histories to enable one to say how much insanity was the direct result of inheritance. But he thought efforts should not be delayed simply because the information desired was not available in its entirety. The public was now happily awakening to the importance of trying to do something to improve human stock, and the public looked to members of the association for guidance in the matter. He did not agree that the experience of breeders of animals was not of much use in regard to human beings; it was the average which it was desired to raise, and that was also one of the aims of breeders; it was not always to raise highly specialised types. Sterilisation did not appear so necessary in the case of those who were definitely insane as for those whose mental capacity prevented certification but who were free to propagate their species, such as the feeble-minded. There seemed to be a case made out for small beginnings and for trying to guide public opinion on the matter.

Mr. H. WOLESLEY LEWIS, while agreeing that the material available did not justify sterilisation, thought that the mere fact that 50 per cent. of persons admitted into asylums had a hereditary nervous history made out a strong case for segregation, even permanent, and that might be extended to the habitual criminal and the inebriate class, as they both suffered from very defective self-control.

Dr. A. N. BOYCOTT regarded sterilisation as an impracticable policy, and thought it would remain so for some hundreds of years; moreover, no Government would listen to

such an idea. He did not express any opinion as to its merits in the abstract. He pointed out that statistics which lumped all forms of insanity together were of no use for such an inquiry as this.

Dr. M. A. COLLINS, referring to the statement regarding the increase of insanity, pointed out the more thorough system of certification, which included the kind of person who was formerly regarded as the harmless village idiot; and reminded the meeting of the increasing stress of life and the continual elevation of standards of education and equipment and also of the falling birth-rate.

Dr. C. HUBERT BOND thanked Dr. Clarke for his paper and for the time which he bestowed on analysing the Long-Grove statistics, which were very full, as he (Dr. Bond) made a point of trying, in every case admitted into Long-Grove, to ascertain from the superintendent of any previous asylum the patient had been in particulars of the case and also particulars concerning any relatives said to have been insane. In that way a multitude of information had accumulated there. He reminded the meeting of the falling birth-rate, in view of which the suggestion as to sterilisation was a very serious one; particularly was extreme caution necessary as proofs were not yet forthcoming. It seemed worthy the care of a special committee. Sterilisation might open the door to many very grave abuses.

Dr. D. G. THOMSON regarded such schemes as futile. Certainly sterilisation should not be one of the horrors of certification, because it would defeat its own ends, even if it were desirable. If people knew what it meant they would seek to still further evade certification than at present. Shortly, the medical inspection of school children would enable them to know more on the subject than at present; to wait until such knowledge was available would be far better than any attempt at tinkering with the subject.

Dr. J. G. SOUTAR said the question of heredity in mental conditions was one of the most difficult which met the physician day by day. People seemed to vary enormously in regard to heredity. There were stocks amongst one's patients so bad that they produced little but neurotic and insane progeny. Yet, notwithstanding that, there were an enormous number of highly competent men and women who had been doing the most important work of the world. That was a fact which should weigh with those who considered tables of heredity. He supported the idea of personal histories being taken much more carefully and thoroughly than at present, then one could get much nearer the truth than was possible now. One value of the paper was that it revealed a lack in the profession of adequate knowledge on the subject. The slums of the large cities of the empire were factories for the production of feeble-minded persons—their surroundings, their wages, the poor food they had, the bad clothes, the abominable houses, all constituted factors in that direction. Mothers in such conditions bringing forth children became more feeble with each birth, and starvation was the lot of the child. Something more might be done than at present to improve environment, for in that direction lay much hope for stemming the tide of mental disease.

Mr. H. F. HAYES NEWINGTON reminded the meeting that the union of sanity and insanity did not necessarily produce bad results in children, and that he regarded as an indication that Dame Nature, in her wisdom, was working to restore the normal. The main trend was not for such union to bring sanity down to the level of insanity but to approximate insanity nearer to sanity. He deprecated any attempt to interfere with the laws of reproduction; there were channels of improvement open short of sterilisation.

Mr. G. M. ROBERTSON said the whole problem rested largely on the question of heredity. He agreed that nature stepped in and did more than men's schemes were ever likely to do in an artificial way to check the production of the unfit. The largest number of cases of hereditary insanity occurred at an early age, and therefore in those who did not procreate. The general trend of disease was towards recovery, towards the normal. More good would be done by encouraging the marriage of physiologically healthy people. Sterilisation had only once been suggested to him. He quite agreed with what had been said about the more thorough record of family histories.

Dr. CLARKE replied, reminding the meeting of his chief point—namely, that sufficient information was not available on the mental side of heredity.

JOINT MEETING WITH THE GYNÆCOLOGICAL AND OBSTETRICAL SECTION OF THE ROYAL SOCIETY OF MEDICINE.

Amenorrhœal Insanity.

The association, at the close of the quarterly meeting recorded above, went into a joint session with the Section of Gynæcology and Obstetrics of the Royal Society of Medicine, Dr. AMAND J. M. ROUTH, the President of the section, being asked to take the chair.

Dr. C. T. EWART, in introducing for debate the subject of Amenorrhœal Insanity, dilated on the fact that menstruation was a rhythmical periodic function, that amenorrhœa was produced by the internal secretion of the ovaries, and he asked the question whether in insanity associated with the suspension of the menses the latter was a cause or an effect. He considered that there was a form of insanity due to suppression of the menstrual flow, and where that was the case the patients recovered in three months from the re-establishment of the menstruation. In every such case there was a heredity which caused the patient to have an unstable nervous system. Whatever toxic substance was contained in the menses was in such a case thrown into the general circulation, and such patients were peculiarly susceptible to toxic influences. He regarded good environment as the main factor in recovery. The paper led to a very interesting discussion.

Dr. ROBERT JONES (London County Asylum, Claybury) paid a high tribute to the author of the paper. He regarded the reproductive function as the highest function. Animals in captivity, such as at the Zoological Gardens, had good general health, but they suffered in the reproductive function. Presumably the nervous system was at fault. It was well known that the advent of menstruation was attended by definite and distinct psychical conditions, probably due to internal chemistry. Dr. Ewart found that heredity was responsible for 83 per cent. of the cases. Animals propagated their species in special seasons, the only exception being man. In regard to women, the two points which came out were periodicity and their liability to be affected by environment. The growth of plants could be greatly changed by modifying their environment, and he remarked that in 1824 Jenner pointed out, in the Philosophical Transactions, that the migration of birds was accompanied by a fleshy condition and increased size of their ovaries. Others had described atrophy of the ovary of the cuckoo in the month of July. He considered that the asylum was the best place in which to study those refined and subtle changes in the mental conditions due to forms of peripheral stimulation. The neurasthenic and the psychasthenic were splendid weather glasses. A large number of anæmic girls entered Claybury Asylum suffering from amenorrhœa, and in many when the menses were re-established mental recovery took place. Towards this Turkish baths and other means of eliminating toxins were of great value. The climacteric was also a very important period. A great deal of loose talk was indulged in on this subject, but everyone would admit that in all women menstruation imposed a considerable strain, while in those with an ill-balanced nervous system it was a dangerous period.

Dr. H. MACNAUGHTON JONES remarked that we had now much more accurate knowledge on the subject of menstruation, ovulation, and the relation of the latter to the metabolism of the ovary and to the general metabolism of the body, but particularly that of the uterus, both pregnant and non-pregnant; also as to the psychical effects of the ovarian secretion. With regard to the term "amenorrhœal insanity," there was nothing more dangerous than to introduce a term which was not strictly accurate. He did not see why a woman or girl who was psychasthenic or neurasthenic, and who also had stoppage of the flow, should be classed as a case of amenorrhœal insanity. He believed most cases of insanity had their hearts affected, but one would not suggest on that account that the people had cardiac insanity. He did not think the term under discussion was justified.

Dr. R. PERCY SMITH expressed his pleasure at hearing Dr. Macnaughton Jones's point of view. There might be amenorrhœa both in cases of melancholia and in cases of mania and insanity was often associated with amenorrhœa, but he did not think there was a special amenorrhœal insanity. It must be remembered that amenorrhœa was a very common symptom in all acute insanities in women. If the term was justifiable in any cases it was in those young women

in whom there had been prolonged fatigue or stress due to exhausting occupations, leading to great anæmia. If amenorrhœal insanity was a definite disease, it should be diagnosable early, not from the fact of recovery three months after the return of the menses.

Dr. RUSSELL (Glasgow) agreed with the criticism of the term which had been offered. In his experience amenorrhœa in cases which had nervous disturbance he regarded as the effect rather than the cause. He described one case in which mental trouble occurred simultaneously with a growth of the ovary, and when that was removed the normal mentality returned. Among young women of this class one could trace persistent neglect of the proper principles of feeding, and, very important indeed, regular relief of the bowel.

Dr. DAWSON (Dublin), President of the Medico-Psychological Association, found himself in agreement with the three last speakers. He did not believe there was a special form of insanity caused by amenorrhœa. The form of insanity most commonly associated with amenorrhœa was melancholia, and those subjects were most apt to have disorders of digestion, sometimes associated with diseased kidneys. Of course, he agreed that amenorrhœa affected the mental condition of the woman, even many sane women. Anæmic girls were particularly liable to nerve symptoms at menstruation.

Dr. WALTER S. A. GRIFFITH said that it was not very clear what was meant by amenorrhœa. The condition was not merely the loss of blood and mucus; that was a mere phenomenon in it. It would have been better if Dr. Ewart had defined exactly what was meant. He agreed with Dr. Percy Smith that the gynæcologist had no definite place in the asylum, and that the insane woman should not be touched in this respect unless an operation was required, such as for a growth. If a robust healthy girl did not menstruate for years there was something definite which neither iron, nor purgatives, nor exercise, nor fresh air would do good to.

Mr. HAYDN BROWN strongly advocated a greater use in the profession of psycho-therapy for nervous conditions.

Dr. W. H. B. STODDART associated himself with most of the speakers in denying that there was such a disease as amenorrhœal insanity. He regarded the amenorrhœa as simply a concomitant symptom. He, however, gave an instance of a woman upon whom he carried out a process of psycho-analysis, which was followed by a return of the menses, and from that time she improved mentally.

Dr. AMAND ROUTH congratulated the joint meeting on the discussion. It was known that menstruation was due to something, some chemical agent, which accumulated in the blood, and ultimately reached a certain pitch and encouraged the uterus and the ovaries to become active. The change in the blood was due to the formation of an excess of calcium, and the first act of the menstruating uterus was to excrete a large quantity of lime salts which lowered the lime content of the blood and encouraged hæmorrhage from the uterus. Amenorrhœa showed that the products which ought to be in the blood in order to encourage menstruation were absent. So probably amenorrhœa meant the patient suffered from a diminution of some substances and an excess of others.

Dr. EWART replied, but did not attempt to traverse all the arguments which had been adduced owing to the pressure of time.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 21st. Dr. S. Lodge, the President, being in the chair.—Dr. F. W. Eurich read a paper on Some Interesting Cases of Typhoid Fever. He said that diagnosis was often difficult at the beginning of a straightforward case, but it was infinitely more difficult in the absence of the usual signs and symptoms, several cases of which had recently come to his notice. Afebrile cases were especially difficult. He instanced one in which the gastro-intestinal symptoms had predominated, and in which a swinging temperature developed only when the diagnosis had been made on other grounds. In a second case a woman in failing health became suddenly comatose, with cyanosis and coldness. In her the nervous symptoms had predominated, and the absence of fever had increased the difficulty of arriving at the cause. The symptoms of a third patient began with neuritis; she rapidly developed a "typhoid state" and died. Even when fever occurred diagnosis was not always easy. A fatal attack began in the case of a man with a conjunction of the symptoms of appendicitis with those of dilated stomach. The occurrence of hæmatemesis did not help to clear the matter up, and a Widal test, which proved strongly positive, was done only because the patient's general state resembled typhoid fever. The complications of typhoid fever might occasionally be the first sign of the disease. A case illustrating this was described. The value of the Widal test was insisted upon. It was not positive before the eighth day, and might not become so until after convalescence. On the other hand, it remained so for months and even years. Hence with a positive Widal a previous attack must be excluded. Repeated examination was advisable, since both the development and the increase in intensity of an already positive Widal indicated an attack. A leucocyte examination was often helpful in addition, for marked leucocytosis or the presence of the alterations diagnostic of other conditions might exclude typhoid fever. Of course, suppuration accompanying enteric fever would cause leucocytosis.—The paper was discussed by the President, Dr. R. A. R. Lankester, Dr. A. F. Martin, Dr. J. Metcalfe, Dr. J. B. Lockerbie, Mr. F. W. Goyder, and Dr. W. Ward-Smith.—Dr. H. J. Campbell spoke of the variations in children, recurrent typhoid fever, and treatment.—Dr. Eurich replied briefly.—Dr. A. C. F. Rabagliati gave a short paper on Some Common Fallacies of Medical Logic. He said that medical men were usually fairly reliable as to the facts of a case, but that their deductions were by no means always the logical inference of their observations. Two fallacies were common. Because, for instance, two symptoms were constantly found together, it was not logical to elevate one to the position of being the cause of the other. Both might be due to a common cause. Again, because a certain disease appeared in a particular family at the same age, it did not therefore follow that the disease was hereditary. It was to some extent an assumption that the previous condition was the cause of the subsequent one. Neither did it follow that the recurrence of the same or even of different diseases in the same individual was the cause of any subsequent condition. All might be due to a common and wholly different cause. Various instances of these fallacies were given, and Dr. Rabagliati argued that real progress as to the causation and the treatment of disease could not be made unless accurate deductions and accurate facts were regarded as of equal importance.—The paper was discussed by the President and Mr. Goyder, and Dr. Rabagliati replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 6th, Dr. F. H. Jacob, the President, being in the chair.—In opening a discussion on "Alcohol as a Drug," Dr. C. H. Cattle pointed out how custom had changed during the last 30 years with regard to the administration of alcohol in disease. When he started practising, alcohol was always given to consumptives; now the modern treatment of consumption was to increase the patient's resisting power, whereas modern science taught them that alcohol lowered the resistance. Surgeons now seldom used alcohol to combat traumatic shock. Enormous doses used to be given in cases of puerperal fever, but now it was seldom ordered. The records of the asylums of London showed some striking figures: in 1889, 1900 gallons of wine and spirits were consumed by patients; in 1905 only 250 gallons were used. Considering the fact that the number of patients was doubled during that period, it meant that only one-sixteenth the amount of alcohol was used in the latter period. The records of all the London hospitals showed the same result. No definite dose of alcohol is advised; he himself generally ordered when he did employ it in small doses, such as half an ounce every four hours. After referring to the physiological action of alcohol Dr. Cattle considered the circumstances in which alcohol should be used. They must remember that the patient had unlimited access to the drug, and therefore it should never be employed in cases of neurasthenia or dyspepsia. In severe febrile cases such as typhoid fever or pneumonia, where the pulse was failing, alcohol might be given in small doses, also in the first stage of threatened delirium tremens.—The President stated that he had found alcohol in large doses useful in cases of extreme collapse; he had also seen much improvement follow its use in cases of phthisis and eczema. However, he seldom especially ordered it except in cases where the temperature was very low and the pulse was small, then he found it useful as a temporary stimulant.—Dr. Sarah

Gray said that although personally a teetotaler she nevertheless found alcohol useful in stimulating the appetites of patients after long and severe illnesses. It was extremely dangerous to give it at the menopause or to neurasthenics.—Dr. A. Fulton pointed out the danger of giving it in cases of dysmenorrhœa or as a galactagogue.—Mr. J. Watson said that medical men seldom ordered alcohol—the patients themselves took it, and it was for the medical man to prohibit it or not, as he thought fit. He employed saline injections to combat shock. Alcohol in the form of champagne was useful in cases of post-anæsthetic vomiting.—Dr. T. D. Pryce thought they knew very little about the action of alcohol, and thought the disuse of alcohol was largely the result of fashion. He found that it stimulated the gastric secretion in cases of long illnesses such as typhoid fever, and it was very useful as a temporary stimulant.—Mr. A. R. Tweedie mentioned that in the late war small doses of alcohol were given to the men after forced marches to enable them to take their rations better.—Dr. M. Parry-Jones (Derby) was quite convinced of its value in urgent cases. The great opposition to alcohol was largely carried on by specialists, who did not have the practical experience of daily seeing urgent cases right through to convalescence. The vintage ordered was more important than the quantity.—Mr. R. Nesbitt, Dr. J. S. Bolton, and Dr. F. R. Mutch continued the discussion.

OXFORD MEDICAL SOCIETY.—A meeting of this society was held in the Radcliffe Infirmary on Dec. 8th, Dr. W. Arthur Waters, Vice-president, being in the chair.—Mr. A. G. Vernon Harcourt gave a demonstration of a safe method of the administration of chloroform. He emphasised the importance of concentration as being the most essential feature to control. The instrument shown was designed to give varying percentages of chloroform, but a maximum 2 per cent. was sufficient for full anæsthesia in the hardest drinker. The details of the apparatus were explained, and the special points designed to overcome various defects, especially the varying temperature of the liquid chloroform in the receptacle bottle. A modification was shown by which air or oxygen could be supplied under a slight pressure. Deaths under chloroform by the use of this apparatus were preventable and post-anæsthetic sickness was greatly diminished.—Dr. W. Collier emphasised the dangers of chloroform even in the most skilled hands under the old method.—Mr. A. P. Dodds-Parker read a paper on the Fate of the Appendix after Abscess Formation. He said that he had been able to collect during the previous six years 17 cases, which he had tabulated, showing the history subsequent to abscess formation and the state of the appendix at the operation. Some of the specimens were shown. The conclusions drawn from this inquiry were: (1) The appendix was never destroyed, but was damaged; (2) there was liability to fresh attacks with such a diseased organ in the belly; (3) in the present keen struggle for existence it was wiser to remove such a menace to life; (4) the danger of a second operation was not great and herniæ might at the same time be cured. The mortality in the 17 cases recorded was *nil*.—In the discussion which followed Dr. Collier bore out Mr. Dodds-Parker's conclusions, emphasising the fact that appendicitis was now much more deadly than formerly. He also mentioned the good effects of fibrolysin in reducing the bulk of the adhesions in a case known to him.—Mr. E. Cecil Bevers mentioned that early operation had now resulted in the abscess formation being very rare; he also thought that it was justifiable to attempt to remove the appendix in many cases at the same time that the abscess was evacuated. He mentioned a case in which no appendix had been found in an operation subsequent to the evacuation of an abscess.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Mr. T. H. Ionides, the President, being in the chair.—Mr. G. Morgan showed a baby of a few months of age with a Lipoma in each cheek.—Dr. Walter Broadbent exhibited a woman, aged 54, with a large Aneurysm of the third part of the arch of the aorta. She had a paralysed left vocal cord, tracheal tugging, and unequal pupils. There was dulness in the first, second, and third left spaces for about three inches from the edge of the sternum, and pulsation could be felt. The second sound was loud over this area, and the breath sounds were tracheal in character over the upper lobe of the lung. There was no history of syphilis, but she had done heavy lifting. The chief point of interest was that she had been under treatment for two years, and the aneurysm had become smaller and the pulsation less. This was very uncommon when the second or third part of the aorta was affected.—The President showed two Uteri, one with a very small fibroid, but which had given rise to severe hæmorrhage for nine months, and the other in an early stage of sloughing.—Mr. H. Nethersole Fletcher showed a Kidney removed for calculi. There was a 30 years history, during which the patient had passed 324 small stones. In the kidney removed there were some hundreds of minute stones, and one large branched one.—Dr. Herbert French read a paper entitled "High Blood Pressure and the Commoner Affections of Arteries."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Dec. 8th, Dr. A. Bostock Hill, the President, being in the chair.—In introducing a discussion upon the Notification of Births Act, 1907, Dr. A. A. Mussen stated that while 148 of the 250 metropolitan boroughs, county boroughs, and non-county boroughs had adopted the Act, exactly the same number among the 1500 urban and rural districts had adopted it. In Liverpool 84 per cent. of the total number of births were notified—60 per cent. by midwives, nearly 10 per cent. by medical men and over 10 per cent. by institutions. He did not regard the small number of notifications by medical practitioners with much concern, for notifications were received from other quarters of all the births concerning which administrative action could be taken. Regarding prosecutions under the Act in Liverpool, the health committee in a few cases instituted proceedings against uncertified women for not having notified births that had occurred under their care. In one or two cases a fine of 5*s*. was inflicted; in others the defendants were dealt with under the Midwives Act. The Act was very useful in assisting in the discovery of neglected cases of ophthalmia neonatorum, not of acute cases, but of those where the child had had slight conjunctivitis which had been treated by the mother or midwife and was getting into a chronic inflammatory condition which in time would cause opacity in the cornea. He was convinced that the Act was a valuable piece of legislation for directing the efforts of a sanitary authority, more especially of those having under their care a large poor-class population living under conditions detrimental to infant life. It gave the health department one of the best chances of teaching the rudiments of health in the homes of the poor at a time when they were exceptionally susceptible to such teaching.

ASSOCIATION OF CERTIFYING FACTORY SURGEONS (INCORPORATED).—The annual dinner of this association was held in London on Dec. 8th at the Trocadero Restaurant under the chairmanship of the President, Mr. W. F. Dearden (Manchester). The dinner was well attended and a very enjoyable evening was spent. A letter of regret and good wishes was read by the chairman from Mr. C. F. G. Masterman, M.P., who, like Sir Thomas Oliver, was unable to be present. After the loyal toasts had been honoured, Dr. R. W. Edginton (Birmingham) proposed "The Home Department of His Majesty's Government." He spoke in particular of the branch which came into close touch with the work of the association, and expressed the thanks of the members to the heads of the department for their courtesy and interest. Sir Arthur Whitelegge, in reply to the toast, insisted upon the importance of standardising certificates, a process unfairly described by philistines as "red tape." He indicated some of the past and future activities of the officers of the department in fighting industrial disease, and referred to valuable recent researches into the questions of dust and humidity, of the methods of illumination, and of fatigue. Dr. T. M. Legge, in proposing the toast of the association, spoke of the dependence of the department upon the coöperation of the certifying factory surgeons, and pointed to the steady decline in industrial disease mortality which had occurred in recent years. The chairman replied and thanked Dr. Legge on behalf of the members for his individual interest in their work. The health of the guests was submitted in a breezy speech by Dr. J. H. Keay (Greenwich) and was responded to by Mr. R. J. N. Neville, M.P., and Dr. T. D. Lister, who rounded off the evening with some amusing "digressions."

Reviews and Notices of Books.

Reproduction in the Human Female: The Uterine Mucosa in the Resting, Menstrual, and Pregnant States, and the Function of the Decidua. By JAMES YOUNG, M.D. Edin., F.R.C.S. Edin. London and Edinburgh: William Green and Sons. 1911. Pp. 222 and 68 Plates. Price 21*s*.

THE scope of this work is better indicated by the subtitle than by the title, as it deals chiefly with the structure of the uterine mucous membrane and the changes that it undergoes during menstruation and pregnancy. This is only a small portion of the large problem of reproduction in the human female. It is, however, a very important part, and whatever we may think of the author's conclusions, there can be no question as to the great value of his researches and of the very suggestive nature of the work that he has done.

He regards the uterine mucosa as a soft, semi-fluid, protoplasmic mass, imperfectly differentiated into cellular elements, in which the intercellular spaces in all probability do not communicate with one another. The walls of the vessels are nothing more than flattened stroma cells, and except in the deepest layer of the mucosa they have no specialised supporting coats. The œdematous changes in the tissues which precede the escape of the blood in menstruation Dr. Young believes to be due to protoplasmic changes resulting in an active imbibition of fluid from the vessels. This conversion is brought about by the liberation in the tissues of crystalloidal or colloidal elements with an increased affinity for fluid. These tissue changes are due to some material (secretion or hormone) liberated by the ovary and reaching the protoplasm of the mucosa *viâ* the blood-vessels. In the pregnant tube, what the author calls the extra-chorionic influence of the fœtal cells—that is, the extraneous changes induced by the chorion in the maternal tissues—leads to marked degenerative changes. The extensive œdema and hæmorrhage which occur in the tubal wall are assumed to be due to the same causes as are operative in the uterus—namely, the production or liberation of crystalloids and an increase in the affinity of the tissues for fluid. The resulting splitting up and solution of the tissues explain the manner in which the implantation chamber is formed, and also the way in which many of the blood-vessels invade the maternal tissues to form large blood-tracks. In cases of chorion-epithelioma which the author has investigated the same conditions are found. The chorionic influence in some way or other determines the occurrence of protoplasmic changes in the cells, which lead to their imbibing fluid that can often be seen to have accumulated in the cell body under a hydrostatic pressure clearly higher than the pressure of the intravascular blood, and of the fluid in the surrounding tissue spaces. This, no doubt, must be explained in the same way by the occurrence of some chemical substance in the cell substance which is associated with the liberation of elements with a greater affinity for fluid. These changes are responsible for the marked œdematous infiltration and escape of blood from the vessels that are so characteristic of chorion-epithelioma.

Dr. Young describes a young ovum which he had the opportunity of examining and which he estimates to be of about the age of 13½ to 14½ days, or midway between the Teacher-Bryce ovum and that of Peters. The chief points of interest presented by this early ovum are that the blastocyst is completely filled with mesenchyme and is much smaller than the implantation chamber, while the decidual development is less evident than in any other young ovum. As a result of his investigations on the decidual changes in the uterus and the pregnant tube the author puts forward an ingenious theory as to the functions of the decidua. He suggests that its function is to prevent an irregular and increasing opening-up and expansion of the maternal vessels and a tearing-up of the mucosa by fluid and blood, after the tissue changes necessary for an adequate supply of the maternal blood for the engrafted ovum have been accomplished. It is by virtue of this action that the chorionic invasion of the tissues is limited and that the increase in the implantation chamber by an erosion or displacement of tissue is prevented.

The final chapter is devoted to a consideration of the various theories of the causation of œdema. Dr. Young says that his investigations—the first attempt to explain the mode of production of œdema by a histological survey of the tissue changes—have demonstrated that the fluid escapes from the vessels, not in response to a mechanical filtration, but in consequence of an alteration in the tissue protoplasm which determines an imbibition of the blood fluid.

The interpretation placed by the author upon the appearances he describes—which are illustrated by a beautiful series of 68 plates—is a very plausible one, and the book represents the outcome of a large amount of work and has much merit.

Untersuchungen über die Struktur der Blutzellen. Von Dr. ALFRED V. DESCATELLO und Dr. A. KRJUKOFF (Moskau), der Medizinischen Klinik in Innsbruck. Mit 8 chromolithographischen Tafeln. Berlin und Wien: Urban und Schwarzenberg. 1911. Pp. 119. Price, paper, 16 marks; bound, 18 marks.

Technik der Klinischen Blutuntersuchungen für Studierende und Aerzte. Von Dr. A. PAPPENHEIM, Berlin. Berlin: Julius Springer. 1911. Pp. 55. Price, paper, 2 marks; bound, 2.60 marks.

THE researches on which Dr. v. Descatello and Dr. Krjukoff's work is based were made in the medical clinic of Innsbruck during 1909–10. The chief fixing and staining method used was that of Pappenheim, who combined the Jenner stain, or, as it is called in Germany, the May-Grünwald stain, with the Giemsa stain. The fresh film is fixed for one minute with the Jenner stain, then stained for three minutes with the same stain diluted with an equal volume of distilled water, and after being washed in distilled water it is stained for 15 minutes in Giemsa's stain, washed, dried, and mounted in acid-free balsam. This method reveals in all nuclei of nucleated blood cells a fine dense network of fibrils (which the authors call the "primitive fibres") of uniform size, most being of a red-violet tinge. The protoplasm of all nucleated blood cells, with the exception of erythroblasts, also contains a network of fibrils, some of which are thicker than the nuclear fibres, and they stain in various nuances, and some of the fibres are in direct continuity with the fibres of the nucleus. Very careful descriptions are given of the various forms of cells found in blood, as revealed by the methods used by the authors, and 102 separate coloured figures are given on the eight plates. Most of the figures are drawings, some of them magnified 1000 times, from two cases which were observed with great care, one of carcinoma of the prostate with secondary metastasis in the bones and severe anæmia, the other a case of acute myelogenic leukæmia. The results are interesting, both to physiologists and pathologists. The authors conclude that to regard the nucleus as a vesicle with a membrane is not a correct view; rather are the body of the cell and the nucleus to be regarded as a complex network of fibres which permeates the whole mass of the cell. Each nucleus possesses the power and capacity by rearranging its fibres to make a curved or jointed polymorphonuclear form or convolution. Nucleus and protoplasm are not two sharply defined anatomical and functional parts of a cell; they are in the most intimate connexion, and fibres from the nucleus may pass into the

body of the cell. The granules seen in the protoplasm are not secretory products of the cell body, as surmised by Ehrlich, but are to be regarded as changed segments of the karyogenetic protoplasmic fibres. Very interesting are the observations on the blood plates, which are not all of one variety, and are chiefly derived from the cytoplasm of neutrophile leucocytes, though other cells give rise to them, and they differ according to their source. The book is a piece of painstaking, laborious work.

Dr. Pappenheim's opuscule is a reprint from Carl Neuberg's "Handbuch der Ausscheidungen und Körperflüssigkeiten" (1911), and is written by one who is a recognised authority on the subject. It deals with the microscopic examination of blood, normal and abnormal, hæmocytometry and hæmoglobinometry. According to the author, the one method for fixing and colouring blood films is the combined May-Giemsa (Jenner) colouration, as invented by himself. There are no illustrations. It is a commendable and useful little brochure.

The Errors of Accommodation and Refraction of the Eye and Their Treatment. A Handbook for Students. By ERNEST CLARKE. London: Baillière, Tindall, and Cox. 1911. Pp. 228. Price 5*s.* net.

WHEN a book has reached its third edition it must be concluded that it fulfils the demands of a considerable body of readers. There are several good books on errors of refraction and cognate disabilities of the eye, but Mr. Ernest Clarke's book can well hold its own amongst them. The optical side of ophthalmology has proved a terrible stumbling-block in the path of the medical student and practitioner, and they are ever ready to hail some expanded and, so far as may be, simplified exposition of the subject. Mr. Clarke, by the free use of diagrams and the avoidance of formulæ, has given a lucid account of the dioptrics of the eye and the optical errors which so frequently affect it. His teaching as to the diagnosis and correction of such errors is satisfactory and trustworthy. We do not agree with his strong advocacy of the ophthalmometer as a clinical instrument, but that is a detail of relatively small importance. The book has been improved in successive editions and minor blemishes will doubtless be removed in the editions yet to come.

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1 *Text-book of Physiology for Medical Students and Physicians* By WILLIAM H. HOWELL, Ph.D., M.D., Sc.D., LL.D., Professor of Physiology in the Johns Hopkins University, Baltimore. Fourth edition, thoroughly revised. London: W. B. Saunders Company. 1911. Pp. 1018. Price 18*s.* net.

THE issue of the fourth edition of Professor Howell's "Text-book of Physiology"—a book which is now recognised as a standard and trustworthy work on both sides of the Atlantic—will be welcomed. The last edition was reprinted in January and July, 1910. The ever-widening boundaries of physiology make it more and more difficult for any one individual to gain a familiar, far less a first-hand, knowledge, not only of its by-ways, but of some of its main routes. This work is not an arid statement of facts, dry and dogmatic in form; on the contrary, it is characterised both by suggestiveness and a vigorous vitality, while it forms a compact epitome of the salient and pregnant facts, and their application in practical medicine, such as can be given only in a work written by a single author who has proved himself both a successful teacher and experimenter, and who has a wide and comprehensive knowledge of physiological literature in all its branches.

Professor Howell's text-book is well abreast of the ever-advancing tide of physiological knowledge. The author has succeeded in embodying in his text the outcome of the two principles which guided him in writing this book—viz., to set forth the presentation of facts and theories in simple and lucid form, and to select the material with judicious limitations. The general arrangement in previous editions is adhered to. The schema displaying the innervation of voluntary skeletal muscles still stands in its simplicity, showing only two neurons from cerebrum to muscle. The pyramidal tract has now been demonstrated not to terminate in the cord, as figured in this schema. The sections on muscle, nerve, and central nervous system are added to here and there, and, as in previous editions, a special chapter is devoted to the physiology of sleep, a subject too frequently dealt with in a cursory manner or even omitted altogether. The views of Head and Rivers on protopathic, epicritic, and deep sensibility are set forth pretty fully, but the author does not submit the results to detailed criticism. There is little charge in the description of the senses of vision and hearing. An excellent dissection shows the position of the semicircular canals in the pigeon and the relations of their ampullary ends. The whole question of the functions of these canals is dealt with very fully; in fact, the exposition is one of the best and most concise in any text-book of physiology intended for the use of students. The introduction of the dates of the successive researches on which each experimenter's view is founded enables the reader to see how recent our real knowledge actually is—e.g., Flourens (1824), Goltz (1870). For the present, "while the endolymph theory may be criticised easily, no other equally satisfactory theory has been suggested to take its place." This statement may be taken as an example of the author's fairness in dealing with a complex subject after setting forth the main facts. It is satisfactory to find that such a question as "reaction of the blood" is dealt with in the light of the latest advances in physical chemistry, and that the blue reaction of litmus to blood plasma is no longer the basis as a true indication of alkalinity.

Physiology links itself up with the question of immunity and the wonderful protective adaptation of the body towards the invasion of foreign cells. The author's account of this and allied matters forms an excellent introduction to the more elaborate treatment of this subject, which the student will learn from the pathologist and the clinician later. Here and there histological figures, some coloured, are introduced, but leucocytes in all their varieties are described without the aid of diagrams—coloured or otherwise. Reference is made, however, to Pappenheim's Atlas, an atlas which the average student is not likely to consult. On p. 447, when mentioning certain facts regarding coagulation of the blood, it would have been instructive to insert after each of the names mentioned the dates of their discoveries. The presentment of the whole question of coagulation of the blood, however, is both excellent and suggestive.

The importance of a knowledge of venous and capillary pressures becomes daily more important. This subject is dealt with more fully than in most text-books, and so also is what is called the "hydrostatic effect," which enables the author to set forth the important work done by Leonard Hill and his pupils. Full effect also is given to the recent work of Mackenzie on the heart and pulse. Having regard to what is called "heart block" from the clinician's point of view in relation to the auriculo ventricular bundle, there is a very good account of the arrangement of the heart fibres—even to the recent description by Mall—nor are the observations of Keith and Flack omitted. When discussing the myogenic *versus* the neurogenic theory of the heart beat the author puts on one page (556) in small print a succinct account of the "dividing line between the ancient and the modern views of the heart beat as is found in the work of William

Harvey (1628)." On the same page (556) we find that Remak (Robert) discovered intrinsic nerve ganglia in the heart in 1844, while in large text on p. 555 the date is given as 1848—a small slip which has escaped revision.

The tracings of blood pressure and respiratory movements are very good. An electrovagogram from Einthoven is given to show the electrical changes in the different fibres of the vagus caused by respirations and the heart beats, but there are no X ray photographs to show the movements of the contents of the intestinal tract. The chapter on the ductless glands and internal secretions is pithy, compact, and excellent throughout. A relatively long and critical account is given of the action of alcohol. The views of Darwin, de Vries, and Mendel are set forth in the interesting chapter on heredity, while the important subjects of growth and senescence are not forgotten.

The author is to be congratulated on the comprehensiveness and thoroughness of his work—a work which should be read by every advanced student of physiology, as well as by the practitioner.

The Deaf Child: A Manual for Teachers and Scholars. By JAMES KERR LOVE, M.D. Glasg., Aural Surgeon, Glasgow Royal Infirmary, Aurist to Glasgow Institution for Education of the Deaf and Dumb, &c. With 10 illustrations. London: Simpkin, Marshall, Hamilton, Kent, and Co; Bristol: John Wright and Son, Limited. 1911. Pp. 192. Price 4*s.* 6*d.* net.

Dr. Kerr Love opens with a careful *résumé* of the various work which has been done towards the education of the deaf. He next proceeds to argue as to the value and the necessity for the proper classification of deaf children, dividing them as fit for ordinary schools, fit for front row of ordinary schools, the hard of hearing, fit for deaf schools, and the mentally defective. He concludes his introductory chapter by a short dissertation on the advisability or otherwise of the deaf child leaving his home and indicates when he should begin to be instructed. After a short and popular exposition of the causes of deafness, with a few words on the physiology of hearing, we come to a chapter of great interest on the operation of the language centres in normal and abnormal children. Dr. Kerr Love shows the various ways in which the working of thought, hearing, and speech is carried on in normal and abnormal children, and here makes full use of the cases of Helen Keller and Laura Bridgeman.

There is a very interesting statement made on p. 64 with regard to the effect of adenoids in children. Only 12·8 per cent. out of 3500 Swedish children examined had well-marked adenoids, though another return shows that 16 per cent. had sufficient adenoids to demand their removal. This would seem to be a low proportion, compared with that existing certainly in England at the present time. Again, on p. 65, Dr. Kerr Love makes a most pertinent statement when he says that the only test of hearing of any practical value in the school child is the human voice, and that the most uniform method of applying the test is by whispered speech. He states later that the average hearing distance for whispered speech in a noiseless room is about 25 yards, and he says that a child who is able to hear whispered speech at 5 yards only may be called slightly hard of hearing; but as sound decreases with the square of the distance, one would think that the 5 yards might be considerably increased for the slightly hard of hearing. However, that is not of any great moment, and does not in the least diminish the value of the author's observations. Continuing this subject, the propriety of determining what residual hearing there is in each subject is discussed, and a chart of a great many different children is given, showing the various islands of active nerve tissue remaining in their cochleæ.

A chapter is devoted to the various conditions of education of the deaf, and gives fairly complete records of the different schools and the methods employed there, both in the British Isles and abroad. Amongst the interesting facts mentioned is that the first public school in Great Britain for the teaching of deaf children was founded in 1792 in the Old Kent-road, though it was preceded by just 32 years by that of the Abbé de l'Epée in Paris. The next chapter is concerned with the methods of education, and very fully deals with the various aspects, the greater need for more schools, and the better methods, or combination of methods, that should be employed. The treatment of deaf children forms the subject matter of the seventh chapter, and is divided into the surgical and the educational treatment. The eighth chapter is on lip-reading, and this is followed by an appendix on the capacity of the deaf for higher education, consisting largely of letters from various deaf people who are holding useful and honourable situations in life. A second appendix deals with the condition of the eyes of a deaf child, by Dr. H. Wright Thomson, and it appears from this report that the visual condition of children in the deaf-and-dumb schools is worse than that which obtains in any board school. Appendix 3 is a short chapter on stammering and cleft palate.

We can hardly speak in too high terms of this book. It is one which has been written largely for the teacher of deaf mutes and deaf children, and for school medical officers, but it will appeal not only to them but to the entire medical profession; and over and above them to all those who are interested in the welfare of these unfortunate beings who have lost the power of hearing in early childhood, and who, without a really careful training, are precluded from occupying any useful sphere in life, but who, if properly taught, are fully capable often of great intellectual development. It is a book which should be in the hands of all teachers of the deaf and of those interested in the question, whether from a social, educational, or charitable aspect.

Sociology Applied to Practical Politics. By JOHN BEATTIE CROZIER, Hon. LL.D., Author of "Civilisation and Progress," &c. London: Longmans, Green, and Co. 1911. Pp. 320. Price 9*s.* net.

Dr. Beattie Crozier, who was at one time in practice as a physician, has devoted many years to the study of sociology, and has made important contributions to its literature. His scientific and medical training gives him a point of view rarely possessed by purely political writers, while his connexion with Canada tends to give a breadth of idea scarcely attainable by writers whose horizon is bounded by the limits of England.

The volume comprises reprints of articles from the *Fortnightly Review*, the *Daily Mail*, and the *New Age*, ranging in date from 1902 to 1908, and embracing subjects falling chiefly under two heads—Socialism and Fiscal Policy. Some of the articles on Socialism are direct criticisms of Karl Marx, the Fabian Society, and Mr. H. G. Wells. The depth of these articles varies perhaps with the depths of the persons criticised. A writer might sport with Mr. Wells, possibly banter the Fabians, but could anyone be light-hearted with Karl Marx? It seems hardly possible, but Dr. Crozier does his best, with very readable results. If there are fallacies in the criticism, there are plenty in "Das Kapital," and perhaps the most glaring is the Socialist notion that manual labour is the only labour performed on the earth and the only effort deserving of payment or reward. If we follow the interpretation of advanced Socialists to its logical conclusions, within the limits of our profession the surgeon would be entitled to fees because he is a manual labourer; the physician could demand nothing

but bare honours. Neither the labour and time spent in training the eye and hand of the surgeon nor the logical faculties of the physician have any recognition as "work."

"Suggestions for a New Political Party" is the title of a somewhat diffuse chapter of thoughts on Party politics, as the game is now played in England. There is much that is refreshing in these pages to men who have not been brought up to believe that politicians have a monopoly of intelligence, learning, and integrity, but the subject is too vague for definite instruction. A chapter on "Taxation Schemes and their Values," reprinted from the *Financial Review of Reviews* (April, 1909), is much more concise, and gives a valuable sketch of the theories of land taxers headed by Henry George, and those of the extinguishers of capital—Mr. Sidney Webb and Mr. Bernard Shaw on the one hand, and on the other of the Independent Labour Party, "all of them the pale ex-sanguined ghosts of Karl Marx and the army of continental Socialists." Finally, Dr. Crozier becomes too technical for ordinary palates in the consideration of fiscal policy and "the English banking system," though even here the untechnical person finds valuable clues to modern lines of thought on these matters.

Diseases of the Skin, an Outline of the Principles and Practice of Dermatology. By Sir MALCOLM MORRIS, K.C.V.O., Surgeon to the Skin Department of the Seamen's Hospital, Greenwich. Fifth edition, revised by the Author, with the assistance of S. ERNEST DORE, M.D. Cantab., M.R.C.P. Lond.; Assistant in the Skin Department of the Middlesex Hospital. With 10 coloured and 67 black and white plates. London: Cassell and Co., Limited. 1911. Pp. 762. Price 10*s.* 6*d.*

THE first edition of this work appeared 18 years ago, and the reception which it then met with and the issue of four subsequent editions prove its value. We welcome this, the fifth, edition, for it will more than maintain the reputation of its predecessors. It contains in a fairly small volume a clear, exact, and indeed authoritative account of a branch of medical practice which is among the most difficult of all for the student to learn; and it is illustrated by a large number of excellent plates, several of them in colours, which give very good representations of the appearances presented by disease. The present edition has been brought fully up to date, and in this the author has had the assistance of Dr. Ernest Dore. No more useful treatise on cutaneous medicine has been published, and the student or practitioner who desires to acquire or improve his knowledge of this branch of medicine cannot do better than read this work.

Love and Marriage. By ELLEN KEY. Translated from the Swedish by ARTHUR G. CHATER. London and New York: G. P. Putnam's Sons. 1911. Pp. 399. Price 6*s.* net.

WE cannot quite understand whether this book is intended to be a scientific contribution to all-important questions relating to love and marriage, or merely an account, by a member thereof, of the views of a particular sect, referred to on p. 6 and elsewhere throughout the book, as "those who profess the faith of Life." The book contains a number of opinions and statements apparently quite unsupported by any evidence, and in places self-contradictory. Many of the chapters treat of generally received notions of morality and religion, as matters which the believers in "the faith of Life" consider utterly false and wrong. But there is nothing to show that the views are superior in ethical value to, rest on a firmer basis than, or would bring about better results than accepted ideas. The first seven chapters are somewhat disjointed disquisitions upon love, the right of motherhood, exemption from motherhood, and collective motherliness. They contain passage after passage of unsupported opinions, written (this may be due to bad translation) in a singularly involved and high-flown style. Apparently their purport is to lead up to the last two chapters, entitled respectively, "Free Divorce" and "A New Marriage Law." So far as we understand Miss Key's arguments, the conclusions of the first-named chapter seem to be: (1) Early marriages are the great remedy for immorality (p. 311); but (2) early marriages are often failures, as the choice is often unsuitable, and the individuals themselves change in the course of years (p. 312 *et seq.*); therefore (3) free divorce must accompany early marriages.

While everyone will allow that the present-day marriage law is not perfect, that the divorce laws are unjust, and that unhappy marriages are by far too common, we cannot think that the opinions expressed in this book, if carried into practice, would bring about a better or more desirable state of matters than exists at present.

Plastic and Cosmetic Surgery. By FREDERICK STRANGE KOLLE, M.D., Fellow of New York Academy of Medicine. With 1 coloured plate and 522 illustrations in the text. London and New York: D. Appleton and Co. 1911. Pp. 511. Price 21*s.* net.

THE value of cosmetic surgery is hardly sufficiently recognised by the medical profession, with the result that much of the work has fallen into the hands of unqualified practitioners and beauty specialists. It is deserving of more careful study, for slight malformations which appear unimportant to others are often the cause of the greatest annoyance to those who possess them. The work before us deals with almost the whole range of cosmetic surgery. The earlier chapters are concerned with the antiseptics to be used and the dressings and sutures to be employed. The most suitable anæsthetics for cosmetic work are also discussed, and for local anæsthesia the author prefers beta eucaine. The general principles are also laid down and skin-grafting is described. Then the several regions are considered in turn, the surgery of the eyelids being taken first. The surgery of the auricle of the ear follows, and the author describes how to remedy outstanding ears. Hare-lip is dealt with, but nothing is said of the surgery of cleft palate, though that surely belongs to plastic surgery. The author describes the employment of paraffin for the remedy of deformities, and a full account of rhinoplasty is also given. He concludes with such minor operations as the electrolysis of nævi and the removal of superfluous hairs. We cannot agree with the statement that it is ever necessary to use such a large current as one of 14 milliampères for the electrolysis of a hair.

We are pleased with this work; it should prove useful to those who wish to practise this branch of surgery.

The Technology of Bread-making. By WILLIAM JAGO, F.I.C., F.C.S., Barrister-at-law; and WILLIAM C. JAGO. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1911. Pp. 908. Price 21*s.* net.

IT is difficult to find any topic of importance connected with bread which has been left out of consideration in this volume. The work is thorough from beginning to end, and no one writes with greater experience of the subject than the senior author. He wrote a work in 1886 which was responsible for much progress in bread-making; he reminded the practical baker of the scientific processes connected with the stages in his art, and exhorted him to apply scientific considerations to the making of bread, which after all is not a simple process. Rule of thumb often spelt failure, the application of scientific principles discovered to what failure was due, and nowadays the baker has no excuse left for a spoiled loaf. The importance of all this was steadily realised, education

in the matter of bread-making became a real thing, and the baker, if for only business reasons, had to adopt a system which he knew secured him a constant and standard product.

In 1895 Mr. Jago took considerable pains to bring his work up to a level consistent with the rapid advances which had been made in the science and art of bread-making. In his work published that year he entered fully into the part which chemistry and biology played in the conversion of flour into bread, while he carefully explained the dietetic significance of the various constituents of flour. His familiarity with the engineering side of bread-making was also obvious from the excellent monographs on the mechanics of the bakery. The book has now grown into a bulky volume, and in the preparation of the present work he has had the advantage of his son's assistance, Mr. William C. Jago, who has given considerable attention to the practical application of chemical methods in the mill and the factory, and who further has studied the applications of modern biology and bacteriology. The progressive baker will be grateful for the care which father and son have taken to keep their account of the subject in close touch with modern developments; but technology apart, there are many chapters which are of general interest. We may mention, for example, those in which the authors views are given on the bleaching of flour, flour and bread improvers, nutritive value and digestibility of bread, and standard bread, all of which form instructive reading in dietetics.

LIBRARY TABLE.

Die Neuralgien der Täglichen Praxis. By Dr. O. SCHELLONG, Königsberg, Prussia. Berlin: Julius Springer. 1911. Pp. 83. Price 1.80 marks.—The author describes in some detail the experiences of six years of general practice, so far as the varieties of neuralgia are concerned. Of some 2630 patients, no fewer than 458 suffered from neuralgia in one form or another. This seems an unusually high percentage, and if we are to judge from certain of the clinical histories furnished by the author the diagnosis of neuralgia may very well be questioned in some, especially since a fourth of his cases appear to have been among children. He subdivides his material into the different accepted groups of the disease, and supplies clinical instances of these different localisations. The longest chapter in the book is that on neuralgia of the brachial plexus, but there is no reference to cervical rib in this connexion. The paragraphs on treatment are for the most part taken up with the description of simple and palliative methods. The drug with which the author appears to have had the best results is quinine.

Psychiatrische Vorträge für Aerzte, Erzieher, und Eltern (Zweite Serie). By Prof. Dr. G. ANTON, Director of the Clinic for Nervous and Mental Disease in Halle. Berlin: S. Karger. 1911. Pp. 77. Price 2 marks.—This volume consists of five essays which may be supposed to be of interest for parents and teachers, as well as for physicians. They deal with subjects widely separated from one another, and the exigencies of his audiences (for the essays are reprinted from addresses read before societies) have compelled the author to deal with his material in a more or less popular way. The first essay is on the expression of the emotions in health and in disease; the second on epidemics of mental disturbance in past and present times; the third deals with the mental upbringing of children; the fourth is concerned with alcohol and its influence on offspring; and the fifth with the causation of epilepsy, and its operative treatment. The essays are readable and instructive, but somewhat slight, and not a little debateable matter is incorporated. Dr. Anton seems to have had unusually good results in his cases of chronic epilepsy which have been submitted to surgical interference. The second essay contains some curious but scarcely novel information on mediæval and modern epidemic hysteria, on lycanthropy and the were-wolf legends, on jumping mania, and kindred topics.

Five Months in a London Hospital. By KATHERINE ROBERTS. Letchworth: Garden City Press, Limited. 1911. Pp. 145. Price 2*s.* 6*d.* cloth, 1*s.* paper.—Written in diary form by a probationer nurse undergoing training in a maternity hospital, the author has daily set down her impressions of the strenuous work she had to carry out at the institution. She informs us that she has neither the strength nor time to describe in detail the work done by the probationer, as it required the combined energies of a hard-working and experienced charwoman, a housemaid, a "general," and a trained nurse to do it anything like justice. So hard was her work that her feet became swollen and blistered. "It seems to me," she remarks, "that what is badly wanted in London is a hospital where only ladies are admitted as nurses and sisters, where the charwoman's work is done by charwomen, the cooking and housemaid's work by cooks and housemaids, the nurses being only asked to do nursing, which in itself, if properly done, would fill up all their time." It is a pity that the name of the hospital referred to is not stated anywhere in the text; the writer evidently does not wish it to become known. Throughout the book there runs a vein of continual grumbling against the conditions under which the author had to work as a probationer midwife. The various difficulties are put forward in such a frank and open way that one is almost convinced that there is no exaggeration. The author, who is married and the mother of children, took up nursing because she liked it, and she is markedly sympathetic to her maternity patients, although she confesses in some of her anecdotes instances where her sympathy caused her to disregard the orders of the hospital and the medical staff. As the author shows a spirit of antagonism also to the nursing sisters under whom she had to serve it is impossible not to see that she is a biased witness. But parts of the book offer considerable food for thought, for they suggest what the internal economy of a hospital ought not to be; some passages are distinctly sensational, and if true require attention.

"*Medicus,*" *Guide Annuaire des Étudiants et des Praticiens (Médecine, Chirurgie, Odontologie, et Pharmacie).* Par A. ROUZAUD. Paris: 41, Rue des Écoles. 1911–12. Pp. 1696. Price 5 francs (4*s.* 2*d.*).—This useful book of reference is divided into six parts, in the first two of which are contained systematic information relative to the teaching of medicine, pharmacy, and dentistry in France, with lists of hospitals, asylums, scientific societies, students' societies, and the military, naval, and colonial services. There are also lists of the principal medical journals, both French and foreign, and of recent medical works issued by French publishers. The third part enumerates the principal foreign schools of medicine, with some historical account, a *précis* of their curricula, and the names of the faculties. The fourth part consists of a dictionary of the law as it affects medical men in France and of medical jurisprudence, arranged by M. Marcel Petit, advocate of the Paris Court of Appeal. The fifth part consists of a summary of the laws, decrees, and ordinances affecting the practice of medicine, pharmacy, and dentistry in France and her colonies, public health, hygiene, the sanitary police, the Public Assistance, and such like. The principal mineral watering-places, both French and foreign, are given and briefly described. Part 6 contains a directory, both alphabetical and local, of the medical men, dentists, pharmacists of France, as well of the civil and military medical men of the French colonies.

The Kala-azar Bulletin.—Owing to the great advances which have recently taken place in our knowledge of the various forms of leishmaniosis it was decided to issue, by arrangement with the honorary managing committee of the Sleeping Sickness Bureau, a publication on the lines of the *Sleeping Sickness Bureau Bulletin*, which has proved so successful and which has been found so helpful by all who have concern with trypanosomiasis of any kind. The first, or introductory, number of the new *Bulletin* has now been issued; it consists entirely of a "List of References" of the titles of some 900 publications relating to the affections known to be caused by leishmania, including kala-azar, as met with in India; infantile kala-azar or ponos, sometimes called infantile splenic anæmia, which is found on the shores of the Mediterranean or elsewhere; and Oriental sore, which is common in some parts of the East. This list has been carefully compiled by Mr. R. L. Sheppard, librarian to the Sleeping Sickness Bureau: it includes all the known works on this subject published up to the end of June, 1911. The future numbers of the *Bulletin* will be issued quarterly and will be under the editorship of Dr. C. M. Wenyon, protozoologist to the London School of Tropical Medicine. The *Kala-azar Bulletin* promises to fulfil a very useful purpose and will be welcomed by all who are interested in leishmaniosis.

New Year's Diaries and Visiting Lists.—To the medical man, as to other men, the Diary is practically indispensable, while the Visiting List has been devised especially for his convenience. From Messrs. Cassell and Co. we have received specimen copies of several of the well-known original Letts's Diaries for 1912. Those more especially suited to the needs of the medical man are the *Rough Diaries*, of which No. 31 contains a week on each opening of its foolscap pages (price 1*s.* 6*d.*, or interleaved blotting, 2*s.* 6*d.*); No. 32, of like size, which contains a week on each page and is interleaved blotting, for 1*s.* 6*d.*; and Letts's *Office Diary and Almanack*, No. 10, price 4*s.* 6*d.*, which contains six days on an opening. The foregoing diaries contain in the preface much useful reference information. The *Pocket Diary*, No. 111, is sold in three bindings, from 2*s.* to 3*s.* net. Letts's *Nurses' Report Book and Diary*, in red leather, price 2*s.* net, contains tabulated pages for case records and a week-to-the-opening diary, with cash account and memorandum pages. Finally, Letts's *Medical Diary* is a combined Diary and Visiting List, giving a week to an opening. The price varies according to binding, from 2*s.* 6*d.* to 4*s.* ruled for 54 patients, and from 4*s.* to 5*s.* 6*d.* ruled for 108 patients. The preface contains medical reference data and general information of special service to the medical practitioner. Letts's publications contain as usual an accident insurance coupon, and we are informed that claims amounting to £3500 have been paid to holders of these coupons. Another well-known publication is Smith's *Physicians' and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements*, which has served the needs of the medical profession for 66 consecutive years. It can be obtained from the publishers, Messrs. Hazell, Watson, and Viney, 52, Long-acre, London, W.C., at prices according to binding from 2*s.* 6*d.* to 6*s.* 6*d.* The *Professional Pocket-book, Daily and Hourly Engagement Diary* (Rudall, Carte, and Co., 23, Berners-street, London, W.) is intended for musicians rather than for medical men, though it might conceivably be made use of by the latter as an engagement book. The open page contains a week in parallel columns of days, the hours being arranged down the left. The engagement pages are in three separate parts of four months each, enclosed in a leather case. From John Walker and Co. also we have received representative samples of their diaries. Walker's *Society Diary*, No. 48, is a handy book, in red cloth, giving a day to a page of excellent paper, and containing an engagement calendar, price 2*s.* 6*d.* Walker's *Loose Leaf Diaries*, especially the medical *Loose Leaf Pocket Book*, containing visiting list, cash accounts, treatment sheets, case sheets, temperature charts, and other useful pages, will commend themselves from the fact that their bulk can be reduced at pleasure by inserting only a few sheets and replacing them as necessary; moreover, the beginning of the following year can thus be carried simultaneously with the close of the current year. They are fitted with a simple device for opening the rings, and contain stamp, card, and other pockets. Messrs. Walker also send several other forms of diary of various sizes and styles, at prices from 1*s.* up, as well as the *Imperial* and the *Graphic Daily Wall Calendars*, in which the figures are boldly printed in colours. We have also received from Messrs. Borroughs and Wellcome a copy of the well-known *Wellcome Photographic Exposure Record and Diary* for 1912, which contains information of all kinds and in the fullest quantity relative to factorial and time development, machine, tank, or stand development, the oil pigment process, contact printing by artificial light, colour photography, the actinic values of lights, light tables, and the Wellcome exposure calculator, whereby it is possible to ascertain the correct exposure under any combination of conditions. Separate editions are published for the Northern Hemisphere and Tropics, the Southern Hemisphere and Tropics, and the United States, and intending purchasers should state which is desired. It can be had from all photographic dealers, price (in the British Isles) 1*s.*

JOURNALS AND MAGAZINES.

Annals of Tropical Medicine and Parasitology. Vol. V., No. 1. Liverpool: University Press. Pp. 131. Price 7*s.* 6*d.* net.—This number of the *Annals of Tropical Medicine and Parasitology* contains the following contributions: (1) Further Experimental Researches on the Etiology of Endemic Goitre, by Dr. Robert McCarrison; (2) Non-ulcerating Oriental Sore, with a New Similar Parasite in *Erthesina fullo* (Thumb), a Pentatomid Bug, by Captain R. Markham Carter, I.M.S.; (3) Infantile Leishmaniasis (Marda tal Biccia) in Malta, by Dr. A. Critien; (4) A Research into the Production, Life, and Death of Crescents in Malignant Tertian Malaria, in Treated and Untreated Cases, by an Enumerative Method, and (5) the Leucocytes in Malarial Fever, a Method of Diagnosing Malaria Long After it is Apparently Cured, by Dr. David Thomson; (6) Note upon Yellow Fever in the Black Race and its Bearing upon the Question of the Endemicity of Yellow Fever in West Africa, by the late Sir Rubert Boyce; (7) On the Amœbæ Parasitic in the Human Intestine, with Remarks on the Life-cycle of Entamœba Coli in Cultures, by Dr. H. B. Fantham. (8) Some Further Observations on the Tsetse-fly, described in these Annals as Glossina grossa, by Professor Robert Newstead; (9) On the Correlation between Trypanosomes, Leucocytes, Coagulation-time, Hæmoglobin and Specific Gravity of Blood, by Mr. Vishnu T. Korke. 1. Dr. McCarrison gives an account of some experiments which confirm and extend observations communicated by him to the Royal Society in November, 1908. His paper has already been referred to in THE LANCET. His experiments are very comprehensive, and his conclusions are cautious and just. Indeed, he might well have claimed that he has shown that it is practically certain that endemic goitre, at least in the district in which the experiments were carried out, is due to a living organism, whereas he only claims that this is probable. 2. Captain Carter contributes a paper which is suggestive and contains descriptions of two very interesting series of experiments. He shows the existence of many similar points in

the cultural characteristics of the parasite causing the non-ulcerating oriental sore and those of another parasite which he discovered in an insect commonly found throughout India and eastwards as far as Japan. His methods are ingenious, and though he does not demonstrate that the new parasite in the insect dealt with has anything to do with oriental sore, his experiments suggest that man may probably be another host. Considering the second part of the paper as independent of the first, as in most respects it actually is, an inversion of the usual method of attacking parasitic diseases is suggested—finding the parasite first and the disease afterwards. A most original point about the paper is the way in which Captain Carter shows that this protozoon, demonstrably parasitic in a particular insect, is possibly, or even probably, parasitic in man, though not in rats and some other mammals. 3. Dr. Critien's paper on Infantile Leishmaniasis (Marda tal Biccia) in Malta, contains a number of careful observations upon this disease. His facts as to distribution and some other points, however, though numerous, are not sufficient to permit definite conclusions, and he claims no more for them than that they are suggestions as to the lines upon which further investigations are most likely to be profitable. He "puts on record" that marda tal biccia and infantile kala-azar are one and the same disease. 4 and 5. The two papers on malaria by Dr. David Thomson give in detail a large number of most laborious observations. Some of them are of undoubted value. Perhaps the most interesting is the fluctuations in the percentage of leucocytes which persist in the patient, notwithstanding ample treatment with quinine, for a considerable time, sometimes for several months, after apparent cure. The nature of this fluctuation depends upon the nature of the fever from which the patient has suffered. 6. The note upon the relative immunity of strange and native races to yellow fever in countries where the disease is indigenous, by the late Sir Rubert Boyce, is of considerable interest, particularly to students of heredity Though many may not agree with the author as to the nature of the immunity enjoyed by the native races, they will certainly welcome the facts collected and thus placed at their disposal. 7. The bulk of Dr. Fantham's paper is occupied by a useful sketch of the known parasitic amœbæ of the intestine of man and a brief but good critical review of the previous observations upon them.

New Inventions.

IMPROVED MEANS OF DILATING CERTAIN PASSAGES.

FIGS 1 and 2 are instruments which, I submit, possess many advantages. Fig. 1 is a uterine and Fig. 2 is a male urethral dilator. Hitherto the great defect in expanding dilators was that we had no means of gauging force. Hence dilatation to desired degrees was at the expense of splitting—a heavy penalty. We cannot judge force by screws, nor is hand pressure so good as untiring gentle elastic pressure. Fig. 1 dilates the cervical canal by means of the elastic expansion of its long arms A, thus antagonising tonic resistance by tonic pressure. There is a scale not shown. The instrument is put into action after introduction by pressing the handles together to the extent desired and fixing them at that by the fly nut. B lies against the external os and affords the *point d'appui* for gauze packing to keep the instrument *in situ*, the handles being supported on a pillow. Thus tents, always a nuisance and sometimes septic, may be dispensed with. Rapid dilatation may, of course, be used. Fig. 2 is a substitute for Kollmann's dilator. The posterior half of the anterior urethra is a funnel, widest at the bulb. No instrument ever used is capable of distending this widest part to the full extent without splitting the narrow part of the funnel. No instrument satisfactorily dilates the bulb, the chief site of infiltration, worst beginning strictures, and gleet. Nor do instruments passed beyond this site distend it owing to the smallness of bulbo-membranous junction. The arm E is long, hence it extends to the extreme end of the spongy urethra. Moreover, the arrangements of the semi-bulbs of the instrument permit them to pass through a narrow meatus, thus constituting a



FIG. 1.

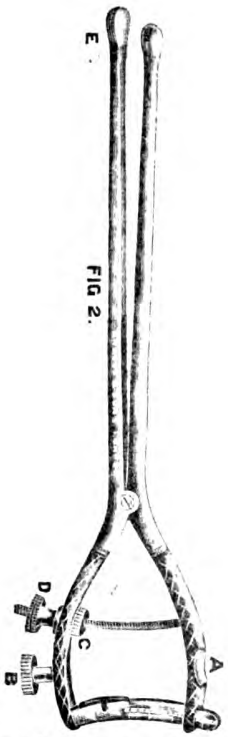


FIG. 2.

large distending body behind it, and a urethrometer if desired. This dilator, like the uterine, can be actuated by finger-pressure on A and B, or by screw through D; there is a millimetre scale. The character of the arms is such that while the whole anterior urethra is uniformly dilated there is no splitting. The desired expansion is fixed beforehand by the nut C, and expansion is taken to this extent or not according to the resistance conveyed to the fingers or according to the patient's sensations.

The instruments were made originally by myself, but are now made in a more perfect way by Messrs. Arnold and Sons.

Finsbury-pavement, E.C. JAMES MACMUNN.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY.—On Dec. 1st a number of ladies met at 5, Bryanston-square, on the invitation of Mrs. Ian Malcolm, to take steps for the formation of a ladies' guild. The chair was taken by Colonel the Hon. Charles S. H. D. Willoughby, treasurer of the hospital; the secretary, Mr. D. D. Kirkaldy, and the matron, Miss Catharine E. A. Thorpe, were also present, and a number of influential ladies. The chairman opened proceedings by giving a sketch of the hospital's work and by showing the service a ladies' guild would be to the hospital. The matron then entered into further details regarding the advantages of such a guild, whose subdivisions might help the hospital in obtaining gifts of vegetables, flowers, poultry, and clothing. A resolution that a ladies' guild be formed was then carried unanimously and the following officers were elected:—President, Lady Violet Brassey; honorary treasurer, Colonel Willoughby; honorary secretary, Miss Broadhurst; honorary secretary of Vegetable League, Lady Guernsey; honorary secretary of Clothing and Linen League, Miss Easton. A committee was formed consisting of Mrs. Ian Malcolm, Mrs. Ferdinand Huth, Mrs. C. A. Ballance, Mrs. Harry Graham, and the honorary secretaries.

THE LANCET.

LONDON: SATURDAY, DECEMBER 16, 1911.

The National Insurance Bill.

THE National Insurance Bill, receiving probably no modification at the hands of the House of Lords, will become law within the next few days, and the medical profession has to resolve what course should be pursued. We must recollect that no one course can be equally acceptable to all the members of a highly organised calling. In this elaborate and far-reaching measure the interests of some practitioners are affected in one manner and the interests of other practitioners are affected in a totally different manner by the same section or sub-section of the measure. The Bill is quite clear with regard to the benefits that are to be received by the insured from the medical profession, quite clear that in return for definite contributions free medical service is to be supplied, but quite vague as to the payment of those who are to supply it. For these reasons, as well as because of a too general committal of the profession to an extension of the contract system, we have always considered that the medical profession should have pointed out from the very beginning that it would be impossible to arrange a satisfactory scheme of either distribution of medical benefits or payment of medical men unless adequate time were afforded for the taking of medical opinion; especially was a proper investigation necessary of the conditions under which much medical practice was performed in this country. Such an investigation would have taken note of the capital sunk in the purchase of practices and of the income derivable in certain proportion from contract practice and in certain proportion from private patients; it would have estimated the amount of ground that a practitioner could cover in fairness to himself and in relation to his income; it would have ascertained the proper proportional number of the profession to the general population; it would have sifted the statements of those who proposed to adopt a measure for the English, Scottish, and Irish because it did (or did not) suit Germany. Such an investigation as this, made by people on whom the medical profession could rely, was wanted; for it was a revolution in medical practice and not an adjustment of our earning arrangements that was contemplated under the Bill.

But no. No stand was made by the medical profession for the necessary time in which to consider the Bill, although from the first it was clear that unless proper time was given the situation in which now we are placed would probably occur. Those in actual practice of the sort that must be affected were as little consulted as those having charge of the medical education of the country, or representing great medical corporations or great university faculties. A majority of medical men was found to believe that there was no peril in accepting the Bill in detail as well as in principle, if certain modifications were introduced. Of course, every man in this majority of medical men who demanded the recognition of what are called the six cardinal points was not solidly in favour of demanding all six points for the same reasons or with the same fervour—a weakness which could hardly fail to escape the eye of those responsible in Parliament for the passage of the Bill. The opposition to details was itself detailed. Similarly it was clear to all with experience of affairs that at least one of these six cardinal points would not be granted as such, or, at any rate, would not be incorporated in the Bill as such. But the prepossession in favour of the Bill, due to the excellent principles underlying it, no less than the excellent things in it, obscured many eyes. As the circular of the British Medical Association dated Dec. 11th, and published on p. 1726 of this issue of THE LANCET, shows, the Association decided on June 1st to adopt the policy expressed in the six cardinal points which have so often been set out. Given these points the Association decided to help in the working of the Bill, a policy which it is claimed is absolutely unchanged. Moreover, it is stated by the chairman of Representative meetings and the chairman of the Council of the Association to have been successful, in that by the efforts of the Association the Bill has now been so amended that there is no legal barrier against the profession securing the fulfilment of its entire policy as indicated by the six cardinal points. That may be so, but it would certainly require a lawyer to make this statement absolute; and we fear that any of our readers, desiring in a dispute to obtain the rights which he might thus believe to be reserved for him, would have considerable difficulty.

The position then is that a Bill, which no medical man should have wanted until it had been entirely adjusted upon professional lines and with due regard to existing conditions, will become law in a few days; that instead of such wholesale adjustment a policy of detailed amendments has been adopted by a majority of the medical profession; but that the measure is passing into law without there being any certainty that the very points are included concerning which the majority of the medical profession are, or rather are supposed to be, solidly positive. We can hardly wonder that the apprehensions of the profession are finding vent in such important meetings as that which is being held in Manchester as we go to press, and that which is announced to be held in London on Tuesday next under the chairmanship of Sir W. WATSON CHEYNE. We hope that the collective force and wisdom of these meetings—and there will be many like them—will not be dissipated in mere bewailing of the present conditions, or in resentment at any particular persons or institutions. The energies of those who promote them and those who are present at them can well be turned to action, either by the strengthening of such organisation as we have, or by the formation of some representative, if temporary, authority, which, by taking a line of independent criticism, may

reinforce medical men in all just demands, and perhaps avert some of the evils of impending agitation. A voice that can clearly have nothing to gain by pleasing any party in the Government or any section in the profession, and that cannot be accused of serving private interests, may bring confidence to many, may reconcile some of the conflicting views, and may supply that leadership which Sir ALFRED PEARCE GOULD asks for in his weighty letter in this issue of THE LANCET.

The Propagation of Plague without the Aid of Infected Rats.

"No rats, no plague," has been for some years the confident assertion of well-known experts at home and abroad. It was as far back as 1899 that Dr. P. L. SIMOND, who had been studying plague in India, laid before the Academy of Medicine at Paris his ingenious explanation of the mode in which plague was transmitted from the infected rat to man through the agency of the flea. Though at first this opinion met with some adverse criticism it has stood the test of time, and the theory he propounded in 1899 has now found general acceptance, having meanwhile been confirmed by laboratory researches, particularly those of the Advisory Committee for the Investigation of Plague in India. According to Dr. SIMOND, plague could not become epidemic in a locality until the rats had become infected. In India and elsewhere the prevailing type of the disease has hitherto been the bubonic, and although occasionally a proportion of pneumonic cases have been observed in which infection seemed to be conveyed by personal contact, they were not regarded as likely to give rise to any considerable spread of the disease. In the light of some recent events, however, it seems likely that we shall have to modify these views. In the virulent plague epidemic which devastated Manchuria in the winter of 1910–11, and which carried off more than 45,000 victims in a few months,[1] it is reported on the highest authority that during the whole course of the epidemic not a single plague-infected rat was discovered, though careful and prolonged search was made, and many thousands of these animals were examined in the affected localities by competent observers, including Chinese, Russians, and Japanese.

Recently two experts have discussed this epidemic, and each has put forward a different explanation of its rapid diffusion, notwithstanding the absence of infected rats. Dr. SIMOND, to whom we have already alluded, published an article in the July number of the *Revue d'Hygiène* entitled "L'Épidémie de Manchourie en 1910–11, et l'État de nos Connaissances touchant la Transmission de la Peste Pneumonique"; and at the October meeting of the Epidemiological Section of the Royal Society of Medicine in London a paper on Plague in Manchuria was read by Dr. REGINALD FARRAR, who was one of the British delegates at the International Plague Conference held at Mukden last April. Both of these experts are in entire agreement as to the main facts connected with the outbreak. It began in October, on the borders of Eastern Mongolia, among coolies employed in trapping the tarabagan, a species of marmot the fur of which is now in great request to imitate sable. For many years an epizootic has from time to time occurred among these animals, and lately this disease has been found to be plague. The tarabagan in past years has been hunted by the native Mongols and Buriats, but owing to the increased demand for the skins some thousands of Chinese coolies had been brought for this purpose from North China. These men were returning eastwards to their homes at the end of October last year, and some of them were attacked by plague of the pneumonic type. Crowded close together in railway carriages they travelled along the Eastern Chinese line, and as they passed through Manchuria they were joined by an immense number (not far short of 90,000) of Chinese coolies who had been employed on the Manchurian farms in the harvest of the soya bean and other crops. The Southern Manchurian Railway passes through a number of towns in the Liao-tung peninsula to Dalny (or Dairen), where the bulk of the coolies cross the Gulf of Pechili in junks or steamers to Chefoo and other ports in the province of Shantung, where plague outbreaks also occurred on arrival of the coolies. The railway carriages were crowded day after day with these men, and many of them slept at night in wayside inns where it was impossible to provide them with adequate accommodation. These coolies do not wash themselves when winter sets in, and they work and sleep in the same clothes, which soon become coated thickly with dirt. They had to sleep in the inns, packed in rows side by side, as Dr. FARRAR says, "like herrings in a barrel," in a confined and artificially warmed space, all fresh air being carefully excluded on account of the keenness of the cold. The majority of those attacked by plague in Manchuria were of this coolie class, and the epidemic area was almost entirely confined to the towns in or near the railway zone. Dr. SIMOND attributes the rapid spread of this virulent plague to the agency of human fleas. He points out that plague contracted from the tarabagan is almost always of the pneumonic form, and that plague bacilli in such cases are very soon to be found in the blood where the human flea can obtain a supply wherewith to infect other persons whom they may bite. The condition of the coolies' persons and clothing would be favourable to the flea, and the warmth of the man's dirty body would counteract the benumbing effects of the intense cold upon the insect. It is fair to Dr. SIMOND to point out that in his original communication to the Academy of Medicine in 1899 he spoke of the human flea being capable of conveying plague infection from man to man. Dr. FARRAR takes a different view, and accounts for the rapid spread of this disastrous outbreak by personal infection, the plague bacilli being sprayed into the air around the patient by the act of coughing. In view of the overcrowding of railway carriages and wayside inns during the return journey of the thousands of coolies, and considering the coldness of the weather and the exclusion of fresh air from the carriages and sleeping apartments, the conditions were altogether favourable for the conveyance of infection from a single patient to many other persons. Some of the experts among the international delegates at Mukden exposed plates in the vicinity of plague patients and succeeded in obtaining cultures of plague bacilli from the droplets coughed into the air by the sick men.

[1] THE LANCET, April 29th, 1911, p. 1152.

We do not deny the possibility of the truth of Dr. SIMOND'S contention, though he himself admits that there has been no evidence collected showing that fleas were present at all, or that they were present in any great numbers on the bodies of the plague patients or the coolie travellers. It appears to us that on the whole Dr. FARRAR'S view is the more probable one. The epidemic is admitted to have been of exceptional virulence, killing practically all who were attacked. The exaltation of the virulence of the infection may have been due, as suggested, to its being derived from the tarabagan, but it is possible the largeness of the dose of infection received by the victims may have had a share. When a patient with pneumonic plague coughs a spray of bacilli is shot into the air around him. A healthy person in the vicinity would inhale these microbes in greater number probably than they could be injected into his blood by fleas. The site also of the inoculation of the virus is important. When the infection is received direct into the respiratory tract it is likely to prove far more serious than if it had been inoculated through the skin. When the epidemic developed no provision had been made for treating or isolating the sick, and there was no sanitary administration to prevent the extension of the outbreak. It is hardly necessary to refer to the ghastly horrors that supervened, when whole households died, or if any survived they fled from their homes in panic, many of them to die on the road. The sick were left to perish untended, or were thrust out by their terrified relatives to die in the streets, where their bodies were devoured by dogs or birds of prey. All trade and commerce came to a standstill. There was no one to bury the dead; the ground being deeply frozen made this, indeed, an impossible task; the corpses accumulated in the towns till they were piled up in heaps and had ultimately to be burnt. At the end of March the outbreak ceased almost suddenly. This, Dr. SIMOND says, was due to the diminution in the number of fleas, but Dr. FARRAR attributes it to the enforcement of appropriate preventive measures. Dr. SIMOND, however, points out that these measures were unequally enforced, and that plague ceased just the same in localities where nothing had been done as in those where the authorities had acted with energy. The dispersion of the coolies no doubt reduced the amount of susceptible material; it is possible that the end of the wintry weather and the consequent elevation of the temperature led the people to admit sunshine and fresh air into their formerly ill-ventilated houses. It is, we think, very probable that overcrowding, uncleanliness, and want of proper ventilation played a part in favouring the spread of the epidemic. The serious character of the outbreak was aggravated by a combination of circumstances, among which lack of hospital accommodation, and want of sanitary and medical administration, played a part. This plague epidemic in Manchuria seems to show that plague can in certain circumstances become epidemic without the agency of infected rats. There is also the suggestion that possibly a secondary pneumonia occurring in a bubonic plague case might infect others, and that the infection "breeding true" might spread rapidly as pneumonic plague without any assistance from infected rat-fleas.

The Racial Importance of Venereal Diseases.

THE public even yet do not recognise to the full the vast importance to the community of the prevention of venereal disease. There can be little doubt that tuberculosis does not cause more than a small proportion of the pain and misery which result from venereal disease. While the members of the medical profession are well acquainted with the importance of these diseases, the general public know little or nothing of their wide prevalence or of the severity of the results which are produced. We publish on p. 1692 the concluding section of a valuable presentation of the position given in a paper by Dr. DOUGLAS WHITE and Lieutenant-Colonel C. H. MELVILLE, R.A.M.C., at the Annual Congress of the Royal Institute of Public Health held in Dublin in August last. In this paper are set forth clearly the disastrous prevalence of these diseases, not only in the army and navy of all countries, as testified by statistics, but amongst the civil population, though here the exact amount of mischief must be more doubtful. However, according to the authors and by a moderate estimate, there are in this country probably more than half a million fresh cases of venereal disease annually. This is an appalling number, especially when the consequences of syphilis and gonorrhœa are considered. The effect of gonorrhœa in causing sterility and chronic invalidism in women is only now beginning to be fully recognised, while we are ever finding more and wider extensions of the activity of the syphilitic poison. The danger is one that must be faced, and not put aside or hidden as unfit for discussion, as is the usual method in this country.

Fortunately, there is evidence of a decided diminution in the extent of these diseases amongst both the military and the civil population, and this is attributed by Dr. WHITE and Lieutenant-Colonel MELVILLE to the general improvement of moral tone and increase of sobriety, for there can be little doubt that a great amount of venereal disease is contracted during drunkenness. The question of the value of various methods for the regulation of prostitution is considered in the paper, and we are bound to agree with the authors that even in those countries where regulation has been most complete the results have been unsatisfactory. At the Brussels conferences of 1899 and 1902 the majority of the speakers were in agreement with the view that regulation had failed, for it does not succeed in preventing clandestine prostitution, by which much of the venereal disease is spread. Several continental countries have given up the attempt to regulate prostitution, and there can be little doubt that as a whole the system has failed not only to eradicate but to prevent the evils it was designed to cope with, although in certain and particular circumstances it proves efficacious. Alluding to the question of compulsory notification, the authors suggest that venereal diseases should be notified in the same manner as the other infections which are notifiable, but the objection to this idea is obvious. Notification would be followed by communication of the name and address to the authorities, and this would certainly lead to concealment by

the patient of his or her condition, and thus would be defeated the very object for which notification had been established. Yet a modified system of notification may be applicable, no names being given; by these means we should be in a position to form a clear idea of the real number of cases, and we should be able to form an estimate of our progress. This anonymous form of notification is not new, for it is already in use in Denmark, Norway, and elsewhere.

In every hospital there should be accommodation for the treatment of venereal cases, both as in-patients and as out-patients. If these means were adopted there would at first appear to be an increase in the number of cases, but before long this would be changed to a decrease. Further, the recent advances in the treatment of gonorrhœa, and even more of syphilis, can give results not hitherto attainable. The gain to the community by the diminution of these diseases would more than repay the cost to the State. Some useful suggestions for the diminution of syphilis were given in the second of the lectures by Major H. C. FRENCH, R.A.M.C., at the Royal College of Surgeons of England in November last.[1] He is in favour of confidential notification applied to both sexes; the segregation of diseased persons in hospital for a few weeks during the early contagious period of the disease; and lastly, efficient in-patient and out-patient treatment. By these means syphilis has been almost stamped out at Malta during this year. In 1909 there were 87 freshly contracted cases amongst the troops there; in 1910 there were 35; and in 1911 only three or four cases have occurred. The matter is of the first moment, yet it is unaccountably neglected by our legislators. Much may be done in several ways, but it is probable that some form of notification would be of very definite assistance. Even though it be not possible to eradicate venereal diseases, their extent can certainly be diminished, the evil, suffering, and death due to them can be reduced, and the race thus materially benefited.

Annotations.

"Ne quid nimis."

THE HEALTH OF TELEPHONE OPERATORS.

ENTIRELY apart from its humanitarian aspect, the efficiency of the worker is always a matter of the first importance to the employer. It is the part of the worker to bring to his task a bodily capacity adequate to the work to be performed, and so to direct his life that it shall not become impaired by any fault of his. On the employer it is incumbent, in the first place, not to accept candidates who can be recognised as being below the standard of capacity, and, next, to arrange the conditions of work, with a view to lessening the tax on the worker's vitality. In the case of public services of the character of the telephone service, the personal relations between the individual members of the public and the employees constitute a third important factor in the efficiency of the worker. It is satisfactory to note that, in accordance with the report of the committee of medical men appointed to inquire into the working conditions of the Post Office telephone employees, all these factors have received careful attention. The report, which was issued as a White Paper on Dec. 5th, was accompanied by a circular from the secretary of the Post Office summarising the recommendations of the committee and, for the most part, laying down the necessary steps to be taken in the proper quarters to give them effect. In the selection of candidates great care is urged to exclude such as are unfitted by markedly anæmic conditions and those of unstable nervous equilibrium. A moderate and ordinary form of anæmia, however, need not necessarily exclude, for the first of the two probationary years will suffice to enable the morbid condition to be cured if easily curable, or to establish its depreciating effect before a permanent engagement is entered on. But a sound nervous system is essential, because the telephonist is constantly using three special senses—namely, speech, hearing, and sight. This, although no injury to the senses themselves was noted, must be very wearing because of the strain on attention inherent in the work; and because the telephonist, instead of dealing, as the telegraphist does, directly with another skilled operator, deals directly with the public, "whose knowledge of the method of working," says the report, "is limited and whose methods, manner, and temper are always diverse and sometimes unpleasant. She is constantly smoothing out difficulties, and is often the subject of abuse or reproach, whilst it is necessary for her to be businesslike, tactful, and courteous under all conditions." Another strain upon her physical powers is the constant jumping up and down and reaching out entailed by her work. Of the employer is demanded consideration for the periods of work and the suitability of the head gear and breast gear. Of the three methods of allotting tours of duty at present in use the proposal to reduce the working day of continuous service from eight or eight and a half to seven and a half hours is postponed. Alternate days of long and short duties are to be abolished, and as regards "split duties," the intervals between a split attendance are to be made either as short or as long as possible. The committee's recommendation that the annual leave should be extended to 21 days is postponed. As to the gear, the committee have wisely suggested that it should always be personal to the girl herself, and that she should be permitted to wear it in any convenient fashion consistent with working efficiency. Steps, moreover, are to be taken to reduce the weight of the receiver and transmitter and to improve the accommodation provided for operators, while the suggested adoption of a rotation in the three main duties—subscribers' boards, junction boards, and trunk lines—is met by the secretary with what appear to be very weighty objections, of which not the least is the usefulness of the knowledge acquired by the operator as to the needs and peculiarities of individual subscribers. The report cannot, of course, deal effectively with the third factor in the induction of ill-health in the telephone operator, especially nerve-strain—namely, the behaviour of the public. It is to be hoped, however, that the widest publicity will be given to this point, in order that it may be instilled into the public mind that forbearance, lack of irritability at slight mistakes, and courtesy may do much to mitigate the rigours of a very trying service which in these days we could hardly get along without.

COLD BATHS IN DISEASES OF CHILDREN.

IN the *Canadian Practitioner* for November Dr. James Newell has published a paper, read at the last meeting of the Ontario Medical Association, on the value of the cold bath in the treatment of diseases of children. We noticed last year a paper by a South African practitioner, Mr. M. G. Pearson, advocating in infantile convulsions, instead of the usual warm bath, a cold bath, on the ground that convulsions are due in all cases to pyrexia.[1]

[1] THE LANCET, Nov. 18th, 1911, p. 1389.

[1] THE LANCET, July 16th, 1910, p. 180.

He reported several cases in which this treatment proved most successful. He has found the treatment equally successful in prevention. He is in the habit of telling the parents of acutely ill children that there is no fear of convulsions as long as the temperature is under 102° F.; that above 103°, no matter what the illness, there is extreme danger of convulsions; and that the temperature should be watched and, if necessary, reduced by bathing. He compares convulsions to the boiling over of a kettle, which is preventable by similar means. In a correspondence which followed[2] the value of this method was confirmed. For over 30 years Dr. Newell has employed the cold bath as a favourite treatment in children's diseases attended by a high temperature and irritability of the nervous system. When a child is in convulsions, rigid, and stertorous, with a temperature of 104° or 105° F., he finds that the happiest results are obtained from a cold bath of 75° or 80°, followed by affusion of cold water to the head, and supplemented by friction of the limbs and body, till the rectal temperature drops to 100°, when the child is removed from the bath and wrapped up, with hot-water bottles applied to the extremities if they have become blue and cold. The treatment is similarly useful in the acute febrile attacks of children with rapid rise of temperature and nervous twitchings, of which the cause may be unknown. Dr. Newell recommends this treatment as preferable to administering the coal-tar antipyretics, which are apt to be followed by cardiac and nervous depression as well as by destruction of hæmoglobin. The cold bath, on the contrary, has a stimulating action on the heart and respiration, producing an increase of blood pressure and deeper respirations. Oxidation processes, diuresis, and other metabolic changes are increased and the number of red blood corpuscles rises.

"THE EXTERNAL MALLEOLAR SIGN."

IN the *Interstate Medical Journal* for July and October Professor C. G. Chaddock, of St. Louis, has described a new sign of organic disease of the spino-cortical reflex paths, which he terms "the external malleolar sign." It somewhat resembles Babinski's sign, but seems to have certain advantages of its own. It consists in extension of one or more or all of the toes, with or without "fanning," when the skin below the external malleolus is irritated. It can almost always be obtained when Babinski's sign is present, and, on the other hand, it occurs when Babinski's sign is absent, and then it is a reliable sign of organic disease of the central nervous system. Professor Chaddock has found it present without Babinski's sign in fracture of the skull, transitory unilateral cerebral lesions, old hemiplegia, general paralysis, and lesions of the cord. He never found it in peripheral lesions or in pure tabes. He has seen it develop alone to be joined by Babinski's sign and persist after Babinski's sign has passed away. The external malleolar sign is obtained as follows. The patient lies in bed on the back, with the lower limbs relaxed and extended. If possible, especially in doubtful cases, the limb to be tested should not be compressed or touched in any way except at the point of application of the stimulus. The sign may also be tested with the patient sitting in a chair and the limb resting on the knee of the examiner, who sits at a convenient distance. Irritation of the skin is best performed with a rather dull steel point. In the groove which outlines the external malleolus the point is drawn from behind forwards until the depression between the malleolus and cuboid is reached. This depression seems to be the most excitable point. The irritation should be varied from slight stroking to rather severe scratching with considerable pressure, but it is never necessary to abrade the skin or cause pain. Normally this stimulus causes no movement whatever of the toes, but it may cause reflex contraction of the muscles of the thigh like that produced normally when the sole of the foot is irritated. The abnormal reaction consists in extension or fanning of one or more or all the toes. In a few cases Professor Chaddock has observed a movement of flexion, and in these there was organic disease of the central nervous system. He therefore considers that flexion has the same pathological significance as extension. Care must be taken not to confound voluntary movements of the limb to escape the irritation with those excited reflexly. A striking peculiarity of the external malleolar sign is the fact that with a unilateral Babinski's sign it is the rule to find it on both sides. Often two toes—for example, the second and third—are extended together, the others remaining unmoved—a movement almost, if not quite, impossible voluntarily. Fanning of the small toes, without extension of the great toe, is likewise practically impossible voluntarily. So also is abduction of the little toe, the others remaining unmoved. Other peculiarities which mark the abnormal movements are the uniformity of the response with repeated application of the stimulus, their production from a definite skin area, most frequently from the depression mentioned, and an electric-shock-like quality. Movements of escape from unpleasant irritation occur indifferently from other areas. The following are some examples of the external malleolar sign. A youth, aged 20 years, fell from a wagon on the right side of his face on August 23rd, 1911. He was unconscious from the time of the fall until the morning of August 27th, when his pulse was 54 and his temperature normal, and he complained of severe unlocalised headache. Both eyes were black, the pupils were normal, and the deep reflexes were normal with a slight indication of ankle clonus. Babinski's sign was absent, but infra-malleolar irritation caused extension and fanning of all the toes on both sides. He became worse, and on August 30th the temperature was 101° F. Babinski's sign was present on the right side, and there was paresis of the left side of the face. Because of the presence of Babinski's sign on the right side, left subtemporal decompression was performed on the 31st, and scarcely any increase of tension was found. Right decompression was then immediately performed. Great pressure with subdural blood was found and drainage was established. The patient was immediately relieved, the pulse rose to 72, and Babinski's sign disappeared, but the right external malleolar sign persisted. A man, aged 38 years, with a history of syphilis, was mentally disturbed and suffered from severe headache. There were Argyll Robertson pupils, of which the left was the larger, double slight ankle-clonus, the external malleolar signs on both sides, and normal plantar flexion on irritation of the toes. He improved under mercury but remained demented, and died in a cerebral seizure. The necropsy showed softening of the left temporal lobe and of all the white substance of the right hemisphere.

[2] THE LANCET, Sept. 17th (p. 912) and 24th (p. 975), 1910.

SUBLUXATION OF THE PENIS.

TWO cases of this rare form of injury having come under his care within two months, Major N. R J. Rainier, I.M.S., has recorded them, with brief notes of five others alluded to in the literature, in the *Indian Medical Gazette* for November. His reason for doing so is that he considers the description of the injury found in text-books potentially misleading. His first case was that of a boy of 14 who had been gored in the perineum by a bullock. The scrotal raphé was lacerated and both testicles were prolapsed. These were cleansed and replaced, the wound was sutured, and 8 ounces of bloody urine were withdrawn by catheter. Three days later pain was experienced in passing urine,

and it was found that urine was issuing from the wound (which had broken down) as well as from the apparently normal penis. Closer examination showed that the "penis" consisted only of a sheath; the glans penis, which was lying above and behind the testes, was drawn down into this sheath, to which it was accurately stitched after removal of the foreskin. Four years later the cure proved anatomically and functionally satisfactory. A second case, occurring in a lad of 16, was also attributed to the onslaught of a bullock, but in this instance the very improbable story given was that the animal had gored him through the foreskin, the penis disappearing at once. In this case also the penile sheath was empty, the body being felt as a firm object at the scrotal junction. The displacement was reduced and the penis retained in position by strapping, a device which seems to have been successful. The point to which Major Rainier draws special attention is the condition of the empty sheath: he says that it feels like a thickened piece of small bowel. In all the cases cited by him the displacement of the body of the penis was apparently overlooked at the first examination. In recent cases the treatment is replacement with or without incision, while in cases of some standing a plastic operation may be necessary. Apparently the results are satisfactory as a rule.

"THE SURGEON'S LOG."

BOOKS of travel are many and of various excellence. At the one end of the scale come such works as "Eothen" and "The Monasteries of the Levant," to say nothing of Herodotus. At the other—but they are many, and it is kinder not to particularise. This book by Dr. J. Johnston Abraham is certainly one from the right end. Dr. Abraham not merely sees but observes. Having travelled as surgeon on a high-class tramp steamer to the Far East, to Singapore, Japan, Java, Celebes, and home again, he gives us in "The Surgeon's Log"[1] the results of his observations and impressions, written in easy, pleasant English, with an alert sense of humour, and the eye of an artist. Everyone who is blessed with any imagination feels the effect on the mind of the great spaces of the desert and the sea. "When we laughed we laughed softly, for the feeling of immensity was over us," says Dr. Abraham, in recounting his feelings at the sight of the desert from the Suez Canal, "and we could intuitively understand how, nurtured in such great vastnesses, the Semitic mind had risen above the futile polytheism of the Greeks, and evolved the grand conception of a vast, omnipotent, omniscient, and omnipresent God, with its necessary corollary, 'there is no God but God.'" And here is a picture of sunset in the Canal. "Slowly the Turneresque effect rose to a climax, until the sinking sun touched the rim of the horizon, sank rapidly, and disappeared; and then as if at the touch of a wand, the gold, the rose, the blue, the green, melted to all the shades of grey, a little breeze sprang up from nowhere, and the soft mantle of night swept in layer after layer across the sky." Dr. Abraham records but little of his medical experiences—very possibly there were none worthy of special mention; but his impressions of the places visited, of the scenery, the peoples, the trade, the political possibilities of the Dutch East Indies, the fishes, animals, birds, and flowers, are all set down in a simple and yet vivid manner. His comparison of Chinese honesty with Japanese subtlety—we mean in the commercial field—is judicially set forth. We do not know if it is still so to-day, but certainly a decade or two ago Chinese clerks were largely employed in the banks and counting-houses of commercial firms in Japan. Dr. Abraham's explanation thereof, together with his prophecy that in the future the one nation will become as honest as the other, is convincing. The author seems to have been most fortunate in his shipmates, who are all drawn with a loving hand, especially the chief engineer, a worthy peer of Kipling's MacPhee, while the captain must have been a delightful person and one, moreover, who knew a good dinner. Dr. Abraham's description of the Javanese "rijst-tavel" calls forth a sigh for the East, the deeper if one has been there already and "hears the East a-callin'" with its mysteriously seductive voice. "The Surgeon's Log" will doubtless prove enjoyable reading, more especially to those members of the medical profession who have made one or more voyages as ship's surgeon—a life that is not without its delights, particularly on the oriental and southern routes. Dr. Abraham talks of "one bell" as being sounded at 11.45 P.M. and 5 45 P.M. We thought that "bells" are sounded only at the hours and half-hours, not at the quarters, "eight bells" being at the hours of 12, 4, and 8.

[1] The Surgeon's Log. By J. Johnston Abraham. London: Chapman and Hall, Limited. 1911. Pp. 338. Price 7s. 6d. net.

PERFORATION IN INTESTINAL TUBERCULOSIS.

ALTHOUGH intestinal ulceration is a common complication of chronic pulmonary tuberculosis, perforation has seldom been observed. In the *American Journal of Medical Sciences* for November Dr. John M. Cruice has published an important paper on tuberculous perforation of the intestines, the result of a study at the Henry Phipps Institute. Of 475 necropsies on the subjects of pulmonary tuberculosis he found intestinal ulcers in 313 (65·9 per cent.). In 13 (2·7 per cent.) there was perforation. Of these, 10 were "complete" and 3 were "incomplete" perforations. This distinction was introduced by the late Dr. Samuel Fenwick, who defined the former as perforation directly into the peritoneal cavity causing either acute peritonitis or local abscess, and partial perforation as cases in which adhesions had formed with some coil of intestine before the ulcer had perforated. There is, therefore, no extravasation of fæcal matter and no acute general peritonitis. Sometimes ulceration takes place through the adherent coils of intestine, forming a fistula. Dr. Cruice's cases of complete perforation occurred in equal numbers in both sexes, and the average age of the patients was 32½ years. The small intestine (generally the ileum) was the seat of perforation in 6 and the large in 4. In 2 cases there were 2 complete perforations, and in 1 case 4. Of the perforations in the large intestine, three were in the appendix and one in the head of the cæcum. In one case the appendix had completely ulcerated off at the tip, and in another there was a perforation at its base. In tuberculous perforation of the intestine the symptoms so characteristic of perforation of the stomach or intestines in general are seldom present, and therefore the condition is not diagnosed. In 4 of the 10 cases they were fairly typical. Thus a woman, aged 33 years, suffering from pulmonary tuberculosis, was admitted without any abdominal symptoms. A week later diarrhœa began, and a fortnight after this she complained of marked abdominal pain. The abdomen was distended, rigid, and tender on the left side. On the next day she was collapsed, with the abdomen greatly distended, tympanitic, hard, and painful, and the diarrhœa was severe. On the following day her face was pinched, she was extremely weak, but was free from pain and the diarrhœa had stopped. She died that evening. The necropsy showed a perforation of the ileum and purulent peritonitis. On the other hand, the symptoms may only suggest the possibility of perforation. Thus a woman, aged 35 years, suffering from pulmonary tuberculosis, was admitted with diarrhœa. One day her temperature became subnormal, her pulse more rapid, and she lay in a state of stupor. The diarrhœa stopped, her mind became clear, but she died a few days later. The necropsy showed a perforation of the cæcum and acute peritonitis. In

another case a woman, aged 22 years, with slight diarrhœa one day complained of abdominal pain. On the next day the pain was severe and accompanied by a slight fall of temperature, but no change in the pulse-rate, which was previously high. On the eighth day after the onset of the pain she died. The necropsy showed 2 perforated ulcers at the lower part of the ileum and acute peritonitis. In 5 cases the symptoms were most indefinite; in 2 there were absolutely no abdominal symptoms, in 1 the only abdominal symptom was pain; in 1 there were pain, tenderness, and rigidity, with slight change in temperature and pulse. When it is remembered that all these symptoms may occur in cases of tuberculous ulceration of the intestines, with perhaps some localised peritonitis but without perforation, it will be realised how difficult or impossible it may be to diagnose perforation. Partial perforation is not a matter for clinical observation; it is merely observed post mortem.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

A MEETING of the Governors and General Council of King Edward's Hospital Fund was held on Dec. 11th at St. James's Palace under the chairmanship of the Speaker of the House of Commons, for the purpose of awarding grants to hospitals and kindred institutions. The treasurer reported that the amount received to date by the Fund for general purposes, less expenses, was £176,745. The Distribution Committee has apportioned £151,000 to be distributed among 105 London hospitals—£1000 more than in 1910. The chairman, in moving the adoption of the various reports and awards, read a letter of congratulation from the King, and announced with regret the resignation of Mr. F. M. Fry from the post of joint honorary secretary.

ACUTE POLIOMYELITIS AND CEREBRO-SPINAL FEVER.

THE attention of the Local Government Board has been drawn to the recent occurrence in this country of several local outbreaks of acute poliomyelitis. Some of these outbreaks, which have been chronicled in our columns, have been made the subject of detailed investigation by medical inspectors of the Board, and their reports, says Sir Horace Monro in a recent circular letter to sanitary authorities, will shortly be issued, together with a summary of the history of the disease, and an account of its pathology. Sir Horace Monro's memorandum shows that at the commencement of these outbreaks some difficulty was experienced in the diagnosis of the disease, owing to the similarity of its symptoms and those of cerebro-spinal fever. The mortality is comparatively high amongst persons attacked by either of these diseases. In cerebro-spinal fever the majority of those who survive an attack recover their normal health after a prolonged and tedious convalescence. In acute poliomyelitis, which occurs in children, and less frequently in adults, a very large proportion of the survivors are left disabled, in greater or less degree, by muscular paralysis. "It is," says the memorandum of the Permanent Secretary of the Local Government Board, "desirable, in the interest of the public health, that both diseases should be made notifiable, in order that the council and their medical officer of health may be informed as soon as possible of the occurrence of cases of these diseases. It will thus be practicable to initiate prompt inquiry into their origin and incidence and to take any precautions necessary to prevent their spread." In several districts acute poliomyelitis and cerebro-spinal fever have already been made notifiable; where this has not already been done the Board suggests that the authority should take steps at an early date to require notification. The circular is accompanied by memoranda from Dr. A. Newsholme, medical officer to the Board, on cerebro-spinal fever and acute poliomyelitis. These memoranda contain in a succinct form all the information available for the diagnosis of the conditions and the prevention of their spread.

IN addition to the Durbar Honours, which will be found in another column of this issue, the Kaisar-i-Hind Medal of the First Class has been conferred upon Dr. Herbert F. Lechmere Taylor, of the Church of Scotland Mission, Jalalpur, in the Gujrat District, Punjab, and in charge of the Jalalpur Hospital; on the Rev. John Cameron Young, M.B., C.M. Glasg., medical missionary of the Keith Falconer Mission at Sheikh Othman, Aden; and on Dr. Raghavendra Row.

WE regret to announce the death, on Dec. 11th, of Dr. Edmond Fauriel Trevelyan, of Leeds, a leading Yorkshire physician and formerly professor of therapeutics in the University of Leeds.

IN connexion with the impending reorganisation of London public health administration under a single authority, we understand that proposals are being considered by committees of the London County Council for the appointment of six whole-time permanent medical officers to carry out work relating to medical inspection and infectious diseases. The appointments are being made with a view of securing coöperation with the medical officers of health of the metropolitan borough councils. A further official will superintend the work of the new officers.

THE HEALTH OF THE NAVY FOR 1910.[1]

FOR many years, and until quite recently, the statistical reports of the health of the navy had been little but a series of dull tables of figures, with the minimum of comment to explain or make them interesting; but when Sir James Porter became Director-General the report for 1909 was enlarged, excerpts from the original journals of medical officers were again published, and the book became once more of great value to the student of naval hygiene. A further improvement is made in the number for 1910, as one of the staff at headquarters has written an article "On the History of Beriberi as it has Occurred in the Persian Gulf Squadron," an article discussing, with the fullest knowledge of all the epidemics in the last 12 years, the incidence of the disease and the theories of its origin which have been put forward in the service. Such papers are of great value and should take, in tropical medicine and geographical pathology, the place filled in relation to the public health of this country by the reports of the inspectors of the Local Government Board.

Divisions of the Naval Force.

Anyone who spends time in considering the report for 1910 will see that the naval force, as arranged in the tables, falls naturally into three groups: the Home Fleet of 50,000 men, the Home Station of 25,000, and the remainder the fleets abroad, aggregating 40,000. Of these, the Home Station shows the greatest percentage of sickness, the average loss of duty through illness being 13¼ days. We may very well find an excess of sickness in this group, as it contains both extremes of naval life; at the one end boys and new entries, at the other the older men who are not being sent abroad as they are just about to take their pensions. The smallest sick lists are shown by the great Home Fleet, whose men averaged only 8¾ days' illness in the year; the men abroad have 9¼ days on the sick list, and besides a greater chance of death than the men in the other groups. Some will be surprised to hear that statistics indicate service abroad to be healthier than service at home, and to learn that the men of the Home Fleet in the "cold and stormy home waters" show the least illness of all. Too much stress must not, however, be laid on these figures, for these are

[1] The Health of the Navy for 1910. London: Wyman and Sons. 1911. Pp. 200. Price 1s. 1d.

only crude sickness rates, uncorrected for age distribution. As death-rates vary with age, so also do sickness rates, but there is nowadays no statement in the health report of the navy about the age constitution of the various groups.

Proportional Incidence of Disease in the Royal Navy in 1910 (Ratios per 1000).

—	A Training establishment.	B Home Fleet.	C Fleets abroad.	D Home Station.	E Total force.	F Marine headquarters.
Number in group	2528	9,000	37,580	26,950	113,530	6180
Cases	1008	573	675	771	653	662
Invalids	20·9	—	—	—	15·4	—
Deaths	3·2	2·5	4·1	2·9	3·1	3·4
Sick daily	33·0	24 0	25·0	36·0	27 0	25·0
Days of service lost to each man through illness	14·0	8·8	9 3	13·3	10·0	9·2
Pneumonia	9·9	4·0	3·2	7·5	4 6	2·4
Tubercle	—	2 1	2·4	2·4	2·3	2·6
Catarrh, sore throat, tonsillitis	—	82·0	76 0	169·0	105·0	—
Rheumatic fever	46·0	7·1	7·3	12·7	8·5	1·6
Enteric fever	—	0·8	1·7	1·4	1·4	0·97
Appendicitis	—	2·3	2·9	2·2	2·5	—
Venereal diseases	—	110·0	109·0	144·0	119·0	79·0
Injuries	104·0	144·0	156·0	111·0	140·0	166·0

Column A is included in Column D. Column E is the sum of Columns B, C, and D. Column F is not included in Column E.

The report deals with a "total force" of 113,530 men amongst whom occurred 74,253 fresh cases of disease or injury, of whom 358 died and 1747 were invalided out of the service. There were, on the average, 3124 men always on the sick list, rather less than half of them sick on board their ships or at their homes on leave, and rather more than half of them in the hospitals (515 daily average at Haslar, 435 at Plymouth, 387 at Chatham). The "total force" as stated above does not, curiously enough, account for all the men, for an extra group of 6180 "marines at headquarters," not included with the others, has a little table all to itself at p. 149.

Improved Health of the Fleet.

The improvement which is being made in the health of the fleet by diffusion of knowledge of sanitation, the building of better ships, the better selection of recruits, and by modern advances in the treatment of disease can be well shown by comparing the figures for 1910 with those of 10 and 20 years ago.

Year.	Total force.	Per 1000. Cases.	Invalids.	Dead.	Sick daily.	Days of service lost by each man by illness.	Days under treatment. Each case.
1890	53,350	1063	26·18	8·54	42·3	15·5	14·5
1900	96,830	882	35·83	7·27	37 6	13·7	15·5
1910	113,530	653	15·38	3·15	27·5	10·0	15·3

We can see from the figures that hygiene must be improving and skill in treatment increasing. There is definite evidence of improving surgical skill among the medical officers of the navy and of increased confidence by the men in their skill, for in 1900, 73 operations are reported for radical cure of hernia, and 532 were done in 1910; further, in 1900, 239 men were invalided for hernia, of whom "the greater number," at least 120, had refused operation, but in 1910, of the 82 who were all that were invalided for this disorder only 31 had refused operation.

Incidence of Different Diseases.

The total sickness is much the same as in 1909, but we notice that pneumonia has increased in the Home Fleet, where there were 196 cases (30 per cent. increase), 2 invalids and 19 deaths. No explanation is offered of the greater prevalence. We observe also that invalidings in the first year of service have increased very materially (p. 15) from 166 to 286. The chief increases were: nervous diseases, 39 (against 17 in 1909); diseases of the ear, 37 (against 17); diseases of the circulatory system, 87 (against 20). Rheumatic fever, 7 (against 22), shows a decrease; it is uncertain if this is a real decrease or due to transference of cases with heart disease to the class of circulatory diseases. So considerable an alteration in the rate of invaliding should surely, if noticed, have evoked some explanation. Further, we should have liked to hear why there is such excess of morbidity in the training establishments (p. 150). The pneumonia rate is double, the rheumatic fever rate five times, those obtaining in the navy generally. No account of the health of the cadets at Osborne or Dartmouth, of which so many people have been asking questions, can we find anywhere. Probably it will be included in the report for 1911.

A considerable epidemic of mumps is reported from Australia; 84 cases occurred in one ship of 425 men. There was no special prevalence of influenza in any one ship this year. A very large number of the cases of influenza occurred among men at home on leave; it is questioned if the diagnosis was always correct (p. 20); all 4 deaths occurred in men away on leave.

Enteric and Mediterranean Fever.

The cause most frequently assigned for enteric fever is the eating of infected shell-fish. One fleet-surgeon (R. D. Jameson) traced a case to a shop in a distant town and found that shop already suspected by the medical officer of health there. H.M.S. *Swiftsure* and H.M.S. *Scylla* still went on having cases of enteric fever. H.M.S. *Swiftsure* had 12 cases last year and 9 in January, 1910; 2 more developed in August and 2 in November. No cause, not even drinking shore water or eating green vegetables that may have been infected, is suggested, but the report says: "It is somewhat suggestive that a ship so badly infected should continue to contribute cases," which seems to indicate that if cases go on appearing this year in the ship it may be officially declared infected, and then something will be done. There is talk of a carrier perhaps being the cause of the infections on H.M.S. *Scylla*, but it is not stated whether measures have been taken to discover him clinically or bacteriologically. No cases of paratyphoid fever are mentioned.

One officer contracted Mediterranean fever in China, having drunk raw goats' milk when passing through Malta. Thirty men are daily doing drill and otherwise learning their work in the Mediterranean Fleet who, but for the work of Sir David Bruce and sanitary regulations founded upon it, would be aching in hospital instead.

Pneumonia.—Malarial Fever.—Tuberculosis.

Pneumonia (519 cases) has increased; cases come in groups from individual ships—7 from *Vanguard* at Berehaven between April 23rd and May 10th. No remark is made about the increase. It would be well if whenever a case occurred the cubic content of the apartment and the number of men sleeping in it could be noted, and with that the area of inlet and outlet ventilation. These could be tabulated later, and in that way much would be learned. Pneumonia in ships is so often a disease of overcrowding that when a case is reported and overcrowding is not definitely disproved at once, it is hard not to suspect that it exists. 321 cases of malarial fevers occurred in the East Indies, but no word is said of the methods of prevention that were or might have been taken, and of their proportional success. Of 611 cases in the service only two died.

260 cases (2·44 per 1000) of tuberculosis occurred, of whom 205 were invalided and 26 died. Marines seem to suffer most. 65 are daily on the sick list through tubercle, and 231 were lost by it to the navy in 1910. The real totals are probably a trifle larger than the figures, as cases of hæmoptysis, broncho-pneumonia, and phthisis are still reported under other headings. 208 were lung cases, 12 in joints, 7 in glands, 5 genito-urinary, and 2 in the skin. The greatest number of cases reported from any individual ship was 5.

Venereal Diseases.

Under venereal diseases there were 13,402 (118 03) cases, 148 (1·29 per 1000) invalidings, and 6 (0·22) deaths. One-third of the sickness of the service is shown as due to venereal disease, but some cases of locomotor ataxia and

general paralysis of the insane are reported merely as nervous diseases, and there should also appear under this heading some of the cases of aneurysm, stricture, and suicide. Three cases of syphilis insontium are mentioned (pp. 42, 76, and 88). Twelve cases of venereal disease occurred for every 100 men, and roughly, 2 were chancroid, 1 primary syphilis, 3 were secondary syphilis, and 6 were gonorrhœa. These diseases are apparently lessening. About 1890 there were 6 cases of sores, 2 of secondary syphilis, and 8 of gonorrhœa, 16 cases in all, to 100 men. Venereal disease has thus lessened in 20 years, 3000 cases being saved in a year—a vast improvement.

Rheumatic Fever.—Parasitic Diseases.

In rheumatic fever (969 cases) there was a considerable increase, but it appears that ordinary muscular rheumatism is this year counted with rheumatic fever. The disease is specially prevalent on the Home Station, particularly in the training establishments. It is suggested that this disease (p. 8) is due to climate and the severity of service at home, but more cases are reported from abroad than from the Home Fleet. Of parasitic diseases, there were 3135 cases of scabies in 1910, a reduction of 429 cases, or 2·9 per cent. In the Japanese navy of 40,000 men there were, in 1907, 337 cases reported, or 8 per 1000. In the American navy of 57,000 men there were, in 1909–10, 316 cases; and in the German navy of 50,000 men (1908–09) there were 570 cases of infection by animal and vegetable parasites.

Beri-beri.—Defective Teeth.—Non-venereal Bubo.

Much attention is being paid in the navy to beri-beri, which has given lately a good deal of trouble in the Persian Gulf. In 1910 it attacked 22 Europeans. A full clinical account of these cases would be of interest. Two papers on beri-beri are in the appendix: one is by Fleet-Surgeon R. C. Munday (p. 179) dealing with prevention and treatment. He recommends the mungo or katjang-idjoe bean (phaseolus radiatus). We have recently mentioned its value in this connexion.[2] The number invalided in 1910 for defective teeth is only seven; in 1909 the navy lost 122 from this cause, but unfortunately no explanation of the improvement is given. There were 327 cases of non-venereal bubo, an important disease, for it occurs on the China and Cape of Good Hope stations, and is reported to be related to plague. A paper in the appendix to the report for 1911 discussing the pathology and treatment of this disorder would be very welcome.

Local Diseases.

As to local diseases, the highest death-rate and the highest invaliding rate are associated with diseases of the circulation. How many of these are due to rheumatic fever we cannot say completely, but it accounted for 30 per cent. of the 262 who were invalided for organic heart disease. The largest daily loss of service is from diseases of the digestive system; half of these cases are sore-throat and tonsillitis. There were 280 cases of appendicitis, which seems to be more prevalent in the American and German navies, but less frequent in the Japanese.

Great Improvement in Diseases of the Lungs.

It is a little difficult to compare the loss from respiratory diseases and from tubercle now and formerly, as cases have been sometimes returned under one head and sometimes under another. If, however, we add together the respiratory and tuberculous figures for 1890 and those for respiratory and tuberculous disease and for pneumonia in 1910, we shall get a very fair idea of the improvement which has occurred. The figures are:—

Respiratory and tuberculous diseases.	1890.		1910.	
Cases per 1000	82		74·5	
Invalided per 1000	4·1 } waste		2·3 }	waste 2·9
Deaths per 1000	1·6 }	5·7	0·6 }	

They show that the waste of the service (deaths and invalids) has been halved in 20 years, an enormous advance.

Accidents.

We must not neglect to mention a suggestive note by Fleet-Surgeon E. B. Pickthorn on the influence of care and forethought in the prevention of accidents (p. 47). That principle applies in exactly the same way to the prevention of disease, as medical officers must show to the executive officers with whom they serve.

Compressed Air Illness in Diver.

The most striking story in the appendix is that of the diver who came up too quickly from a depth of 16 fathoms and was consequently attacked with cramp, headache, and nausea. Fleet-Surgeon R. S. Bernard got him quickly back into his diving dress and sent him down immediately to 12 fathoms to get him again under pressure. The man was now 72 feet down below his medical adviser, was all alone, and could only be communicated with by telephone—an anxious position for both patient and physician. In ten minutes the patient began to improve and was allowed to make his way slowly to the surface, and when he reached the top at last in 40 minutes he was found to have recovered. The other papers in the appendix are also of great interest.

[2] THE LANCET, Dec. 2nd, 1911, p. 1570.

THE LONDON COUNTY COUNCIL AND THE CARE OF THE FEEBLE-MINDED AND INSANE.

AN interesting debate took place at the meeting of the London County Council on Dec. 5th with regard to questions of recurrent insanity and the care and control of the feeble-minded.

Report on Deputation to the Home Secretary.

The General Purposes Committee reported that a deputation from the Council had waited upon the Home Secretary to urge that legislation should be promoted to deal with the whole question of the care and control of the feeble-minded, and particularly to confer on the Council authority to make provision for persons lacking in moral sense.[1]

The Home Secretary, in his reply to the deputation, said that both he and the President of the Board of Education were deeply interested in the subject and in securing a remedy very much on the lines asked for by the Council. He had in draft an Inebriates Bill and also the heads of a Bill for dealing with the feeble-minded, both of which he trusted would become law next session. Mr. McKenna added that the last-named Bill would be compulsory and not adoptive, and provision would be made for the care, after the age of 16, of feeble-minded children and for the care of imbeciles. Further, the Home Office was in entire agreement with the Council's contention for the establishment of a central authority. As regards the question of the treatment of inebriates, he foreshadowed legislation whereby magistrates would be enabled in every case to commit a habitual inebriate to receive reformatory treatment, and he indicated that assistance from the Treasury might be expected towards the establishment and maintenance of reformatories. As regards the question of the care and treatment of lunatics in their relation to the feeble-minded, the Home Secretary pointed out that the establishment of a central authority would trench upon, and he hoped relieve, the burden of dealing with lunatics.

The President of the Board of Education (Mr. Pease) addressed the deputation on the question so far as it related to the education service, and referred to the necessity of making compulsory the operation of the Elementary Education (Defective and Epileptic Children) Act, 1899, and of educating the feeble-minded children in every district, thus reducing the number of adult cases to be dealt with.

This report was received without comment.

Recurrent Insanity and the Propagation of the Unfit.

A discussion, however, took place subsequently on the report of the Asylums Committee already mentioned in THE LANCET.[2] This report had reference to a lunatic who had been in and out of Banstead and other asylums 26 times and had had 13 children, two of whom had shown signs of insanity. In giving the details the committee merely said: "It seems a striking illustration of the need for legislation to prevent the increase of the unfit," and made no definite recommendation.

Mr. A. O. GOODRICH, chairman of the Asylums Committee, said this was one of the cases of recurrent insanity in regard

[1] THE LANCET, April 29th, 1911, p. 1164, and Dec. 10th, 1910, p. 1717.
[2] THE LANCET, Oct. 28th, 1911, p. 1222.

to which the committee was anxious to do something practical. The problem of constant readmissions was causing those responsible for the London County Asylums a great deal of anxiety. At present, although the committee very well knew that in many cases there was every probability of a patient returning, no power existed by which they could detain a patient who had recovered. Members of the Council might be astonished to know that between 1885 and 1910 no less than 29 per cent. of the patients discharged were readmitted into London County asylums. He would be asked what practical suggestion he had to make; this was, however, a very difficult matter, and therefore the committee had not made a definite recommendation. There were various ways of dealing with the problem. One suggestion was segregation; in this direction the Eugenics Society was doing noble and good work, and was promoting a Bill in Parliament to deal with the question; he hoped the Council would support them. A method was by colonisation; a number of the insane of one sex would be put on an island and kept there practically for life. Another method was by means of surgical operation—of course, under proper safeguards. They knew on the excellent authority of Dr. F. W. Mott the hereditary character of mental deficiency. Nearly all the patients of this class had relatives who were, or had been, insane. He believed the whole of the committee was united in thinking that some form of State control should be exercised in cases of recurrent insanity.

Mr. EDWARD SMITH thought that on this important subject the Asylums Committee should have presented a more exhaustive report and have made some definite suggestion. Mr. Goodrich touched on very dangerous ground when he suggested that because a young woman became insane and entered and left an asylum three or four times she should be taken from her family and all her associations and placed on a remote island. He had known cases which had become permanently cured after three or four entries into an asylum.

Sir JOHN MCDOUGALL: What about the next generation?

Mr. SMITH said that he was content to deal with the present generation. This subject ought not to be discussed by the County Council, but by another body with power to take definite action.

Sir JOHN MCDOUGALL welcomed the report as calling public attention to a serious peril that lay before the nation. It required very careful consideration before any practical suggestion could be made. He mentioned a case of a woman who had been in an asylum before she was married. She had had five children, and one daughter, aged 17, was in the same asylum. The problem urgently required attention. Dr. Mott was making very strenuous inquiries and obtaining the most exhaustive statistics. At present there was no power to prevent the propagation of the unfit.

Mr. H. H. GORDON said that no one reading the report of the Royal Commission on the Feeble-minded could fail to be struck by the number of cases of women coming to workhouses year after year to give birth to incapable and degenerate children. It was not kindness to allow women to go out into the world and be subject to temptation, which owing to their feeble-mindedness they were unable to resist. It was not fair to them and the rest of the community to allow them to give birth to children who invariably proved to be feeble-minded. They deplored a falling birth-rate among the physically fit, but took no steps to try to prevent the propagation of the unfit. As to sterilisation, he was told that the religious conscience of the community would be against such a course. If this was considered the only effective method of dealing with the problem, then the religious community must be asked to say how else it was to be solved. The present state of things could not go on indefinitely, and he trusted the Asylums Committee would bring forward case after case of the kind presented in this report, and that they would be published widely all over the kingdom in order that public opinion might be educated.

Mr. E. G. EASTON said that Dr. Mott had such cases by the score. After referring to the growing cost of asylums, Mr. Easton declared that the Asylums Committee could not have taken more definite action because the medical profession hesitated to express itself as strongly as many laymen desired.

Mr. H. C. THOMAS quoted a medical authority as saying that of the inmates of asylums 32 per cent. were there through worry alone and 26 per cent. through excessive alcoholism, largely due to the conditions under which they lived. The following remedies had been suggested:—A living wage; insurance against sickness and unemployment and provision for old age; the abolition of slums and overcrowded areas; and the encouragement of the family and family life. It was encouraging to think that such a considerable proportion of the insanity they had to deplore was due to removeable causes, and it was to be hoped that the next few years would show a great fall in the number of asylum inmates.

Mr. E. W. HOBSON said that, although the Asylums Committee had amassed more information on this subject than any other dozen authorities, yet it only gave the Council a mere recital of facts. He hoped the committee would make definite use of its invaluable reports by medical experts, for the information of the people of England in dealing with this most serious question.

Mr. C. JESSON mentioned a case of a young man being anxious to marry a girl—a moral imbecile—who was just leaving an asylum. In spite of all endeavours to dissuade him the man married the girl, and no one could interfere in the matter, as the girl was not at that moment insane.

Mr. H. W. ROWE, a former chairman of the Asylums Committee, declared that no one was willing to bear the onus of the unpopularity of such a proposal as the steriltsation of the insane.

Mr. J. W. GILBERT declared strong opposition to dealing with recurrent insanity by sterilisation.

Notice of Motion.

In order to secure a definite result from the debate Mr. Walter Reynolds has since given notice of the following motion:—

That in order to enable the Council to decide what action should be taken for the prevention of lunacy, especially so far as it is due to hereditary transmission by persons known to be of unsound mind and is to that extent preventable, it be an instruction to the Asylums Committee to submit a full report on the subject of the causes of lunacy, particularly the hereditary causes, with particulars of cases which have come under the observation of the committee of the hereditary transmission of insanity.

MEDICAL MEN AND MUNICIPAL HONOURS.

WE print below brief notes of the medical and municipal careers of the members of the profession who have been elected or re-elected to the mayoral chair. We have dealt already with the appointment of Sir Thomas Crosby to the office of Chief Magistrate of the City of London, and with the relation of medical men to an active municipal life.

Barnstaple.—Mr. John R. Harper, M.R.C.S. Eng., L.R.C.P. Lond., was educated at St. Thomas's Hospital, where he held several house appointments. He is surgeon to the North Devon Infirmary, medical officer of health for Barnstaple rural district, and up to his appointment as mayor of Barnstaple held the posts of medical officer of health of the borough and school medical officer. These two appointments he resigned upon being made mayor. He is a major in the Royal Army Medical Corps, Territorial Force.

Bolton.—Mr. J. Young, M.R.C.S. Eng., L.R.C.P. Lond., who was educated at the Owens College, has been a member of the Bolton town council for eight years and an alderman for four years. He is president of the Bolton Medical Ethical Society and past president of the Bolton Medical Society, a member of the Court of Governors of Victoria University, and chairman of council of the Association of Technical Institutions. He is also a member of the Textile Institute and other educational associations, as well as a governor of several secondary schools.

Congleton.—Mr. W. I. Fern, J.P., L.R.C.P. Irel., L.R.C.S. Edin., was born at Hurdsfield, Macclesfield. He was educated primarily at Christ Church School, Macclesfield, and electing medicine as his profession subsequently went to the Owens College, Manchester, and studied at the Manchester Royal Infirmary. Nine years ago he was returned a member of the town council of Congleton; he is a member of the finance committee and chairman of the watch committee. In his medical capacity he is public vaccinator for Congleton.

Exeter.—Mr. C. J. Vlieland, M.D. Durh., M.R.C.S. Eng.,

L.S.A., after serving as house surgeon at the Kent and Canterbury Hospital in 1879 and at the Hertford General Infirmary in the following year, took up his residence at Exeter in 1882, where he entered into partnership with the late Dr. Mark Farrant. Ten years later he dissolved partnership, but continued in practice. He has been medical officer of health of Exeter since 1882, first under the local board of St. Thomas, subsequently under the urban district council, and afterwards, on the annexation of St. Thomas by the city of Exeter, he was appointed assistant medical officer of health for No. 3 (St. Thomas) District. The offer of the mayoralty for the ensuing year, which he accepted, came as a complete surprise to him, and appears to have met with unanimous approval. He has resigned his appointment as medical officer of health during his mayoralty only.

Faversham.—Mr. S. R. Alexander, M.D. Lond., M.R.C.S. Eng., L.S.A. (re-elected), is an old student of London University and Guy's Hospital. He has been chairman of the governors of the Faversham Grammar School for several years, is a trustee of public charities, a governor of Wreight's and Gibbs's Schools, and represents the University of London on the higher education committee. His election to the mayoral chair last year is believed to be a unique event in the history of the borough, as he had been previously unconnected with the corporation. As Mayor of Faversham he is a Baron of the Cinque Ports, and in that office attended the Coronation of the King in Westminster Abbey. He married in 1890 a daughter of the late Mr. Alfred George Schiff.

Hertford.—Mr. J. Burnett Smith, M.B., C.M. Edin., L.R.C.P. & S. Edin., L.F.P.S.Glasg., is medical officer for the Herts and Ware isolation hospital and the Herts workhouse and workhouse infirmary. He is medical officer and public vaccinator for the No. 1 District of the Hertford Union, and was formerly house surgeon at the Royal Infirmary, Glasgow, and at the Hertford General Infirmary.

Hartlepool.—Mr. W. S. Gibb, M.B., C.M. Edin. (re-elected), is an honorary physician to the Hartlepools Hospital.

Leamington.—Mr. Harold Mason, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. (re-elected), was educated at Leamington College and received his medical training at Birmingham. He qualified in 1890 and proceeded to the M.B. Lond. in the following year. After holding residential posts at the General Hospital, Birmingham, he became medical officer to the Leamington Provident Dispensary, and has been in active practice for 19 years. He has written one or two papers on the etiology of cancer. In 1898 he successfully contested the South-East Ward of Leamington and was returned unopposed in 1901. In 1904 and in 1907 he was again elected, and last year was appointed mayor, which honour has again been conferred upon him. For ten years previous to his mayoralty he was chairman of the health committee.

Lewes.—Mr. H. Stott, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., belongs to a medical family which for seven generations has been able to count a medical man among its members. For 16 years Mr. Stott was in private practice at Friern Barnet, and held several public appointments, afterwards removing to Lewes, where he has rendered great service to East Sussex as medical officer of health of the combined districts. He is a Fellow of the Society of Medical Officers of Health and secretary of the Brighton and Sussex Medico-Chirurgical Society. In the subject of national defence Mr. Stott takes a great interest, and was formerly a commanding officer to the Cinque Ports Rifles. He is now a Major in the Special Sanitary Service (Territorials). It is worthy of note that after being appointed Mayor Mr. Stott was elected a member of the Council.

Macclesfield.—Mr. C. A. Bradley, M.R.C.S. Eng., was educated at the Owens College, Manchester, and qualified in 1877. At one time he was visiting surgeon to the Macclesfield General Infirmary.

Newport (Mon.).—Mr. J. McGinn, F.R.C.S. Irel., L.R.C.P. & S. Edin., L.F.P.S. Glasg., was born at Omagh, County Tyrone, in 1862, and was educated at the Christian Brothers' Schools and by private tuition. He received his professional education at the Royal College of Surgeons, Dublin, where he obtained a Fellowship in 1900. After qualifying in 1887 he served a term at the Tyrone County Infirmary as assistant surgeon and then proceeded to Aberdare, where he assisted at the Cottage Hospital and the Aberdare works and collieries for nearly two years. He went to Newport in 1890, when he succeeded to the practice of the late Dr. Ready. He was first elected to the Newport council in 1897 as member for the central ward, which he has since represented with a short interruption, when he was defeated in the newly constituted Crindau ward, which he selected at the redivision of the borough. He is deputy chairman of the health committee and chairman of the hospital sub-committee, and a member of the education, asylum, and parks committee. He married in 1902 a daughter of the late Mr. A. J. Murphy, an old inhabitant of Newport.

Montgomery.—Mr. Nicholas Watson Fairles-Humphreys, M.R.C.S. Eng., L.S.A. (re-elected), was born in 1837 and studied medicine at St. Bartholomew's Hospital. In 1885 he was elected alderman for the borough of Montgomery and has been 13 times mayor. He is a justice of the peace for the county of Montgomery, was high sheriff in 1882-83, and has been a county alderman since 1889. His grandfather, Nicholas Fairles, justice of the peace for the county of Durham, was the originator of the lifeboat movement, and chairman of the first committee.

Pwllheli.—Owen Wynne Griffith, L.R.C.P. & S. Edin., was educated at Guy's Hospital, London, qualified in 1878, and has practised for over 32 years in the "Lleyn" Peninsula, Carnarvonshire. He was first elected a member of the town council of the borough of Pwllheli in 1891 and was returned unopposed in 1894. He was elected alderman in 1896, 1902, and 1908, and was mayor in 1899-1900. He has served on the Carnarvonshire county council for 16 years, and has occupied an aldermanic chair. His name and efforts have for a lengthy period been associated with county, country, and corporate institutions, whilst his influence is a prominent factor in public, private, and philanthropic benefactions.

Saffron Walden.—Mr. J. P. Atkinson, M.D. Glasg., L.R.C.P. Lond., L.R.C.S. Edin. (re-elected), was born in 1838. After serving a term of pupilage with Mr. Little, Mr. Young, and Mr. Adams, of Boston, he proceeded to Glasgow University, where he received his medical education, and graduated as M.D. with honours in 1863, having previously passed the examination for the diploma of the Royal College of Surgeons of Edinburgh. In the same year he took the L.R.C.P. Lond. Subsequently he settled at Bampton, Oxon., but removed in 1881 to Saffron Walden, and finally retired from practice in 1908. He entered the town council of the borough of Saffron Walden in 1888 and in 1891 was elected mayor, being re-elected in the following year. He was again appointed in 1900 and re-elected in 1901, and was mayor at the time of the Coronation of the late King Edward VII. and received the Coronation medal. This year he has been elected mayor for the sixth time. Dr. Atkinson joined the medical staff of the 3rd V.B. the Suffolk Regiment, received the V.D. in 1904, and retired with the rank of surgeon-colonel in 1905. He has represented the town council on the joint isolation hospital board, of which he has been chairman since its incorporation in 1903, is a member of the Essex County Territorial Force Association, and has represented the borough on the Essex county council, and also on the county association recently formed for combating consumption.

Wallasey.—Mr. John Oldershaw, J.P., M.D. Brux., L.R.C.P. Irel., L.R.C.P. & S. Edin., L.F.P.S. Glasg., is the second son of the late Mr. Isaac G. Oldershaw, of Lenton Hall. He was born at Derby, and was educated at Prescot Grammar School and at Cambridge, Edinburgh, and Brussels. His family has long been connected with the learned professions, numbering Dr. John Oldershaw, of Starton, who died in 1807, being a noted physician; and the Venerable Archdeacon Oldershaw, who died in 1847 (the son of a Leicester physician), a zealous dignitary of the Church. Dr. Oldershaw has always taken the greatest interest in local matters, and especially in the question of education, and to his influence must be attributed the building of many of the schools in Wallasey, which was the first town to possess a higher elementary school. Deputations not only from the furthermost parts of England, but from the Continent, have come over to see the schools and to profit by the methods employed in teaching. He entered the town council in 1897, and has served as chairman of several of the committees. Dr. Oldershaw had the honour of being chairman of the council during the year of the Coronation of King Edward VII. He married the only daughter of the late Mr. John Holbrook, of Rolleston, Staffordshire.

Warrington.—Mr. G. W. Joseph, M.D. Durh., L.R.C.P. Irel., M.R.C.S. Eng., L.S.A. (re-elected), was born at Liverpool on Nov. 29th, 1850. He is the son of Mr. Neild Joseph, chemist, of that city, and was educated at Kirkbean School, near Dumfries, and at Liverpool Institute. He studied medicine at Liverpool Royal Infirmary School of Medicine, and University College, Liverpool, and after matriculating at the University of Durham he qualified in 1873, proceeding later to the Durham degree. He went to Warrington in 1874 as house surgeon to the infirmary, and for seven years was medical officer of health of the borough, and was also first public analyst for the borough. For 30 years he was honorary surgeon to the infirmary, and is now honorary consulting surgeon to that institution. He entered the Warrington town council in May, 1905, and has served on the health and other committees. He is chairman of the watch committee, and deputy chairman of street improvement committees, and takes a great interest in sanitary and social reform. In 1909 he was appointed a justice of the peace for the borough.

Wimbledon.—Surgeon-Major E. L. McSheehy, A.M.D. (retired), M.D., M.Ch.R.U.I., F.R.C.S. Irel., who is a justice of the peace for the county of Surrey, was educated at Queen's College, Cork, and at Paris. He entered the medical department of the army in 1857 and retired from the service 20 years later. He has always taken an active interest in the municipal affairs of Wimbledon and is a much respected member of the borough.

MEDICINE AND THE LAW.

A Rink and its Neighbours.

IN the case of Page and others *v.* Watt and others, tried by Mr. Justice Darling without a jury, damages and an injunction were claimed by persons residing in the neighbourhood of a roller-skating rink against its proprietors, a nuisance being alleged arising out of the noises made by the skating, a mechanical organ, varied by a band, a megaphone used for making announcements to the skaters, and a siren. After witnesses had been called on both sides his lordship awarded as damages £20 to a plaintiff who owned certain houses affected, £10 to the former occupier of one of them, and £20 to the occupier of another. An injunction was refused. The result of this case, with that of the recent action referred to in THE LANCET of Nov. 25th, p. 1505, in which noises arising out of the Exhibition at Earl's Court were complained of, should tend to make caterers for the public more careful before they open places of amusement to prevent them as far as possible from interfering with the comfort and health of those who have no pecuniary interest in them.

Hebert v. *The Royal Society of Medicine.*

The Court of Appeal recently had before it an appeal from the decision of Mr. Justice Darling in a case in which the question at issue was whether the plaintiff, Dr. P. Hebert, was entitled to describe himself as a member of the Royal Society of Medicine. He had been so described in the advertisement of a book of which he was the author, and the secretary of the society had written to the publishers to the effect that he was wrongly so described. His claim to membership of the Royal Society of Medicine was based upon membership of the Gynæcological Society, coupled with the alleged sending of a postcard to the former society intimating his desire and intention of joining it. Under the Charter and by-laws of the defendant society the plaintiff claimed to be entitled to acquire membership thus, and that he was, in fact, a member of the Royal Society of Medicine. At the conclusion of the trial Mr. Justice Darling said that he was not satisfied by the plaintiff's evidence that he had communicated his desire to be admitted to membership of the Royal Society of Medicine in the manner described, and intimated that this finding of fact would be a decision in favour of the society in respect of the claim of membership and also of a pending action for libel in connexion with the denial of the plaintiff's right to describe himself as a member of the defendant society. The Court of Appeal declined to interfere with Mr. Justice Darling's judgment, and having dismissed the plaintiff's appeal informed counsel for the appellant that their decision and that of Mr. Justice Darling rendered the whole matter *res judicata*—that is to say, the plaintiff would be precluded from proceeding with an action for libel (or any other action) which would raise questions of fact already determined.

Petty Frauds upon Medical Practitioners.

Claude Hamilton, who described himself as a surgeon but refused to give an address, was sentenced by Mr. Chapman at the Tower Bridge police court recently, under the Prevention of Crimes Act, Section 7, to 12 months' imprisonment after proof that he had obtained, or attempted to obtain, by fraud, various small sums of money. An attempt to obtain money had been made upon Dr. R. Larkin, divisional surgeon of police residing in the Borough, and whisky and milk had been obtained from Dr. Helen Gordon Clark. In both these cases the prisoner said that he was a medical man from Australia and that he had been robbed and pretended that he was in a state of collapse. He was also charged with obaining 2*s.* 6*d.* from the Rev. R. Doran, with the variation that in that instance he stated that he was from Ireland. Fourteen previous convictions and many complaints against him were proved.

200 Bogus Claims for Accidents.

Ernest Pendrigh, 37 years of age, pleaded guilty at the Old Bailey recently to three counts of an indictment charging him with obtaining money by false pretences from tradesmen. His pretence consisted in falling down and claiming to have been injured through the negligence of the persons whom he made his victims, and during three years it was estimated that about 200 such claims had been successfully made by him with the assistance of a confederate. The prisoner suffered from a malformed right wrist, which assisted him in extracting money as supposed compensation. He was arrested through playing the same trick upon two butchers in the same morning, alleging that he had fallen upon pieces of fat outside their shops, and the fact that both at once sought the assistance of the Incorporated Society of Meat Traders led to the detection of the fraud. A man alleged to be his confederate accompanied the prisoner on the occasions in question, making notes on his behalf of the incident with particulars of the name and address of the person from whom the money was to be obtained. Pendrigh was sentenced to 18 months' hard labour. It will be noted that Pendrigh's success was due to his victims paying what perhaps seemed to them a modest compensation in preference to fighting his claim. An action would have required medical evidence as to the existence and cause of the alleged injuries, and could hardly have been repeated with safety in the same court.

ASYLUM REPORTS.

Annual Report of the Glamorgan County Lunatic Asylum for the Year 1910.—The daily average number resident at this asylum was 1652. There were admitted 338 patients. Of these, 142 males and 100 females were first attack cases and direct admissions. Cases of the confusional and demented type increased from 21 in the previous year to 44, while cases of melancholia have decreased from 91 to 59. In 41·5 per cent. of the admissions there existed an inherited predisposition to insanity, allied neuroses, or alcoholism, the proportion being 68·6 per cent. insanity and other neuroses, and 31·3 per cent. alcoholism. The chief exciting causes were mental stress 15·7 per cent., and alcohol 14·5 per cent. 132 patients were discharged, the recovery rate calculated on the total admissions being 27·8 per cent. and on the direct admissions 28·5 per cent. The deaths numbered 160, the percentage to the daily average numbers on the registers being 9·6. Post-mortem examinations were held in 105 instances, the most frequent causes of death being tuberculous disease 20 per cent., general paralysis of the insane 14 per cent., and senile decay 10 per cent. The Commissioners in Lunacy in their report dated Jan. 25th, 1910, write disparagingly of the dinner they saw served on the occasion of their visit. "The plates were cold, a considerable percentage of the potatoes were unsound, and although the portions served out to the men were for the most part sufficient, this was certainly not so in regard to the women. The portions set apart for the various tables were in no way properly divided, but wholly apart

from this, some of the meat was such as, though possibly most suitable for soup or stock, should never have been issued as table meat, consisting as it did of gristle, bone, and fat." The Commissioners trust that immediate and active attention may be given by the committee to this matter. It appears that this is not the first occasion that the Commissioners have had occasion to remark on the character of the diet at this asylum.

Annual Report of the Stirling District Asylum for the Year ending May 14th, 1911.—The average number of patients resident at this asylum during the year was 730. The admissions numbered 219. Forty-eight of those admitted had been under treatment before, but a considerable number of these were patients who had been previously discharged as unrecovered and removed to the care of their relatives or boarded out under the guardianship of strangers. In some cases the patients were returned to the asylum owing to the death of the guardian and in others on account of bodily illness or infirmity. The age of those admitted varied from 14 to 79; the largest number of males admitted were from 25 to 30 years of age and the largest number of females from 30 to 35 years of age. Only 18 of those admitted were in average bodily health. In 152 patients the health was in poor condition and 49 patients were admitted in an exhausted state. An inherited predisposition to insanity was found in 30 per cent. of those admitted. In 15 per cent. the mental breakdown was attributed to alcoholic excess, and in 21 cases insanity was the result of general paralysis and other gross forms of brain disease. One hundred and twenty-five patients were discharged during the year, and of this number 75 were recovered, giving a recovery rate calculated on the admissions of 34 per cent. for both sexes. A lowered recovery rate has been the general experience throughout the Scottish asylums of recent years. This is probably mainly to be accounted for by the accumulation in asylums of chronic incurable cases, and in part also to the present-day system of treating acute cases of mental disease in the observation wards of the large parochial hospitals. The deaths during the year numbered 76, the death-rate calculated on the average number resident being 10·2. The mean age at death was 50. Seven patients who had died had been resident in the asylum for over 20 years. Post-mortem examinations were held in 84 per cent. of the deaths. Dr. Robert B. Campbell, medical superintendent, has no doubt that the modern method of keeping the inmates of the institution as much as possible in the open air is an important factor in promoting the comfort and health of the patients. The recently admitted patients are treated in bed in the verandahs in connexion with the hospitals and the small sanatorium verandahs also have their accommodation fully taxed.

Annual Report of the Inverness District Asylum for Year ending May 15th, 1911.—The average number of persons resident at this asylum during the year was 691. The admissions during the year numbered 162, representing 159 persons, there having been two males and one female admitted twice during the year. Of the total number of patients admitted 45 had previously been under asylum treatment at this institution. Of the 45 readmissions 29 were admitted for the second time, 6 for the third time, 4 for the fourth time, 2 females for the fifth time, 1 male for the seventh time, 1 male and 1 female for the eighth time, and 1 female for the ninth time. The ages of those admitted varied from 16–90. Eighty-two of the admissions were cases of melancholia and 42 were cases of mania. As a result of the recent Census it appears that though there has been a decrease in the total population of the councils included in the lunacy district, there has not been any corresponding decrease in the admission rate of patients to the asylum. Dr. T. C. Mackenzie, the medical superintendent, considers it possible that a decrease in the general population of the district may mean for some time at any rate an increase in the population of the asylum. It may prove to be the case that aged persons, who have remained behind in their homes, while their descendants have left the country, may require to be sent to the asylum not so much because they are mentally afflicted as because there is no one at home to look after them in their old age and infirmity. Among the probable causes of insanity in the patients admitted, a hereditary or family predisposition to insanity existed in 71 of the 162 cases, whilst senility and alcoholism were amongst the assigned causes in 22 and 25 cases respectively. One hundred and fourteen patients were discharged during the year. Of this number, 71 were discharged recovered, giving a recovery-rate calculated on the admissions of 44·4 per cent. for both sexes. The number of deaths during the year was 45, the death-rate calculated on the average number resident being 6·5. Fifteen of the deaths were due to pulmonary tuberculosis and eight to senile decay. Post-mortem examinations were held in 38 out of the 45 cases. The mean age at death for male patients was 53·8 and for female patients 61·2, giving a mean age at the death of both sexes of 57·5.

Annual Report of the County Borough of West Ham Lunatic Asylum for 1910.—The total admissions to this asylum during the year were 248, of whom 106 were males and 142 females. Forty-three of the cases admitted were re-admissions and 20 were transfers. Forty-six of the admissions suffered from forms of mania and 67 from melancholia, 37 were cases of dementia, 31 of general paralysis, and 16 of epilepsy. Of the direct admissions 69 cases had a history of hereditary insanity or epilepsy, and 14 others of hereditary alcoholism, giving a total percentage of 36. It appears that of 1869 cases admitted during the nine years, 1902 to 1910 inclusive, more than 53 per cent. had a hereditary history of insanity or were congenitally defective. Of the exciting causes alcoholic excess was ascertained in 37 cases and mental stress in 25 cases. One hundred and sixty-eight patients were discharged, and of these 66 were discharged recovered, giving a percentage of 23·94 on the direct admissions. These are comparatively low figures and are due to the hopelessly incurable character of the cases admitted. Out of 51 cases in which the duration of the mental attack from its commencement was ascertained, recovery took place in less than nine months in 31 cases. The deaths numbered 83, of whom 46 were males and 37 females, giving a percentage of 9·33 on the average number resident. Senile decay was regarded as being the principal cause of death in 28·9 per cent. of the cases, and general paralysis in 31 per cent. In 14 cases tuberculosis was found post mortem. It appears from the tables that the proportion of certifiable insane belonging to West Ham is greater than that of the whole country.

THE NATIONAL INSURANCE BILL.

THE GENERAL MEDICAL COUNCIL AND THE BILL.

IN reply to the representations to the Government by the General Medical Council,[1] which were communicated to the Chancellor of the Exchequer on Nov. 30th, the President, Sir Donald MacAlister, has received the following letter:—

[COPY.]

Treasury Chambers, Whitehall, S.W.,
7th December, 1911.

DEAR SIR DONALD,—I am much indebted to you, and to the General Council of Medical Education and Registration, for your letter of the 30th November, and for the valuable suggestions it contains with regard to certain provisions of the National Insurance Bill. I am glad that the Bill in its present form is in substantial agreement with these suggestions, as you will see from the following summary, in which they are dealt with seriatim.

(1) It is now explicitly provided in Clauses 74, 75, and 76 (now 80, 81, 82), relating to Scotland, Ireland, and Wales respectively, in the Bill as amended in Report, that in each case at least one of the Insurance Commissioners shall, as in England, be a duly qualified medical practitioner.

(2) The provision in the same clauses that the Commissioners for those countries shall have all the like powers and duties as are conferred on the Insurance Commissioners includes the appointment by them of an Advisory Committee in each case.

(3) A substantial increase has now been made in the number of medical practitioners on the Local Health Committees. Under Clause 55 (now 58) as amended, besides the two appointed by the profession itself and the minimum of one appointed by the Commissioners on each such committee, the County Council is now bound to appoint one additional medical practitioner in every case, or two where the committee reaches the number of 60, or three where it reaches 80.

(4) The provisions of Clause 58 (now 61) constituting Local Medical Committees extend to the other countries as well as to England, such modifications as are required, e.g., in the definitions of area, &c., being secured under the clause relating to the application of the Bill to the particular country. It must be remembered, however, that Ireland stands apart from the other countries because medical benefit is not there provided, and therefore the questions dealt with by Local Medical Committees elsewhere do not there arise.

(5) Clause 16 (4) (now 15 (4)) is limited to systems or institutions existing not when the Act comes into operation, but when it is *passed*.

[1] THE LANCET, Dec. 9th, 1911, p. 1640.

Any attempts to take unfair advantage of this section could be frustrated by the power of the Insurance Commissioners and the Local Health Committees to withhold approval.

(6) The relation of the Insurance Bill to hospitals and other voluntary institutions has been very carefully considered; and I am confident that the extreme statements that have been made as to its effect on voluntary subscriptions will not prove to have been justified. If experience should show that the danger is to any extent real and serious the nation may be trusted to see that steps are taken to prevent the efficiency of the hospital system being impaired.

Yours sincerely,
(Signed) D LLOYD GEORGE.

Sir Donald MacAlister, K.C.B., President, General Council of Medical Education and Registration of the United Kingdom.

THE BRITISH CONSTITUTION ASSOCIATION AND THE BILL.

The council and committee of the British Constitution Association petitioned the House of Lords in respect of the Bill, and concluded as follows:—

It is respectfully represented to your Lordships that the National Insurance Bill now under your Lordships' consideration was not even in outline subjected to the judgment of the Electorate at the last, or any, General Election; that so far as it seeks to compel large sections of His Majesty's subjects to contribute to an Insurance Scheme which may, or may not, commend itself to their judgment, it introduces a novel principle into our Legislative system, the effects of which cannot fail to be far-reaching, and may prove highly disastrous; that it has been passed by the House of Commons without adequate opportunity having been afforded for the discussion of many of its most important provisions, and that a Measure so drastic and so exceptional should not be passed into Law until it has been subjected to further examination and discussion within the Houses of Parliament, and in the Country.

Your Petitioners humbly pray that your Honourable House may either reject the Bill,

OR

In the event of the Bill being passed (whether amended or not by your Lordships) that a Clause may be added providing that the Measure shall not become law until it has been submitted to the judgment of the Electors at a Special Poll to be taken for the purpose in such a manner as Parliament may provide.

And your Petitioners as in duty bound will ever pray, &c.

The House of Lords has had the same view forcibly put before it, no doubt, by many people, but it has been generally foreseen that the peers will pass the Bill practically without comment.

As we go to press a meeting of the British Constitution Association is being held, under the presidency of Lord Robert Cecil, M.P., to protest against the National Insurance Bill becoming law "before the country has had full time to consider the measure."

THE BRITISH MEDICAL ASSOCIATION AND THE BILL.

The following circular from the medical department of the British Medical Association, dated Dec. 11th, gives the opinions of the chairman of Representative meetings and the chairman of the Council as to how much has been obtained for the medical profession under the Insurance Bill and what still remains to be obtained:—

1. On June 1st, 1911, the British Medical Association adopted the following policy with respect to the Insurance Bill, and circularised every member of the profession asking for support of the following six essential principles: (1) An income limit of £2 a week for those entitled to medical benefit; (2) free choice of doctor by patient subject to consent of doctor to act; (3) medical and maternity benefits to be administered by Local Health Committees and not by Friendly Societies; (4) the method of remuneration of medical practitioners adopted by each Local Health Committee to be according to the preference of the majority of the medical profession of the district of that committee; (5) medical remuneration to be what the profession consider adequate, having due regard to the duties to be performed and other conditions of service; (6) adequate medical representation among the Insurance Commissioners, in the Central Advisory Committee, and in the Local Health Committees, and statutory recognition of a Local Medical Committee, representative of the profession in the district of each Health Committee.

2. On June 15th the members of the profession were asked to pledge themselves, in the event of the Bill becoming law, not to enter into arrangements for the treatment of insured persons on terms inconsistent with the above declared policy of the Association.

3. The Insurance Bill will probably become law within the next fortnight, and the Association and profession have to consider their future action towards it.

4. The policy of the Association as expressed in the above stated six cardinal principles is absolutely unchanged.

5. The Bill by the efforts of the Association has now been so amended that there is no legal barrier against the profession securing the fulfilment of its entire policy.

6. The following principles of the Association have been incorporated in the Bill as it has now left the House of Commons, viz., the free choice of doctor, the administration of medical and sanatorium benefits by the Local Health Committee, the representation of the profession on all the administrative bodies established under the Act; the statutory recognition of a committee of the medical profession in each district.

In addition the essential principle of a wage limit is recognised by Clause 15 (3) in the Bill, the precise amount being fixed by the profession in each district in negotiation with the Local Health Committee.

7. The remaining principles of the policy of the Association not dealt with under the Bill are the rate and method of remuneration and the amount of the wage limit. The first of these, the most essential of the principles of the Association, the Representative Body decided should be settled by agreement between members of the profession in each district and the Local Health Committee. As regards the second, it decided that this also if not embodied in the Bill should be fixed by local negotiation.

8. The Association, through the Representative Body, has taken every possible step to secure that in every locality where its assistance is required, the whole resources and strength of the Association shall be used to support the profession in securing the essential principles.

9. If each member of the profession will do his share in this great work he may fully rely upon the organisation of the Association being both ready and adequate to secure success.

(Signed) EWEN J. MACLEAN,
Chairman of Representative Meetings.
J. A. MACDONALD,
Chairman of Council.

Medical Department, British Medical Association, London, Dec. 11th, 1911.

MEETINGS OF THE MEDICAL PROFESSION.

As we go to press a mass meeting of the medical profession is being held at the Midland Hall, Midland Hotel, Manchester. Mr. G. A. Wright has been announced to take the chair. Medical men from all parts of the country have been invited. Resolutions will be proposed "calling upon all medical men to take no office under the Bill," and to form a temporary union to deal with the situation.

A meeting has been convened by an influential group of medical men for Tuesday next, Dec. 19th, at 4.30 P.M., at the Queen's Hall, Langham-place. A preliminary meeting has been held to draft the resolutions and showed that the general tone of these will be strong, their sense being to imply that existing associations have failed to safeguard the interests of the profession, and that a further union of medical men is required. Sir W. Watson Cheyne will preside over the meeting.

A representative meeting of medical practitioners in the Ilford district was held on Dec. 5th, in the Recorder Buildings, with the object of securing unity of action and of determining the main principles which should guide the profession in its work with the National Insurance Scheme in this locality. After some discussion a resolution was moved and carried unanimously to the effect that the meeting forms itself into the "Ilford Medical Union," to secure joint action locally, and through the British Medical Association nationally, with the rest of the profession, to safeguard the interests of the profession and the health of the public; to endeavour to secure fair rates of remuneration and fair conditions of employment under the National Insurance Scheme. All the medical men practising in the district who were prevented from attending the meeting have signified their agreement with the resolution, and their intention to join the union.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157.797 persons in the middle of this year, 7506 births and 4718 deaths were registered during the week ending Dec. 9th. The annual rate of mortality in these towns, which had steadily increased from 13·1 to 15·7 in the four preceding weeks, declined to 15·2 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual rate of mortality in these towns averaged 14·3 per 1000, and was 0·4 per 1000 above that recorded in London during the same period. The annual death-rates in the 77 towns last week ranged from 6·8 in Hornsey, 7·1 in Willesden and in Walthamstow, 7·8 in East Ham, and 8·6 in Bournemouth to 21·5 in Walsall, 21·7 in Sunderland, 22·2 in Preston, and 23·0 in Stockton-on-Tees. The 4718 deaths from all causes in the 77 towns were 151 fewer than the number in the previous week, and included 238 which were referred to the principal epidemic diseases, against 259 and 276 in the two preceding weeks. Of these 238 deaths, which was the lowest aggregate number recorded in any week of the current year, 60 resulted from diphtheria, 52 from measles, 45 from whooping-cough, 45 from infantile

diarrhœa, 20 from enteric fever, and 16 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 0·8 per 1000, against 0·8 and 0·9 per 1000 in the two previous weeks. The deaths attributed to diphtheria, which had been 64, 61, and 57 in the three preceding weeks, rose to 60 last week, and included 16 in London and its suburban districts, 4 in Bradford, 3 in Leicester, and 3 in Liverpool. The deaths referred to measles, which had been 51, 44, and 66 in the three preceding weeks, declined last week to 52, and of these 9 occurred in London, 8 in Norwich, 7 in Liverpool, 5 in Burnley, 4 in Nottingham, and 3 in Salford. The fatal cases of whooping-cough, which had steadily risen from 16 to 38 in the five preceding weeks, further rose to 45 last week; 11 deaths were registered in London and its suburban districts, 6 in Walsall, and 3 each in Birmingham, Sheffield, and Newcastle-on-Tyne. The deaths of infants under two years of age attributed to diarrhœal diseases, which had continuously declined from from 2714 to 68 in the 15 preceding weeks, further fell to 45 last week, and included 11 in London, 4 in Birmingham, 4 in Manchester, and 3 in Grimsby. The 20 deaths referred to enteric fever last week were 3 below the average number in the four preceding weeks, and included 2 each in London, Liverpool, Burnley, and Sheffield. The fatal cases of scarlet fever, which had been 29 and 25 in the two preceding weeks, further declined to 16 last week; 3 deaths were recorded in London, 2 in Liverpool, and 2 in Manchester. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had been 2213, 2166, and 2141 at the end of the three preceding weeks, had further declined to 2089 at the end of the week under notice; 241 new cases of this disease were admitted to these hospitals during the week, against 291, 203, and 248 in the three preceding weeks. These hospitals also contained on Saturday last 1306 cases of diphtheria, 194 of whooping-cough, 83 of measles, and 79 of enteric fever, but not one of small-pox. The 1239 deaths from all causes in London last week were 67 fewer than the number in the previous week, and included 331 which were referred to diseases of the respiratory system, against numbers steadily rising from 170 to 297 in the five preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 158 and 188 in the two preceding weeks, further rose to 201 last week, and 420 inquest cases were registered. The causes of 44, or 0·9 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and its eight suburban districts, Bristol, Bradford, Newcastle-on-Tyne, Nottingham, Salford, and in 42 other smaller towns. The 44 uncertified causes of death last week included 9 in Birmingham, 7 in Liverpool, 5 in South Shields, and 3 in Gateshead.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 796 births and 550 deaths were registered during the week ending Dec. 9th. The annual rate of mortality in these towns, which had been 16·7 and 18·0 in the two previous weeks, declined to 16·8 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·7, and was 2·4 per 1000 above the mean rate during the same period in the 77 large English towns. The annual death-rates in the several Scotch towns last week ranged from 14·1 and 14·5 in Edinburgh and Perth to 18·5 in Aberdeen and 24·3 in Greenock. The 550 deaths from all causes were 39 fewer than the number in the previous week, and included 58 which were referred to the principal epidemic diseases, against 63 and 72 in the two preceding weeks; of these 58 deaths, 23 resulted from measles, 10 from whooping-cough, 9 from diarrhœal diseases, 8 from diphtheria, 5 from enteric fever, and 3 from scarlet fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·8, and was 1·0 per 1000 above the mean rate from the same diseases in the 77 large English towns. The deaths referred to measles, which had been 28, 23, and 31 in the three preceding weeks, declined to 23 last week, and included 13 in Aberdeen, 7 in Glasgow, and 2 in Greenock. The deaths attributed to whooping-cough, which had been 4, 7, and 6 in the three preceding weeks, rose last week to 10, of which 5 were registered in Aberdeen and 3 in Glasgow. The deaths assigned to diarrhœal diseases, which had been 16 in each of the two previous weeks, declined last week to 9, all but one of which related to infants under two years of age; 3 deaths were recorded in Glasgow, 3 in Paisley, and 2 in Dundee. The fatal cases of diphtheria, which had been 7 and 15 in the two preceding weeks, declined to 8 last week, and of these 2 occurred in Glasgow and 2 in Leith. The 5 deaths attributed to enteric fever were 3 in excess of the average in the three preceding weeks and were all recorded in Glasgow. The 3 fatal cases of scarlet fever were registered in Glasgow, Paisley, and Greenock respectively. The deaths referred to diseases of the respiratory system, which had been 113 in each of the two preceding weeks, increased to 122 last week, but were 29 below the number recorded in the correspondir g week of last year. Of the deaths from all causes in the Scotch towns last week, 144, or 26 per cent., were recorded in public institutions, and 19 were attributed to different forms of violence. The causes of 16, or 2·9 per cent., of the deaths in the eight towns in the week under notice were not certified or not specified; in the 77 large English towns the proportion of uncertified causes last week did not exceed 0·9 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 502 births and 391 deaths were registered during the week ending Dec. 9th. The annual rate of mortality in these towns, which had been 18·0 and 18·3 in the two previous weeks, declined to 17·7 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·2 per 1000; in the 77 large English towns the mean annual death-rate during the same period did not exceed 14·3, while in the eight Scotch towns it was equal to 16·7 per 1000. The annual death-rate last week was equal to 18·6 in Dublin (against 14·3 in London), 16·1 in Belfast, 26·5 in Cork, 19·2 in Londonderry, 16·3 in Limerick, and 20·9 in Waterford; while in the 16 smallest of these Irish towns the death-rate last week did not exceed 15·1 per 1000. The 391 deaths from all causes were 12 fewer than the number in the previous week, and included 25 which were referred to the principal epidemic diseases, against numbers declining from 47 to 40 in the three preceding weeks; of these 25 deaths, 7 resulted from diarrhœal diseases, 6 from whooping-cough, 4 from scarlet fever, 4 from diphtheria, 2 from measles, 1 from enteric fever, and 1 from typhus, but not one from small-pox. These 25 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·1 per 1000; in the 77 English towns the mean annual death-rate from these diseases last week did not exceed 0·8 per 1000, while in the eight Scotch towns it was equal to 1·8. The deaths attributed to diarrhœal diseases, which had been 19, 19, and 14 in the three preceding weeks, further declined last week to 7, all of which related to infants under 2 years of age; 4 deaths were recorded in Dublin and 2 in Belfast. The deaths referred to whooping-cough, which had been 11 in each of the two preceding weeks, declined to 6 last week, and comprised 3 in Dublin, 2 in Belfast, and 1 in Lurgan. The 4 fatal cases of scarlet fever were equal to the average in the five preceding weeks. The 4 deaths assigned to diphtheria, of which 2 were recorded in Belfast, were equal to the average in the two preceding weeks. The deaths referred to measles numbered 2, against 4 in each of the two preceding weeks, and were registered in Dublin and Cork respectively. The fatal case of enteric fever was recorded in Dublin, and that of typhus in Cork. The deaths referred to diseases of the respiratory system, which had been 73, 78, and 77 in the three preceding weeks, rose to 92 last week. Of the 391 deaths from all causes in the Irish towns last week, 125, or 32 per cent., were recorded in public institutions, and 9 were attributed to different forms of violence. The causes of 13, or 3·3 per cent., of the deaths in the 22 towns last week were not certified either by a registered medical practitioner or by a

coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 0·9 per cent. in the 77 English towns, but was equal to 2·9 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

Fleet-Surgeon Patrick Brodie Handyside has been promoted to the rank of Deputy Surgeon-General in His Majesty's Fleet (dated Nov. 25th, 1911).

ROYAL ARMY MEDICAL CORPS.

Colonel F. H. Treherne has taken up duty at Bangalore as Principal Medical Officer of the Bangalore and Southern Brigades. H.E. the Viceroy and Governor-General of India has been pleased to appoint Brevet-Colonel R. H. Firth, sanitary officer, army headquarters, Simla, to his personal staff as Honorary Surgeon in succession to Colonel R. H. Forman, retired. Lieutenant-Colonel W. C. Beevor, C.M.G., lately commanding the Station Hospital at Bangalore, has taken over charge of the Military Hospital at Fermoy. Lieutenant-Colonel R. L. R. Macleod, lately commanding the Station Hospital at Aden, has been selected for the higher rate of pay under Article 317 of the Royal Warrant. Lieutenant-Colonel R. W. Wright has been appointed to command the Station Hospital at Fyzabad for a period of three years. Lieutenant-Colonel J. Fallon, from Preston, has embarked for a tour of service with the Northern Army in India, and on arrival will be posted to the Third (Lahore) Division. Lieutenant-Colonel C. E. Nichol, at present commanding the Station Hospital at Maymyo, Burma, has been granted an extension of his Indian tour of service until further orders. Lieutenant-Colonel B. J. Inniss has been transferred from the Eastern Command to the Irish Command. Major J. D. Mc D. McCarthy has taken up duty as Specialist Sanitary Officer to the Second (Rawal Pindi) Division, in succession to Major F. Smith, D.S.O., transferred to command the Station Hospital at Calcutta. Major M. P. Corkery, in medical charge of the Lawrence School and Residency Surgeon at Mount Abu, has arrived home on six months' leave of absence. The leave granted to Major R. J. Copeland, from Meerut, has been extended by six months on the recommendation of a medical board. Major H. O. B. Brown-Mason has been appointed Specialist in Dermatology and Venereal Diseases to the Sixth (Poona) Division. Major E. M. Morphew, on transfer to the Home Establishment from India, has been posted for duty to the Western Command. Major J. A. Hartigan has taken up duty in North China. Major J. G. Gill has been transferred from Secunderabad to the Station Hospital at Bangalore. Major W. H. S. Nickerson, V.C., from Rawal Pindi, has joined for duty at Cherat. Major B. Watts has been appointed Specialist in Midwifery and Diseases of Women and Children to the Seventh (Meerut) Division. Major A. F. Carlyon, from Devonport, has embarked for a tour of duty at Mauritius by exchange with Captain M. Foulds, surgical specialist at Belfast. Major G. W. Tate has taken up duty in Ireland as Medical Inspector of Recruits. Captain F. M. Parry, from Maidstone, has embarked for a tour of duty at Mauritius. Captain S. E. Lewis has taken up charge of the Military Families Hospital at Devonport. Captain R. G. Archibald has arrived home on leave of absence from Egypt. Captain C. D. Myles has been transferred from the Southern Command to the Western Command. Captain F. P. Lauder, from Cork, has been appointed to Youghal for duty. Captain A. D. Jameson, specialist in dermatology and venereal diseases to the Aldershot Command, has embarked for a tour of service with the Northern Army in India. Captain D. L. Harding, from Athlone, has taken up duty at Belfast. Captain C. E. Fleming, from Colchester, has arrived for a tour of duty in South Africa. Captain C. R. Sylvester-Bradley, from Cosham, has been appointed Adjutant to the Royal Army Medical Corps School of Instruction, Eighth (Wessex) Division, at Exeter, in succession to Major R. H. Lloyd, whose tenure of the appointment has expired. Captain A. H. McN. Mitchell, specialist in ophthalmology at the Royal Victoria Hospital, Netley, has been placed under orders by the War Office for a tour of service in Jamaica. Captain J. E. Powell has been transferred from the Northern Command to Alderney. Captain F. J. Stuart, from Fyzabad, has taken up duty at Meerut Cantonment. Captain C. A. T. Conyngham, from the Station Hospital at Quetta, has been detailed for a course of instruction in X-Ray Management at the Dehra Dun X-Ray Institute. Lieutenant E. C. Stoney, at present in charge of the Military Families Hospital at Colchester, has been detailed by the War Office for a tour of service in India during the present trooping season. Lieutenant R. H. Nolan, serving at Barian Military Hospital, Murree Hills, has been granted eight months' leave of absence home, on the recommendation of a medical board. Lieutenant A. D. Stirling, from Piershill, has taken up duty at Alexandria. Lieutenant T. J. Hallinan has been transferred from Youghal to the Military Hospital at Limerick.

INDIAN MEDICAL SERVICE.

Surgeon-General W. S. Bannerman, Surgeon-General with the Government of Madras, has been appointed to the suite of His Excellency the Governor of Madras during the Coronation Durbar at Delhi. Colonel D. ffrench-Mullen, deputy principal medical officer of His Majesty's Forces in India, has been selected for appointment as Principal Medical Officer of the Sirhind and Jullundur Brigades, in succession to Colonel H. Hendley. The Honourable Lieutenant-Colonel S. H. Henderson, Inspector-General of Prisons in the United Provinces of Oudh and Rohilkhand and Member of the Administrative Council, has been appointed to the suite of His Excellency the Lieutenant-Governor of the United Provinces during the Coronation Durbar at Delhi. Lieutenant-Colonel E. Jennings, superintendent of the Central Prison at Farrukhabad, United Provinces, has been granted privilege leave of absence, combined with furlough, for a total period of two years. Major C. B. Harrison has arrived home on leave of absence from Madras Presidency. The services of Major W. H. Roberts, plague medical officer in the Punjab, have been placed at the disposal of the Home Department of the Government of India. On return from furlough Captain G. G. Swan has been appointed to Ludhiana as Civil Surgeon, in succession to Captain M. Corry, who has been appointed Civil Surgeon at Mooltan. Captain H. C. Keates, at present officiating as civil surgeon at Jullundur, has been directed to proceed to Dehra Ghazi Khan as Civil Surgeon on relief by Major J. Peck, returning from furlough. Captain J. W. H. Babington has arrived home on leave of absence from India. Captain E. C. Hepper has been appointed to the medical and sanitary charge of the United Provinces Camps at the Coronation Durbar at Delhi. Captain E. T. Harris has been granted four months' extension of his leave of absence home by the Right Honourable the Secretary of State for India. Captain M. C. Kendrick has been appointed to officiate as Statistical Officer to the Government of India in the Medical and Sanitary Departments during the leave of absence of Major S. P. James. Captain C. Gill has taken up duty as Officiating Civil Surgeon at Simla during the absence on leave of Lieutenant-Colonel C. Duer. Captain N. S. Wells has received one month's extension of his leave of absence on the recommendation of a medical board. Captain F. O. D. Fawcett and Captain G. M. Millar have returned to India on the expiration of their leave. Captain Armytage Green, on appointment to the Civil Medical Department, has been posted to Jalpaiguri as Civil Surgeon. Captain E. A. Walker, civil surgeon at Bassein, has been granted leave of absence, combined with furlough, for a total period of two years. The services of Captain A. N. Dickson have been placed temporarily at the disposal of the Government of the United Provinces for plague prevention duty. His Excellency the Governor of Bombay in Council has been pleased to appoint Captain C. C. Murison to officiate as Superintendent of the Medical School at Hyderabad during the absence on deputation of Lieutenant-Colonel B. B. Grayfoot. Captain J. L. Lunham has been selected for appointment as Personal Assistant to the Surgeon-General with the Government of Bombay, in succession to Captain R. M. Barron, whose services have been replaced at the disposal of the Government of India.

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd Highland Field Ambulance, Royal Army Medical Corps: Lieutenant Arthur M. Davie to be Captain (dated Nov. 2nd, 1911).

1st East Lancashire Field Ambulance, Royal Army Medical

Corps: Major William Leonard Bentley, from the 3rd East Lancashire Field Ambulance, Royal Army Medical Corps, to be Major, with precedence in the unit as from April 1st, 1908, next above Major Herbert G. Parker (dated May 20th, 1911)

2nd East Lancashire Field Ambulance, Royal Army Medical Corps: Major William Bridgett Pritchard, from the 1st East Lancashire Field Ambulance, Royal Army Medical Corps, to be Major, with precedence in the unit as from April 1st, 1908, next above Major Fred D. Woolley (dated May 20th, 1911).

3rd South Midland Field Ambulance, Royal Army Medical Corps: Lieutenant George Scott Williamson, from the Yorkshire Mounted Brigade Field Ambulance, Royal Army Medical Corps, to be Lieutenant (dated Oct. 5th, 1911)

2nd Wessex Field Ambulance, Royal Army Medical Corps: Lieutenant Robert Burnet to be Captain (dated Oct. 1st, 1911).

THE DURBAR HONOURS.

In connexion with the crowning of His Majesty the King as Emperor of India a long list of honours has been issued rendering necessary a statutory increase in the numbers of the two Indian Orders. Among the members of the medical profession in the list is the name of Surgeon-General Charles Pardey Lukis, C.S.I., the Director-General of the Indian Medical Service and an additional member of the Council of the Governor-General of India for making Laws and Regulations, who has been promoted to a Knight Commandership of the Order of the Star of India. Surgeon-General Francis Wollaston Trevor, C.B., K.H.S., Principal Medical Officer in India, has also received a similar honour.

Among the Companions of the Order of the Star of India are the names of Lieutenant-Colonel William Burney Bannerman, I.M.S., Surgeon-General with the Government of Madras, and lately Director of the Bombay Bacteriological Laboratory; Colonel George Francis Angelo Harris, V.H.S., Inspector-General of Civil Hospitals, Bengal; and Lieutenant-Colonel Arthur Russell Aldridge, R.A.M.C., lately Sanitary Officer at the Army Headquarters.

In the list of Knights Commanders of the Order of the Indian Empire is the name of Surgeon-General Arthur Mudge Branfoot, C.I.E., I.M.S. (retired), President of the Medical Board of the India Office. Among the Companions of the Order are the names of Lieutenant-Colonel Charles MacTaggart, I.M.S., Inspector-General of Prisons, United Provinces of Agra and Oudh; Major Leonard Rogers, I.M.S., professor of pathology at the Medical College, Calcutta, and bacteriologist to the Government of India; Major Henry Burden, I.M.S., residency surgeon in Nepal; Lieutenant-Colonel James Reed Roberts, I.M.S., residency surgeon in Indore and administrative medical officer in Central India; and Major Frederick Fenn Elwes, I.M.S., surgeon to the Governor of Madras.

The Royal Victorian Order includes the name of Colonel Charles James Bamber, I.M.S., Inspector-General of Civil Hospitals, Punjab, and a member of the Coronation Durbar committee, who receives the C.V.O.

Lieutenant-Colonel Charles Henry Bedford, I.M.S., chemical examiner, Bengal, has been made a Knight Bachelor.

The following officers have received the "Kaisar-i Hind Medal for Public Service in India" of the First Class:—Major Albert Elijah Walter, I.M.S., superintendent of the X-Ray Institute, Dehra Dun; Major Arthur Gwyther, I.M.S., civil surgeon, Howrah, and superintendent of the Howrah Jail; Surgeon Lieutenant-Colonel Thomas Joseph O'Donnell, K.G.F. Vols., V.D., lately chief medical officer Kolar Gold Fields; Captain Jasper Robert Joly Tyrrell, I.M.S., agency surgeon at Bhopawar, Central India; and Major William Hancock Tucker, I.M.S., district medical and sanitary officer, Coimbatore, Madras Presidency.

We offer, in the name of the medical profession, our hearty congratulations to all these gentlemen.

BRIDGWATER HOSPITAL.—The annual meeting of subscribers to this hospital was held recently. The financial statement showed that there was an unfavourable balance of £1132 against the charity. It was stated that a carnival will be held next summer in order to raise funds for the hospital. It was decided to raise a fund for building a new wing, as additional accommodation was much needed.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—May I beg the hospitality of your columns to publish as widely as possible the fact that it has been decided to hold a meeting of the medical profession at 4 o'clock on Tuesday afternoon, Dec. 19th, in the Queen's Hall, Langham-place. Sir W. Watson Cheyne has kindly consented to take the chair.

I would like to explain that this meeting will not concern itself in any formal manner with the recent action of the Council of the British Medical Association: it obviously arises out of that action, but as no possible good could come from discussing that point in public any further it will be entirely omitted from the meeting which is intended to be one open to the whole profession.

The objects of the meeting will be confined to: 1. Protesting against the Bill in its present form by a resolution probably on the lines of those which are now being proposed in various centres. 2. Strengthening the hands of all associations of medical men which are assisting in the same object.

It is earnestly hoped that as many medical men as possible throughout the Kingdom will do their very best to attend, as the present situation of the profession under the Bill as it stands seems to be very critical.

I am, Sir, yours faithfully,

Harley-street, W., Dec. 11th, 1911. FRED. J. SMITH.

To the Editor of THE LANCET.

SIR,—The Insurance Bill will undoubtedly in a few days become the Insurance Act. The British Medical Association undertook to negotiate with the Government for the medical profession. The time has now come when we are bound to ask what has been the outcome of these negotiations. Like other members of the British Medical Association, I have received a memorandum signed by the chairman of the Representative Meetings, and the chairman of the Council, dated Dec. 11th. It seems to express some satisfaction with the result of the action of the Council, but I think this satisfaction will be found to be enjoyed by the members of the Council only. It is needless to discuss the "six essential principles" of which we have heard so much. The great outstanding fact is that while the Bill declares exactly what the insured are to contribute and what sickness benefit they are to receive, the members of the medical profession who are called upon to afford "free medical attendance" are not informed how or how much they are to be paid for their services. Whatever value may attach to the "six essential principles" so dear to the Council of the British Medical Association, the great fact that looms large in the estimation of every practitioner in the country is that while the Bill demands from him an unknown amount of professional service, it makes no definite provision for his adequate payment. It is to the clearing up of this doubt and uncertainty that we should now devote all our attention, and whatever may be thought of the action of the Council in regard to other matters I myself feel that their great default has been in dissipating their strength upon minor matters, and leaving untouched and to be fought out with every Local Insurance Committee by smaller bodies of practitioners, seriously handicapped in the encounter, the one essential issue. Even yet much may be done if only the profession will hold together and are wisely led.

I am, Sir, yours faithfully,

ALFRED PEARCE GOULD.

Queen Anne-street, Cavendish-square, W., Dec. 13th, 1911.

To the Editor of THE LANCET.

SIR,—The intense feeling which has in the last few days been stirred up against the Council of the British Medical Association appears to me to arise mainly from a want of knowledge of the real state of affairs. This feeling, if allowed to grow, will inevitably destroy the unity of the profession which has been so recently and so hardly achieved,

and this will render us powerless in the face of our opponents.

The facts of the case.—My own view as to the true state of affairs is as follows. The governing body of the Association is the representative meeting, an elected body which voices the feelings of the members in all the divisions and which declares the policy of the Association. The Council is the executive body which works out the details of the policy laid down by, and carries out the instructions of, the representative meeting. The policy of the Association, as declared by the representative meeting, has been arrived at only after careful consideration and after consulting the individual members in the divisions. Of course, with such an exceedingly complicated measure as the Insurance Bill it was impossible that there should be absolute unanimity in the views taken by the many thousands of members of the Association. In some cases the minority had to give way to the majority; in others divergent opinions were reconciled by taking an intermediate course. Thus the policy adopted was in the nature of a compromise amongst ourselves. But the net result was that in the end we did arrive at a policy on which we could all unite and which we could use as a common base from which to fight.

The policy adopted.—We agreed that we would not oppose the Bill at the outset, but that we should endeavour to have it amended and improved. We agreed on six cardinal principles which were to serve as the bedrock of our demands. We agreed that as many as possible of the points in these cardinal principles should be incorporated in the Bill, and that those which were not so incorporated we should insist on having provided in the regulations to be drawn up by the Commissioners. We agreed that if these six cardinal principles were not granted we would oppose, with all our power, the acceptance by medical men of the duties of providing medical attendance to the insured. With this end in view the majority of practitioners in the country signed a "pledge" to refuse to undertake the medical attendance of the insured under the Bill unless the six cardinal principles had been conceded.

An axiom.—In a voluntary association like ours, if we are to achieve any success by united action against powerful antagonists, we must take it as an axiom that where a minority has been constitutionally outvoted it must be willing to sink its minority views and to agree to act loyally with the majority in asserting the views that have been agreed upon for the general good.

Points of cleavage.—All through this adopted policy there appear what I may call points of cleavage when a number of members, sometimes from one section, sometimes from another, wished to take a line differing from that favoured by the majority. And when this has occurred, unless the minority is willing to fall in with the axiom I have just given, the Association will have its unity destroyed and as a power for enforcing the views of the whole body of members it will be reduced to impotence.

Let us look at some of these points of cleavage. First, there were a number of members who wished to have nothing to do with the Bill, and who were unwilling that we should take any part in endeavouring to improve the provisions of the Bill. These views have been negatived in the three successive representative meetings held this year. Then there were many who wished to have all the six cardinal principles embodied in the Bill itself. But this was recognised to be an impossibility. The policy, therefore, adopted by the representative meeting was that those points, which we could not get inserted in the Bill, were to be obtained in the regulations still to be framed by the Commissioners. Then, again, the "pledge" agreed to only referred to the medical treatment of those insured. Some men wanted a similar "pledge" to cover administrative posts under the Bill, such as Commissionerships. But when a resolution to this effect was proposed at the last representative meeting it was recognised that the passing of it would defeat our own objects, as unless we had satisfactory representation amongst the Commissioners we could not hope to have the regulations drafted to our satisfaction. This proposal was therefore, *with the consent of the meeting*, withdrawn.

What the Council have done.—From what I have said I think it is clear that the Council have so far faithfully carried out the instructions of, and the policy laid down by, the representative meeting. On the particular question which has raised all this dangerous storm—the appointment of Mr. Smith Whitaker—I would like to accentuate the fact that medical representation amongst the Commissioners is one of the points in the six cardinal principles for the granting of which we have been clamouring for the last seven months, and the withdrawal of the motion to apply the "pledge" to executive posts clearly implied, to me at least, that the representative meeting did not wish to hamper the Council in getting the best possible medical man appointed as a Commissioner. I have not yet heard it seriously suggested that we could get any better man for our purpose than Mr. Smith Whitaker. The idea of our Association being split into factions on the question of the precise method of the acceptance of this post would be absurd if it were not so serious.

The responsibility of the members.—If all those who have differed from the majority at any of the various points of cleavage are now to be added together as opponents of the policy of the Association, as adopted by the representative meeting, then, of course, we may find that they make a majority against this policy. But this method of working is absolutely contrary to the axiom I have propounded as essential to any satisfactory unity in the work of a voluntary association. That way lie anarchy and destruction. If the policy adopted by the Association be wrong, that is the fault of the members themselves or of their representatives. Certainly it is not the fault of the Council. I have heard it stated that the representative meeting is led by the nose by a few pushing members of the Council. This, of course, is absurd; but, even if it were true, it would still be the fault of the members for sending up such weaklings as representatives.

Danger of dissension.—Will not those who are forcing this split upon us realise, before it is too late, that they are simply playing the game of our opponents? It is idle to talk of the hasty formation of a new union at this stage in the fight. Even if it could be got ready as a fighting machine in time to be of any service, let us remember the old proverb about the danger of swapping horses when crossing the water. To attempt any new formation now is fatal, it simply means disunion and destruction. Our only strength is in unity. Our one weapon—first, last, and all the time—is refusal to undertake the treatment of the insured when the time comes. That weapon is as strong now as ever if we can only retain our unity. Those responsible for the Bill have been warned that we have this weapon ready, and that we shall not hesitate to use it. We are all of us justly indignant at the way we have been treated and our interests ignored by those who drafted the Bill. We are certainly united on the main issue, that we will not work the Bill unless the conditions offered are satisfactory to us. We can win, if we will only stand together. Why, then, because we are sore and irritated at the treatment we have received from others, should we lose our heads, quarrel amongst ourselves, and thus destroy our chances of success by a bitter disruption over questions which are, after all, only those of tactics and procedure?

I am, Sir, yours faithfully,

Harrow, Dec. 12th, 1911. ALFRED H. WILLIAMS.

To the Editor of THE LANCET.

SIR,—One can but regret that the admirable logic and wit of Dr. B. Hall is being wasted on a deservedly lost cause. If we pursue his argument to its conclusion, our practices would be so magically transformed by *per capita* payments that when we were busiest we should be saddest, and we should only be happy when we had no work to do. Would this state of mind really conduce to our patient's welfare, let alone our own? Much as we should all love to join with him in our client's tears and laughter, may I remind him that a good physician's duty to smile occurs precisely when the patient is weeping; and we are fortified in this difficult task by the knowledge that we are paid per attendance—i.e., per chortle. Dr. Hall's seems to be an individual and temperamental view; whereas the ordinary method of payment per attendance is based on the permanent springs of human nature, and rests on that fundamental community of interest underlying all fruitful labour—namely, the exchange of good individual work for good individual payment. Any transaction in which the payment is a known fixed sum and the work an unknown variable quantity stamps itself as a gamble. I recognise in

Dr. Hall a true sportsman, but I must persist in declining to join him in turning my actual occupation into a gamble against time and chance, with the dice loaded on the side of the State. Even without *per capita* payments a little philosophy will enable me to smile when the surgery is empty; and a little sympathy will enable me to present a cheery face when it is full, thus bettering Dr. Hall's attitude by dispensing altogether with the tears.

Dr. Hall and Mr. Penrose Williams must not suppose that their arguments are unanswerable nor that "silence gives consent." The arguments against *per capita* and for per attendance payments have appeared in abundance in our journals for months past; I would only add one out of many, if you have room for it, of a more general nature. Mr. Williams considers that "the one objection to the practice of medicine is the daily valuation of one's services." The art of medicine is, and always will remain, a mystery to the public, who do not know what we put into our bottles, and, if they did, would be equally ignorant of both of its commercial and therapeutic value. The public, therefore, have only two means of estimating the value of our services: (1) the apparent care we take of them, measured by our visits and their results; (2) the money they pay us per visit. Hence in their eyes their money is measured and balanced by our visits, which form a manifest measure of the value received by them.

What, in our consciences, is our aspect of the matter? We know that our medicines alone are commercially the smallest item, and therapeutically but a small item, in the things we give them; but our *visits* include our advice and care, and we add them to the credit balance as the major item in the ledgers of our conscience. In fact, our sense of honour compels us to earn the money of each visit by giving to each visit the utmost of our care. It is precisely the daily money valuation of our visits, to which Mr. Williams objects, which induces us to give value for money, because this value cannot, as in ordinary exchange and barter, be *exacted* from us by the buyer (*caveat emptor*), on account of his ignorance of the true items in what he is receiving. On the two standards by which he judges, what value will he place on services obtained for 4*s.* a year? He will value them just at four shillings' worth; and, what is more, he will eventually get just that value and no more, for in the long run services of unlimited scope so paid for will be corrupted and restricted so as to be of that value and no more. Can this be good doctoring?

The clients of most of us, from reasons of expense, only call us in when they need. Our existing practices are founded on this basis. "Free doctoring" at an annual fixed payment will reveal a tenfold number of calls, clients who had previously called me in only in emergencies, and according as they could pay, but who will now call me in in innumerable slight illnesses. (Mark that it is all one to me whether the illness is slight or severe; the time and care per attendance which I give them is substantially the same in all cases.) Hence my work will be enormously increased, and three consequences will inevitably attend the system. (*a*) Simple arithmetic on the census proves to me that I can at best, on a *per capita* basis, receive a less income than I now earn. (*b*) While to earn it I am bound to sacrifice all my leisure and health in impossibly enhanced work. Why should any of us accept, still less welcome, this *certain* prospect. It may be pure selfishness, but I prefer the present system of payment for work done, which applies to all other exchanges, and which leaves to both parties to the exchange the responsibility of freely exchanging the service for the payment from day to day. (*c*) This enormously enhanced work can only be coped with by an enormously enhanced number of doctors. Where are they? They do not exist; hence I must do the work of ten. The Chancellor began by admitting that "the doctors are an overworked profession"; can he be surprised that we decline to add to that existing heavy burden an enormously enhanced *new* burden of work?

This view of the problem is entirely apart from the sordid £ *s. d.* aspect, which even the *per capita* advocates, in their altruistic heights, cannot and do not ignore. Mr. Williams himself claims that "the whole thing for us turns on one point only, £ *s. d.*" When one considers the quality of work turned out by overworked people I think it will be admitted that we advocates of "payment per attendance" take a wider and more truly ethical view of the problem than our opponents. Pardon me for attempting to bring out clearly these two of the very many aspects of the problem; practical aspects which none of the opposing letters, admirable as they are in logic and theory, have even touched.

I am, Sir, yours faithfully,

Osmotherly, Nov. 30th, 1911. H. B. LUARD.

To the Editor of THE LANCET.

SIR,—Although thoroughly in accord with the professed object of the National Insurance Bill to protect the poorer classes against the evils of sickness and unemployment, I do not for one moment think that the proposed victimisation of the medical profession will serve that purpose. Surely in the fight against disease and death it is essential to the public welfare that the medical attendant should not only be well qualified, stimulated to most strenuous effort and unrestrained by handicap, but at the same time able to earn sufficient to maintain himself and his in honest independence. These conditions, I am quite certain, would not be fulfilled under a scheme which proposes to remunerate the medical attendant at so much a head. Such a scheme, on the contrary, would rapidly diminish the present number of competent men, and offer no encouragement for them to do their best.

The system of payment per head I have had considerable experience of, and I am quite convinced that it is radically wrong and unjust to patient and medical man alike. (1) The patient must employ for a time a practitioner in whom he may have no confidence; (2) the practitioner is obliged to continue attendance for a time on a patient who may make his life miserable and injure his reputation by neglecting to follow doctor's advice; (3) many, if not most, subscribers to sick clubs think that their weekly payment entitles them to call on their medical officer at any hour and for the most trivial ailments; (4) encouragement may be given to malinger; and (5) temptations to practitioners to scamp their work. These are a few of the evils pertaining to clubs paying capitation fees, and so far as I can see these deplorable evils are going to be accentuated by the proposed Act.

Therefore I thoroughly agree with the movement for demanding (1) complete liberty of choice between patient and practitioner; and (2) payment for services rendered and *not* per head. Contract practice on the lines of the National Deposit Friendly Society, however, is not quite in harmony with my ideas of sound and honest practice. Its moderate scale of fees might be accepted for poorer patients and modified for those in better circumstances, but it would be difficult, if not impossible, to draw a hard-and-fast line of income, as a curate, clerk, or small shopkeeper with £160 per annum might not be so well off as a mechanic with £2 per week. I am, Sir, yours faithfully,

JOHN DUNLOP, L.R.C.P. & S. Edin., &c.

Walthamstow, Dec. 8th, 1911.

To the Editor of THE LANCET.

SIR,—I am directed by the Salford and Broughton medical unions, which societies include practically every medical man practising in the borough of Salford, to forward to you a copy of the resolutions which were carried without a dissentient voice at their meeting held in Salford on the evening of Dec. 5th.—I am, Sir, yours faithfully,

STANLEY HODGSON,
Honorary Secretary, Salford Medical Union.

Salford, Dec. 6th, 1911.

This meeting is of opinion that the provisions of the National Insurance Bill as finally drafted do not incorporate the six cardinal points to which the profession unanimously pledged itself. That they do not secure effectual means whereby the practical working of the Bill can be carried out in absolute conformity with the principles of these six points. And therefore the Council of the British Medical Association should at once call upon all members of the profession to decline to form a panel or to undertake any duties which the Bill proposes to assign to them.

This meeting expresses its strong disapproval of the action of the Council of the British Medical Association and demands its resignation forthwith.

To the Editor of THE LANCET.

SIR,—I am a new member of the British Medical Association, having joined only a short time after the introduction of the National Insurance Bill. I have no personal acquaintance with the members of the Council, and I do not even know Mr. Smith Whitaker by sight. But I have been an interested student of the work done both by the Council and

the medical secretary since the Bill was printed, and as such I could scarcely fail to notice the conspicuous ability displayed in the various documents issued by them, and also in their negotiations with one of the keenest intellects of the present day.

I therefore look upon the appointment of Mr. Smith Whitaker as a happy augury for our future under the Bill. His unrivalled knowledge of the profession and the conditions of practice in all parts of the United Kingdom; his special experience in insurance problems; and his tact, ability, and genius for administration and organisation, as shown in the high state of efficiency to which he has brought the British Medical Association, mark him as the man best of all suited for this high and important position. I think few would gainsay the assertion that if the choice had been given to the profession to elect its own man Mr. Smith Whitaker would easily have headed the poll. That being so, I think it is rather unfortunate that unworthy motives should be attributed to the Council in connexion with this appointment and the negotiations with the Government, and on this matter I am entirely in agreement with the views expressed in the leading article in your current issue (p. 1642). I fear this is hitting below the belt. The special representative meeting gave the Council the mandate to negotiate with the Chancellor of the Exchequer and also to use every influence with the Members of the House of Commons with a view to amend the Bill so that the six cardinal points could be secured to the profession. On what points can critics of the members of the Council indict them? What are the specific charges of failure brought against them on any one of those points? In considering the matter from this standpoint I think a careful perusal of the Bill, as amended in Committee, is highly advisable. It is with valid reason contended by the Council that the Bill in its amended form will enable the profession to obtain all those points, and, I believe, too, that any impartial legal tribunal would quickly come to the same conclusion.

For example, if the medical men in any administrative area, through their directly elected Local Medical Committee, decide that they will not accept service under the Act on the *per capita* system of payment, then payment for work done can be equally as well secured them by the present provisions of the Bill. If they in the same manner fix a minimum rate of wages above which they will not attend insured persons in that area the Bill enables them to have their way on this point also. Few, indeed, seem to grasp the true significance of those Local Medical Committees with their statutory right of being consulted by the Local Insurance Committees *according to regulations issued by the Insurance Commissioners* (the italics are mine). Truly those Committees are a splendid victory for the Association.

Then with regard to the free choice of doctor, we hopefully look to the deputy chairman to see that the Harmsworth amendment will not long remain either a grievance to the profession or a menace to real free choice. For if the regulations cannot assure this, then the Commissioners have the power vested in them to vary or alter the provisions of the Act so that it will work smoothly. Therefore I think we can feel quite easy on the point. Similarly, in regard to the early actuarial figures of 4*s.* or so for medical attendance, it should be made known at once that no such absurd figure can even be discussed by us. And in this regard, does anyone think that this most astute politician, Mr. Lloyd George, who nearly wrecked his health in getting this measure through, would ruin his reputation, destroy his party, and lose his popularity by passing a health insurance scheme that could only be worked by blacklegs? Or to think that Mr. Smith Whitaker would dishonour us and himself by taking office on such conditions! The thing is too absurd to seriously discuss. I certainly prefer to consider his appointment as a friendly act towards us, and as foreshadowing that the regulations, which he will have such a large share in framing, will amply satisfy the just demands of the profession and thereby give the public a truly efficient and national medical service.

Our one and only danger now is disunion, and it is therefore deplorable that some branches should seem to be inclined to adopt separatist tactics. That road leads to ruin and certain disaster, and to those whose thoughts turn that way no better recommendation could be given than to advise them to read the "Battle of the Clubs" (published by THE LANCET), and the report on "Contract Practice." This will put them in a frame of mind to reflect on what we have been, and what we might be again if we abandoned our present splendid organisation and destroyed that unity which now makes us so powerful.

I am, Sir, yours faithfully,

Mile End, E., Dec. 10th, 1911. M. S. HARFORD.

To the Editor of THE LANCET.

SIR,—Your attitude on this question is only what might be expected from the antecedents and prestige of our leading journal.

But apart from the utter unsuitability of the contract principle in its application to medical practice, there is in the provisions of the Bill one point which in its special bearing on the general practitioner seems to have hardly gained the attention it deserves. I speak of the transference of dispensing out of the hands of the practitioner into the hands of the dispensing chemist. Now, at first sight this seems a step in the right direction, for the compounding of drugs is not rightly our province, and in widely different circumstances I should welcome the change. But the chemist has about as much right to *prescribe*, as the doctor to *dispense;* and over the counter, and in the little room behind his shop he already has trespassed long on what is undoubtedly our legitimate domain, so that to transfer into his hands our only set-off against him is a manifest injustice.

I have throughout declared my adherence to the system of payment according to services, and on no account whatever shall I withdraw. The inherently vicious principle of contract, which the action of those who should know better has alone enabled the Chancellor to retain, ought to be rejected. This Bill is *not ours*, though it might be from much that has been done and said about it; it is Mr. Lloyd George's; and if he is unable to reduce to practice the principle which alone can make it acceptable to us, then, so far as we are concerned, there should be an end to the whole matter.

I am, Sir, yours faithfully,

Rotherham, Dec. 7th, 1911. HUBERT H. B. WILKINSON.

To the Editor of THE LANCET.

SIR,—In my letter to you in to-day's issue of THE LANCET a slight error has crept in which unfortunately quite alters the meaning of what I intended to convey. The item, "Mr. Lloyd George is *not* fully convinced that £4,500,000 is inadequate to achieve his beneficent objects," should read, "is *now* fully convinced."

I am, Sir, yours faithfully,

J. P. WALKER, M.D. Durh., D.P.H.,

Dec. 9th, 1911. Assistant County Medical Officer for Hants.

To the Editor of THE LANCET.

SIR,—The advocates of "payment for work done" seem to think that this method will ensure that we shall be paid a fair fee and that we are much more likely to get adequate remuneration than by the capitation payment. But I venture to think that when the fees are suggested they will be far from acceptable to the majority of practitioners and that a reaction will set in. The National Deposit Society is often referred to, but their statistics are quite misleading, and their fees ridiculously low. This society deals mostly with a class that has a low sickness-rate—the small tradespeople and the well-paid artisan. And the whole aim of this society is to cut down medical attendance by drawing from the member's deposit for payment

If payment for attendance is adopted in the insurance scheme there will be no inducement to curtail medical attendance, or to discourage malingering. Coddling and encouragement of imaginary diseases and trivial complaints would abound. The bills would startle the Insurance Committees and extra grants be applied for everywhere. Then the ratepayers would cry out and another method of payment would be insisted on. The medical profession would be accused of being "out for fees" and be discredited in the public eye. In this system there is less obvious inducement for the practitioner to warn the drunkard, restrain the gourmand, advise the careless, or improve the hygienic conditions than there would be in a capitation payment. The immense labour of book-keeping and sending in sick reports and bills would be a very serious matter.

Our profession has always been content to do a great amount of gratuitous and underpaid work, and we must recognise the fact that it will always be so. We get our

compensation in many ways. The money value of medical services cannot be estimated. All we ask for is a decent income. We can never expect any Government to guarantee all our ordinary fees for attending people under the income-tax limit or under the hoped-for £2-a-week limit. And this is what the advocates of "payment for attendance" are asking for. In "capitation" payment it is said that we take all the risk, and that in excessive sickness we should be the losers. But we must not forget that this cuts the other way, and in times of less sickness we get the same pay. Moreover, in localities with excessive sickness an extra grant could easily be made. We must remember that the capitation rate must vary in different districts unless allowance for mileage be an extra.

One of the great objections of "payment per attendance" is that the tariff of fees will tend to spread to private practice. I object to any fixed fees above a minimum. We must retain our freedom to charge what we think is a proper fee and not be bound to a scale. Contract practice is so associated in our minds with underpayment and unpleasant conditions that the name itself creates a great prejudice. But if we get better pay and are controlled by a body on which we are represented, and, moreover, if no individual bargaining is allowed and everything must be done by a Local Medical Committee elected by the profession, I fail to see any objection to it. At all events, it has got a firm hold all over the country and many are satisfied with it. No combined effort has been made to abolish it.

Can we blame the Chancellor for inferring that the system is so ingrained in our practice that a continuance, under better conditions, would be acceptable to us? Can we wonder if he asked his actuaries to work out the cost on a 6*s*. per head basis? In what other way could he have estimated the cost of his scheme? He has stated that the cost of medical attendance is unlimited. He knows that it will cost much more than 6*s*. But a low estimate must be made as in the case of Old Age Pensions, or the Bill would not go through. The Insurance Committees will know where they are if they pay on a capitation system. They would be content to pay a good fee per head rather than run the risks of the "per attendance" system. A fee of 8*s* 6*d*. per head and an extra 6*d*. for drugs would, according to my statistics for the past four years of club patients, pay in a country district. The fear that a capitation basis would encourage unnecessary calls upon the medical man will be no more real than it is at present, and every medical man knows how to stop that sort of thing, though it may take a year or two to educate the people up to the point of coming at proper hours. Some pointed admonition and combination among medical men would soon lessen the evil. It is a well-known fact that in certain districts where the medical men have protested against night calls there are very few of them. Even if an extra fee be paid for night calls every medical man would prefer to be without them.

In conclusion, I wish to emphasise that it is quite time that this controversy was settled, and that a definite decision was arrived at. For many months a special investigator has been collating statistics on contract practice and other matters. Surely he must have formed some ideas as to the "capitation" *versus* "per attendance" system? Let us settle this question and devote ourselves to other urgent matters. If we do not, I can see dissension in our ranks. In the Division of the British Medical Association in which I reside we are about equally divided on the question, and I believe it is so all over the country. I tremble to think what will happen when the Divisions have to decide this matter. It is far better to come to a general agreement. If all the arguments seem to favour a capitation fee, it is entirely owing to the fact that we have allowed this system to become established so strongly that it is impossible now to adopt any other. I am, Sir, yours faithfully,

Buckingham. ARTHUR E. LARKING.

To the Editor of THE LANCET.

SIR,—It is disappointing to find any doubt in the minds of medical men as to the policy of the British Medical Association in concurring in Mr. Smith Whitaker's appointment as Insurance Commissioner. I hope that after a little reflection the whole profession will feel unmixed satisfaction at this appointment.

Two things must be remembered, both of which, indeed, are recognised in your article of this week. First, there was to be a Medical Commissioner in any case. Is it better to have Mr. Smith Whitaker or Dr. X. Y. Z., whose attitude towards the Act might be nondescript or wobbly? Secondly, the sole and only *raison d'être* of the Medical Commissioner is that the views of the profession may be freely and ably represented on the Commission which will have the control of many important details in the working of the Act. I am not a member of the British Medical Association, but a comparatively slight personal acquaintance with Mr. Whitaker has taught me that when he has made up his mind he is not lightly swayed from a course of action. The Government has seen enough of him in recent months to know this; it cannot imagine that it will silence such an opponent by appointing him to a position which has been created on purpose that the very views he has already repeatedly stated may be officially represented. To seriously put forward the "bribery" theory is an insult to the intelligence of both the Government and the medical profession, even more than to the character of the new Commissioner.

The Association has technically departed from its position; but would it have been more tactful, more prudent, or more helpful to the profession had it objected to Mr. Smith Whitaker accepting the appointment? I feel that both Mr. Whitaker and the profession are to be heartily congratulated on an appointment which is also creditable to the Government's desire to hear the doctors' side.

I am, Sir, yours faithfully,

Norwood, S.E., Dec. 8th, 1911. S. W. CARRUTHERS.

To the Editor of THE LANCET.

SIR,—I am instructed to forward you the enclosed copy of a letter which has been sent by the Broughton Medical Union to the Members of Parliament for Manchester and Salford.

I am, Sir, yours faithfully,

R. B. FLETCHER, Hon. Secretary.

Manchester, Dec. 5th, 1911

The Broughton Medical Union.

DEAR SIR,—I am instructed to forward you the following copy of a resolution carried unanimously at a special meeting of the above union held on Dec. 1st, 1911.

That the Broughton and Salford Medical Unions, embracing practically all the registered medical practitioners in the county borough of Salford, earnestly request you to record your vote against the third reading of the National Insurance Bill as the six cardinal demands of the British Medical Association have not been embodied in the Bill.

Yours faithfully,

Manchester, N., Dec. 4th, 1911. R. B. FLETCHER, Hon. Sec.

To the Editor of THE LANCET.

SIR,—I have had sent to me by the honorary secretary of the Lambeth Division of the British Medical Association a series of circulars, asking me to become a member of that body, and to guarantee a sum in the future, with a proposed immediate payment of £1, towards a fund to carry on their struggle in connexion with the Insurance Bill, and finally threatening to brand me as "an enemy to the profession" if "I persist in refusing to commit myself to a definite statement of the profession's policy." I have written declining to agree to their requests. Is the policy of the British Medical Association "the profession's policy"? I doubt it very much. I consider the policy of the British Medical Association in connexion with the Insurance Bill anything but determined or satisfactory. It is a dallying policy, and their sanction to the appointment of their medical secretary to the post of "Deputy Chairman of Insurance Commissioners" before the six cardinal points they demand are conceded, stamps their policy as a "betrayal of trust." As to guaranteeing a sum in the future, I am not in a position to do so, if so inclined, and the threat to brand me as "an enemy to the profession" is most unjust, and amounts to nothing less than coercion. There is no more strenuous opponent of the Bill, as at present framed, than myself, and I have done, and will continue to do, all in my power to prevent it becoming law. I have brought before my patients my views on the subject, as you will see by the enclosed copies of notices placed in my surgery. I have asked each working man with whom I have come in contact for his opinion of the Bill, and, without exception, all expressed dissatisfaction—mostly in strong language. Under the Bill I should be compelled to give unsatisfactory work to my patients, and thus do away with any feeling of confidence

they may have had in their doctor. Those who accept office under the Bill must sooner or later realise that they are greater enemies to the profession than any who at present refuse to sign away their independence of action.

I am, Sir, yours faithfully,

ROBT. SAUNDERSON.

Rodney-road, Walworth, Dec. 11th, 1911.

*** Mr. Saunderson's statement concerning the Bill, posted in his surgery, is a vigorous plea for that freedom of relations between medical man and patient which he considers will be destroyed under the impending legislation.—ED. L.

To the Editor of THE LANCET.

SIR,—"Rural Practitioner" says he is absolutely convinced that the *per capita* system of payment is far and away the best and most "lucrative" in a rural district. Well, I have had 20 years' experience of a country practice and I am absolutely convinced that this system is "rotten to the core," bad for the doctor, and worse for the patient. It may under certain circumstances be the most lucrative system (though I think the word lucrative in this connexion is a peculiarly inappropriate one), but this is a matter of minor importance. Payment for work done, with proper safeguard against its possible abuse, is better for doctor and patient, though not necessarily better for the doctor's pocket. It means better work, and if the people of England and the leaders of the Friendly Societies could only be made to realise this all our difficulties would vanish.

I am, Sir, yours faithfully,

T. CUMING ASKIN, M.D. Dub.

Alderton, Woodbridge, Suffolk, Dec. 12th, 1911.

To the Editor of THE LANCET.

SIR,—I have been instructed by the Rossendale Medical Society to tender you their best thanks and appreciation for the kind way in which you have opened the columns of your journal to members of the medical profession in connexion with the National Insurance Bill.

I am, Sir, yours faithfully,

E. W. FALCONER, Honorary Secretary.

Stacksteads, Bacup, Dec. 6th, 1911.

To the Editor of THE LANCET.

SIR,—For nearly six months I have held myself in check and refrained from airing my views on the Insurance Bill in a letter to THE LANCET. It has been quite a struggle week after week to read the outpourings of others and myself keep silence. Whatever its intentions, I have all along disliked the Bill. I think it will upset my practice and land me in all kinds of troubles without giving me the least benefit in return. I have a mixed practice with some club work. I don't like the clubs, but they are useful. I object on principle to Friendly Society control, but I make the best of it. I regard it and club patients as necessary in my professional life, but I have a strong objection to extending the club system, under compulsion by Act of Parliament, to a large number of the patients of small means who are now upon my private list. The booking and collecting of small accounts is a nuisance, and there are many bad debts, but I prefer private patients. Moreover, if I give up dispensing for my smaller patients I shall have to discharge my dispenser, and perhaps lose that dispensing for my better class patients from which at present I derive part of my income. Again, the saleable value of my practice, in which I invested all my capital some years ago, will certainly diminish. Thus, from every point of view, I think the Bill detestable. I do not want it, and I never asked for it.

But when I hear all this commotion about insisting upon the "six cardinal points" and refusing to work if they are not all granted, I feel obliged to ask my colleagues whose work runs on the same sort of lines as my own (and there must be a vast number of them), do they realise the full meaning of each of these cardinal points for which they say they are so willing to strike? I am thinking in particular of "free choice of doctor," which seems to be the only demand which was immediately and willing granted by the astute Chancellor, and indeed the only point which he has substantially conceded.

I cannot imagine why we asked for this "free choice"—or why we allowed it to be made a "cardinal point." The Act will take so much away from me, why should it also rob me of my one little vested interest? With all their manifest drawbacks these clubs are now mine own and yield an assured income. With "free choice" they and the rest of my lower middle-class practice will be open to competition from all sides. Of all the silly things that have been noisily said and quietly accepted this "free choice" chatter seems to me the silliest.

The whole scheme is unpalatable. But why all this talk of "six cardinal points" when one at least of them has never been realised or even discussed? This is my first and only letter. We must know exactly what we mean to strike for before we talk of striking. At the present moment we are in a bad way, but with a little clear thinking and some sensible leadership we may yet pull through.

I am, Sir, yours faithfully,

Dec. 10th, 1911. RADIX.

To the Editor of THE LANCET.

SIR,—Surely it would have been more diplomatic and of much more service to the profession had Mr. Smith Whitaker refused the post of deputy chairman until the six cardinal points put forward by the British Medical Association had been granted.

Would it not have been better if the Council of the British Medical Association had sent to each member a circular explaining matters, and allowing them to discuss with their fellow members the offer of the appointment made to Mr. Smith Whitaker instead of the one sent excusing their having advised his acceptance of the post with such undue haste?

I am, Sir, yours faithfully,

Dec. 11th, 1911. TOWN PRACTITIONER.

To the Editor of THE LANCET.

SIR,—Having been for some 18 years a bookkeeper to the medical profession both in London and the provinces, I venture to think I can in a measure speak on some aspects of the Insurance Bill, shortly, it is feared, to become an Act. Despite all that has been said, it is doubtful if the profession fully realises the extent of the injury that this Bill may do to their practices. Most practices in which I have been engaged as bookkeeper relied to greater or less extent on the patients paying 3*s.* or 3*s.* 6*d.* per visit, and the male members of this class (with a certain number of women and domestic servants, both male and female) will now be turned wholesale into State-club patients paying 1*d.* or a little more per week. A glance at many ledgers will prove the havoc likely to result. This, however, is not all. In certain districts where Friendly Societies are grouped together and employ one medical man solely there is a provision in the Bill by which this grouping shall still continue, and if the Friendly Societies attract a large number of the State-club patients many patients will leave their present medical man who will receive nothing in return.

Only those who have worked in large club practices can realise what the profession will lose, not only financially but in standing, in return for very hard work. It is for the profession to have nothing to do with the Bill as it now stands.

I am, Sir, yours faithfully.

Dec 11th, 1911. ALIQUIS.

ELECTION OF DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—I wish to thank most sincerely those who voted for me at the last election as Direct Representative on the General Medical Council. I think I may almost call them my personal friends, as owing to circumstances which are not necessary now to detail, those who voted for me were directly or indirectly influenced by old associations and the fact that I have been connected with medical reform of the General Medical Council, and elsewhere, for a long period of years.

I also take the liberty of thinking that the principle of the judge not being the accuser, however indirectly, is a right one. All the Direct Representatives are now the nominees

of the British Medical Association, and as such will doubtless either have to act in the dual capacity, or have to retire from the Council when cases of great interest to the profession are brought before it.

I am, Sir, yours faithfully,

Plymouth, Dec. 4th, 1911. GEORGE JACKSON.

SANATORIUM TREATMENT FOR CHILDREN.

To the Editor of THE LANCET.

SIR,—Speaking on this subject at Cambridge in 1880, more especially with reference to hip disease, the late Mr. Timothy Holmes said [1]:—

> Who has not seen with profound sorrow poor children bandied about from one out-patient room to another, getting splints which only very imperfectly immobilise the joint or receiving injunctions to "keep at rest" which the surgeon knows cannot be carried out, till the limp becomes agonising pain and the patient is taken into hospital and allowed a little rest in bed? Then after a few weeks he is found to be occupying a bed which can be better employed; and his pain having for a time subsided he is turned out again. Possibly this process is more than once repeated, and then abscess forms; the joint is found to crepitate; and the surgeon probably knows that if he keep him in again for a few weeks and send him out relieved the disease will recur in a worse form; and so he recommends excision. I do not say that the surgeon is wrong in his advice under the circumstances, but I do say that the circumstances show our general hospitals to be places where chronic morbus coxarius can hardly be treated successfully.

Mr. Holmes died in 1907, and in an obituary notice the above passage is referred to with the painful comment that "the protest would be almost, if not quite, as much justified to-day as when it was uttered more than a quarter of a century ago."[2] The same year that the children lost Mr. Holmes they gained the Education (Administrative Provisions) Act of 1907, which gives the local education authorities power "to attend to the health" of the children.

When you, Sir, were asked as to the meaning of this you replied that "under these provisions we are of opinion that any county council may establish children's hospitals and convalescent homes at the seaside, provided they obtain the approval of the Board of Education."[3] Here, then, at last was the chance for the children, but the recent report of the chief medical officer of the Board of Education goes far to destroy this hope. After quoting Section 13 (which confers the power) the report (p. 124) goes on to say that—

> The power conferred by the section is not indiscriminate or promiscuous. In matters of construction it is necessary to consider the whole scope and purport of the Act, or series of Education Acts, in which the section occurs. From such a consideration it is reasonable to suppose that Parliament intended (*a*) that the powers of treatment under this section should be used for children who are in attendance at public elementary schools, and that therefore children whose state of health necessitates absence from school without any hope of returning, or whose state is such that they can only be effectively dealt with in permanent institutions other than schools, should be regarded as outside the scope of this section; (*b*) that the treatment supplied should be carried out in intimate connexion with the system of education and with the school; (*c*) that the maladies and conditions for which treatment is provided under this section should primarily be either such as are capable of amelioration in connexion with school life, or are conditions which are, generally speaking, characteristic of school children. Though the wording of the section is extremely general, it is in the interests of sound administration that these three considerations should be borne in mind.

This interpretation of the Act is probably not made without legal assistance; but it must be remembered that the only authoritative interpretation of an Act of Parliament is the decision of a judge, and further that on three important occasions recently the opinions of the law officers of the Crown have been at variance with those of the judges. With respect to the intentions of Parliament it may be here mentioned that when this section came up for discussion in the House of Commons it was pointed out that it would enable local education authorities to establish hospitals, and an amendment was moved; yet the amendment was withdrawn and the section passed as it stood, and still stands.[4]

When a child is absent from school on account of ill-health the attendance officer calls, and if the child is well enough orders, under threat of prosecution, that he be taken to be examined by the school doctor; if he be not well enough to go the school doctor, as I understand, does not go to see him; the child is excused from school attendance, his name is removed from the school register, and his existence possibly forgotten. Instead of this I submit the authority should instruct their doctor to go and see the child, and ascertain if he is under medical care, and if so, whether the medical attendant considers the circumstances are favourable to adequate treatment; very possibly the child cannot be sent to a sanatorium on account of the weekly charge the institution makes, and which the neighbourhood is too poor to raise; under these circumstances it would seem clear that the local education authority should exercise the power it possesses of paying in whole or in part for the child. It is true this can only be done with the consent of the Education Department, but there is no reason why the local authority should not play its part and leave the responsibility of veto where the law has placed it—at Whitehall.

If voluntary arrangements are, as they are said to be, inadequate, the above is the only way in which these children can be properly treated; the Poor-law is only for the destitute and the sanatoria of the Insurance Bill do not yet exist.

I am, Sir, yours faithfully,

Devonshire-place, W., Dec. 9th, 1911. WALTER EDMUNDS.

[1] Brit. Med. Jour., 1880, vol. ii., p. 257.
[2] Brit. Med. Jour., 1907, vol. ii., p. 705.
[3] THE LANCET, Nov. 30th, 1907.
[4] The Schoolmaster, August 10th, 1907.

THE DIAGNOSIS AND TREATMENT OF URINARY TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—My attention has been called to an interesting address to the Harveian Society on the above subject by Dr. Samuel West, and published in your issue of Nov. 11th, p. 1318. He claims that the disease is difficult to diagnose in the early stage. In this I fear I cannot agree; and with regard to treatment he practically advocates a do-nothing policy, completely contrary to the teaching of modern surgery, and to a considerable extent based upon the belief, not supported by facts, that renal tuberculosis is in the great majority of cases bilateral early in the history of the disease. And in the last paragraph he says: "All that I wish now to do is to protest against regarding the removal of a tubercular kidney as an operation to be lightly decided on. It is a very grave act, requiring the most serious consideration and in all cases involving grave risks. The very ease and success with which the mere operation can now be done renders this caution, I think, the more necessary. The question is not whether the operation can be safely and successfully done, but what will be the condition of the patient afterwards, and how far his chances of life will be altered for better or worse." Every careful surgeon will accept this general statement of opinion, but he will also remember that in the present position of renal surgery there is as great responsibility in refusing an operation as in advising one, and that by adopting the former course during the time that elapses between the onset of the disease in the kidney and the invasion of other parts the surgeon may allow to escape a valuable opportunity of saving the life of his patient. Since physicians have come to appreciate the value of recognising urinary tuberculosis at an early stage the results obtained by the surgeon have greatly improved.

Now by bacteriological examination of the urine, inoculation experiments, segregation of the urine, and the employment of the cystoscope the surgeon can obtain objective proof of the presence of tuberculosis in the urinary tract long before the subjective evidence is sufficient to justify a diagnosis. "Unfortunately, when a patient is not suffering much actual pain or serious inconvenience it is difficult to convince him of the seriousness of his condition, but in all cases of primary renal tuberculosis the problem must be seriously placed before him and nephrectomy advised."[1] The diagnosis I find can often be made so early in the history of the case that the surgeon is beset with difficulty. He has proof of the presence of tuberculosis in the kidney, but the patient suffers so little, and his general health is so excellent, that it is difficult to convince him of the impending danger of his position.

Primary nephrectomy is now looked upon by urologists as the only remedy, and is resorted to when the disease is known to be limited to one kidney; and this can be determined with considerable accuracy by ordinary diagnostic methods, aided by cystoscopic examination and bacteriological research. I am sorry Dr. West does not give any evidence to support his statements. I may say

[1] The Surgical Aspects of Early Renal Tuberculosis, by the writer, The Practitioner, July, 1911.

that I collected statistics of operations in all stages of the disease[2] published from 1891 to 1908, and found that during that period lumbar nephrectomy for tuberculous disease gave a mortality of 27·4 per cent. and abdominal nephrectomy 33 per cent. Now we find that when the disease is limited to one side and there is no tuberculous disease elsewhere, nephrectomy results in cure in 30 per cent., with an operative mortality of about 10 per cent. This is taking general statistics, but in the hands of surgeons of great experience the cures are in a larger proportion, and the mortality is about one-half—namely, 5·8 per cent. I may now take Walker's statistics,[3] giving the remote results in 210 cases of nephrectomy: Reported as well, 79 cases; recovered, 83 cases; cured, 20 cases; good results, 4 cases; improved, 7 cases; not improved, 2 cases; improvement not maintained, 15 cases. I think it will be admitted that these statistics convey a different impression from that contained in the remarks made in Dr. West's address.

Further, Dr. West says, "When the disease in one kidney is advanced enough to be capable of certain diagnosis the chances of the other kidney being affected too are very considerable ....." This depends, of course, upon the methods employed in making the diagnosis and the stage at which the disease is detected, but let that pass, and permit me to quote a passage from Watson and Cunningham[4]:—

> Clinical evidence of unilateral renal tuberculous infection.—The testimony of this nature upon the unilateral occurrence of renal tuberculosis is derived from, and based upon, the examinations of the urines drawn separately from each of the two kidneys, and from the facts with regard to permanency of the cures or entire absence of evidence of the existence of renal tuberculosis subsequent to nephrectomy of the kidney which is known to be invaded by it. Upon the evidence of this character, such surgeons as Krönlein, Israel, Kümmel, Rafin, Kelly, Bevan, Reynaud, Casper, and Hurry Fenwick assert that the process, at the time at which the patients were examined by them, was confined to one kidney in from 50 to 80 per cent. of the cases.

Or, taking the disease not at the stage when it should be presented to the surgeon, but when it has done its worst and has come under the review of the morbid anatomist rather than the clinical pathologist, Halle and Motz[5] found in 131 cases of renal and ureteral tuberculosis examined by them post mortem, in 89 the disease was confined to one side, in 42 it was bilateral.

I think it right to place these facts before the readers of THE LANCET to justify the position I have maintained that—

> It is to the diagnosis of tuberculosis in the early stage that we must especially direct our attention, seeing that in its later developments the aid of the surgeon is of little avail.[6]

And—

> In some instances when first seen by him [the surgeon] the disease is so advanced that little can be attempted to stay its progress or to mitigate the suffering of the patient, while in other cases the malady is still limited in extent, and much may be done by early surgical intervention. Even a few years ago renal tuberculosis was looked upon as almost a certainly fatal malady, but now that new and more exact methods can be employed in detecting the disease in the early stage, the surgeon is not uncommonly placed in a position to advise and to carry out operative measures with considerable hope of success.[7]

I am, Sir, yours faithfully,

Glasgow, Dec. 2nd, 1911. DAVID NEWMAN.

A SPHYGMOGRAPHIC METHOD FOR THE ESTIMATION OF SYSTOLIC AND DIASTOLIC BLOOD PRESSURE.

To the Editor of THE LANCET.

SIR,—In Mr. S. G. Longworth's letter in your issue of Dec. 2nd it is stated that "according to Dr. George Oliver and others, the point to take [for the reading of the diastolic pressure] is that at which a distinct change in the intensity of the sound occurs, which is generally pronounced and limited to 1 or 2 mm. of the scale." So far as I am concerned, your correspondent is under a misapprehension. The later results of my observations, which appeared in the *Quarterly Journal of Experimental Physiology*, March 3rd, 1911, support the view of Ettinger, Gettings, and others to the effect that the disappearance of the throb on release of air-pressure indicates the minimum arterial pressure. I said: "If we accept the lower limit of throb as the indicator of the true diastolic or minimum pressure, then the range of throb furnishes three readings of the arterial blood pressure—namely, those of the minimum, the mean, and the maximum pressure. ..... Observation shows that the mid-reading coincides, as a rule, with the optimum oscillation of the mercurial column, which has hitherto been accepted as the indication of the diastolic pressure. We do not, however, know what the maximum oscillation as an indicator of arterial blood pressure actually does signify, and it is not improbable that further observation will show that it represents more nearly the mean arterial pressure rather than the true diastolic pressure." The diastolic pressure definitely afforded by the disappearance of the throb has not yet been studied and appreciated sufficiently in clinical work.

I am, Sir, yours faithfully,

Farnham, Dec. 10th, 1911. GEORGE OLIVER.

THE PRACTICE OF MEDICINE IN BRITISH COLUMBIA.

To the Editor of THE LANCET.

SIR,—As I think considerable misapprehension exists in the British Isles in regards to the conditions of medical practice prevailing here, I venture to call attention to certain facts in the hope that the information may be a help to others. Before I arrived here I was firmly convinced that my Edinburgh qualifications would be sufficient to enable me to practise medicine here. I thought I had merely to hang up a blass plate and the patients would come flocking in. This is, however, not the case. In British Columbia and in Alberta, as I believe in all the provinces in the Dominion of Canada, there is a medical examination. This is open to any medical man or woman who has studied medicine for a minimum of four years at a recognised medical school and obtained his diploma. Nobody is allowed to practise in British Columbia or in Alberta until he or she has passed this examination.

It would appear that almost complete ignorance prevails at home with regard to this examination, and it is entirely erroneous to consider it as anything but a severe test of knowledge. In British Columbia the examination lasts for the better part of two weeks, and papers are set in all the subjects in the average medical course, with the exception of biology and physics. Clinicals and orals are conducted in medicine and surgery, as well as an examination in practical bacteriology and in clinical methods. The examination is a thoroughly fair test of knowledge and is practical, as the examiners are, without exception, either specialists in the subjects in which they examine or general practitioners.

In May there were 42 candidates, of whom 19 failed, and this month 62 made their appearance, and 23 were unsuccessful. In each examination several candidates with qualifications from the British Isles were unsuccessful. In both May and this month an Edinburgh graduate failed to qualify, and two or three London College men were among those rejected. Now these were in every case quite good men, and the reason of their failure was owing to their ignorance of prevailing conditions. They had read or been told that the examination was a mere formality, and had regarded it as such. For my own part I arrived in British Columbia two full months before the examination last May, and devoted the time to reading. Despite this fact, and the experience I had gained as a house physician and surgeon in Edinburgh, I was by no means certain of the result until the lists appeared. In Alberta the conditions are similar, although there are no oral and clinical examinations.

We have here a wonderful country and one that will loom largely in the future history of the world. It is undoubtedly a land of promise, and conditions of practice are very much more favourable than in the British Isles. "Old Country" graduates are always welcome here, not only among the general public, but also among our Canadian colleagues, and it seems to me a pity that men who are undoubtedly skilled practitioners should fail at an examination when a little extra preparation would entirely alter the result.

Although this is in every way a very favourable country in which to practise medicine, money is not made with quite that rapidity which many expect. A certain amount of capital is necessary. In Vancouver, with any reasonable success, $1500 should be made in the first year. In the smaller towns and in the Kootenay and the Cariboo fees are

[2] Article, Operations on the Kidneys and Ureters, Burghard's Operative Surgery, vol. iii., p. 403.
[3] Quoted by Watson and Cunningham, vol. ii., p. 401.
[4] Diseases and Surgery of the Genito-Urinary System, vol. ii., p. 390.
[5] Annales des Maladies des Organes Génito-Urinaires, Paris, 1906, xxiv., 161-241.
[6] Surgical Diseases of the Kidney, 1888, p. 295.
[7] THE LANCET, 1900, vol. i., p 526.

larger, and most of the doctors make their expenses from the start. In any case practitioners should be prepared to wait for a few months at least, and it would be well if this fact were understood. Then we would not be faced with the spectacle of an "Old Country" graduate arriving with some $170 as his entire assets. Even this might be overcome if he succeeded in satisfying his examiners, but in default it means a nearer acquaintance with a pick and shovel or other form of manual labour.

In conclusion, I would say that I shall at any time be delighted to answer any communication I may receive regarding this undoubtedly wonderful country with its endless opportunities.

I am, Sir, yours faithfully,

GEORGE GIBSON, M.D., M.R.C.P. Edin.

724, Robson-street, Vancouver, B.C., Nov. 14th, 1911.

*** We may mention, in regard to the above interesting letter, that in an article on "The British Medical Man Abroad"[1] it is stated that an examination has to be passed before a qualified person is admitted to the Register in British Columbia and Alberta.—ED. L.

THE STATISTICS OF THE BENENDEN SANATORIUM.

To the Editor of THE LANCET.

SIR,—In a recent publication, "Sanatoria for the People,"[2] the authors, Mr. C. H. Garland and Dr. T. D. Lister, have made some very definite statements regarding the results of the treatment of tuberculosis in the Benenden Sanatorium. They state (pp. 16 and 17) that "as a matter of accumulated experience, the successful cases wherein the disease becomes completely arrested are about 70 to 80 per cent. of the admissions," and further that "with patients able and willing to continue their working lives under simple hygienic modifications, 80 per cent. are found to be still on full work and wage-earning two years after discharge; and as knowledge spreads among the working classes, as shown by the German insurance experience, the lasting nature of the recovery tends to increase. Statistical evidence will be found in Appendix II."

I have carefully examined the figures given in Appendix II., and so far as I understand them can find none which appear to provide the above percentages. It is obviously of the highest importance that data in publications of this kind, directly intended to influence public opinion, should be so expressed as to be intelligible to the layman. May I therefore as a layman ask the authors to explain how they reach these percentages?—I am, Sir, yours faithfully,

DAVID HERON.

Galton Eugenics Laboratory, University College, Gower-street, W.C., Dec. 12th, 1911.

THE PRESCRIPTION OF TUBERCULIN.

To the Editor of THE LANCET.

SIR,—Mr. P. W. Squire's memorandum attached to the letter of Sir R. Douglas Powell and Dr. P. Horton-Smith Hartley appears to confuse rather than settle the issue raised by your reviewer. The review stated that instead of representing the small initial dose of T.R. by "0·000,000,001 cubic centimetre," "a more convenient method would seem to be to express the amount in fractions of a milligramme." Your reviewer will doubtless make his meaning clear, but workers with tuberculin would understand this to mean vulgar fractions of a milligramme of tubercle bacilli, not fractions of a milligramme of T.R. liquid, as assumed by Mr. Squire.

The point raised by your reviewer is sufficiently important to be illustrated by experience. I have made an examination of the 1000 last orders received by Messrs. Allen and Hanburys for T.R. and B.E. (the two forms of tuberculin to which the alternative method of stating the dose applies), and find that on 912 orders the dose is stated in vulgar fractions of a milligramme of tubercle bacilli, and in 23 cases in decimal fractions of a cubic centimetre of the concentrated liquid. On all Messrs. Allen and Hanburys' labels the dose is stated in both forms—e.g., "New Tuberculin T.R. 0·000,001 c.c. (1/100,000 milligramme T.B.)"; physicians can therefore employ the system they prefer without trouble. Although precedence is given on the label to the decimal method of stating the dose now used by the makers of Koch's tuberculins, on 91·2 per cent. of the orders received the doses are written in vulgar fractions of a milligramme of tubercle bacilli. I think it must therefore be conceded that the latter is the more popular and presumably the more convenient way. I am, Sir, yours faithfully,

F. W. GAMBLE,

Pharmaceutical Chemist; Examiner to the Pharmaceutical Society; Manager, Allen and Hanburys, Ltd.

Vere-street, W., Dec. 11th, 1911.

[1] THE LANCET, Sept. 2nd, 1911, p. 713.
[2] The Scientific Press, Limited, 1911.

A PLEA FOR AN AMENDED CLASSIFICATION OF UTERINE FIBROIDS.

To the Editor of THE LANCET.

SIR,—Permit me space to make a suggestion as to the amendment of the usual description of fibroid tumours of the uterus in regard to their position in the uterine wall. Hitherto hard and soft fibromata of the uterine wall have been described as submucous, mural, and subserous. The submucous fibroid is occasionally pedunculated; the subserous is more often so. The foregoing classification was strictly anatomical. What I now propose is a classification which, whilst being anatomical, is in every sense of the term clinical as to pathology and treatment. I will now briefly explain.

Most uterine fibroids are placed either inside or outside the centre of the middle coat, which is occupied by the larger blood-vessels supplying the uterine wall. The classification I now propose is to locate every uterine fibroid, anatomically and clinically, either on the inner or the outer aspect of the central vascular zone of the middle coat. Anatomically, therefore, one would speak of an "inner" and an "outer" fibroid, sessile or pedunculated, in strict relation to the central vascular zone of the middle coat of the uterus, because this classification, from a clinical point of view, can be shown to be important. I have so often seen a uterus which is the subject of multiple fibroids have all of them confined either to the inner or the outer side of this vascular zone of the middle coat, that I begin to think that there must be some developmental rule why this should be; because if a uterus is found to have a so-called subserous fibroid and this is accompanied by other smaller ones they will almost invariably be found on the peritoneal side of the central vascular zone of the middle coat. The same applies to the submucous fibroid; seldom does one see fibroids on both the inner and the outer side of the vascular zone of the middle coat simultaneously. The clinical pathology of the proposed classification of these tumours is interesting and shows a strong contrast in their behaviour.

No gynæcologist of any experience but must have seen a case of severe hæmorrhage from a fibroid uterus, endangering life and often causing death, yet after hysterectomy or post mortem, on laying open the uterus, no point or punctured blood-vessel can be found anywhere to account for the hæmorrhage, the uterine mucous membrane over the tumour appearing merely congested. In conversation with Mr. Shattock, of the Royal College of Surgeons Museum, he very aptly described this hæmorrhage as "uterine epistaxis." This hæmorrhage or epistaxis in my experience is only caused by fibroids situated in the uterine wall on the *inner side* of the central vascular zone of the middle coat of the uterine wall, the salient factor not being that the fibroid is a so-called "submucous" fibroid, but that it is "internal" to the vascular zone in the middle coat of the uterus. How the hæmorrhage is caused can be briefly explained. The fibres of the middle coat outside the vascular zone and all the fibres of the outer coat when the fibroid has reached such a size that by their contraction they can compress the whole vascular circulation against the fibroid, cause an intense venous stasis of the mucosa, more especially over the tumour. And so we have established a hæmorrhage very much like that which occurs in the stomach after gastro-duodenostomy and other abdominal operations; in other words, a true epistaxis which may or may not be fatal. This *inner fibroid* is also liable, in the event of a miscarriage occurring in the early months of an existing pregnancy, especially if the placental site be over the tumour, to become

displaced inwards as a partially pedunculated tumour by uterine contraction, be presented at the os and cause death from hæmorrhage unless its presence and clinical significance are recognised and the tumour rapidly enucleated and delivered per os. A medical colleague recently informed me of a patient of his who died from hæmorrhage from this very cause in a well-known London hospital for women.

Uterine fibroids, on the other hand, situated "external" to the central vascular zone of the middle coat of the uterine wall, do not give rise to uterine hæmorrhage, whether sessile or pedunculated, for very obvious reasons, because contraction of any muscular fibres external to them does not compress the venous channels in the middle coat. Reverting to "inner fibroids," my experience leads me to class them as to their liability to produce hæmorrhage by their situation in the uterine wall. Fibroids situated below a line joining the insertion of the Fallopian tubes are more liable to produce hæmorrhage of the kind described than fundal fibroids. Of those situated below the insertion of the Fallopian tubes, lateral cornual tumours are most prone to cause hæmorrhage, because the efferent vessels of the uterus emerge here; then tumours in the cervix and anterior wall, then tumours in the posterior wall; and lastly, and least, fundal tumours.

Finally, from the clinical-operative point of view, the classification I propose as "inner" and "outer" fibroids has a practical bearing on treatment, because the probability is that where a uterus is the subject of an "outer fibroid," any others will all be found external to the vascular zone of the uterus, and can on abdominal section be removed by myomectomy without fear of hæmorrhage. This will permit us to leave the uterus, perhaps enabling the patient to become subsequently a happy mother. On the other hand, uterine fibroids situated internal to the vascular zone can be removed without much hæmorrhage by dilatation of the cervix, with or without splitting of the anterior lip, by blunt dissection out of the uterine wall with the fingers and dissector or by previous *morcellement*, followed by enucleation and delivery, which I have repeatedly successfully done, even treating tumours as much as 5 lb. in weight. This latter procedure also leaves the woman with the power of subsequently becoming a mother.

I am, Sir, yours faithfully,

F. W. FORBES-ROSS, M.D.Edin., F.R.C.S. Eng.

Harley-street, W., Nov. 29th, 1911.

DREAMS.

To the Editor of THE LANCET

SIR,—In an annotation in this week's LANCET upon Mr. Havelock Ellis's book on dreams you quote the late Sir Samuel Wilks's remark that "the dreamer merely forms a mental picture, and the description of it he calls his dream." To my mind, however, the question how we form "a mental picture" still waits for a reply. Each individual among us, as the late Sir Francis Galton remarked, is a composite cellular creature made up of a bi-parental half, a grand-parental quarter, and the residue of definite fractional parts of earlier forebears. We also believe that the chromosomes, "the individual entities" as Mr. C. E. Walker calls them, "are distributed from cell generation to cell generation, from parents to offspring in a manner that coincides exactly with the behaviour of the individual characters." ("Hereditary Characters," p. 213.)

Now as regards dreams during "the solemn watches of the night," I have often recalled visions of my parents, seldom of my paternal grandfather, more frequently of my maternal grandfather, whom I personally resemble in many respects, and occasionally of my dead son. According to biometricians, there are twice as many molecules (or atoms or ions) in my body that have directly sprung from my two parents as there are others originating in my four grand-parents. The chances of a parental atom knocking at the portals of my sleeping brain, and in that way exciting a "mental picture," are therefore many times greater than are those affecting a grand-parental atom. This suggestion, I fancy, accounts in my case for the repeated dreaming of parents. It would be interesting to know whether my experience coincides with that of others. I have been led into this train of thought through another experience. On two or more occasions I have indulged in a hearty meal of under-done beef late in the evening, and have gone to rest shortly afterwards. I have notes of two dreams after such a meal, written soon after the event. In each dream I was crossing an open space, when suddenly savage-looking cattle obstructed my path, and I took to my heels, to awake in a cold sweat, with an uncomfortable sensation in my head and—stomach! Is it possible that here we have the Machiavellian stimulus of a semi-devitalised ox-cell upon my dormant cerebrum? I am, Sir, yours faithfully,

Hove, Dec. 9th, 1911. W. AINSLIE HOLLIS.

UNIVERSITY AND COLLEGE REFORM.

To the Editor of THE LANCET.

SIR,—May I state with regard to your short account of the meeting of the Fellows and Members of the Royal College of Surgeons of England, published in THE LANCET of Nov. 25th, that I did not venture to "prophesy" what the Royal Commission on University Education in London would or would not do. I just warned the Council *not* to rely solely upon the side issues (to them) of the numerous University regulations or the extraneous representations of the Polytechnic or Royal College of Science or other bodies, and which the Royal Commissioners were chiefly considering. No doubt my motion with regard to the M.D. and M.B., B.S. degrees and the Conjoint Examination Board of the Royal Colleges has occupied, and still does occupy, the attention of the Council on behalf of the Fellows and Members—a vital point for their future welfare; and so far there was no actual need to carry my division on the motion over again, since it was passed before on a similar resolution. But what is, is! And the Council would do well either at once to obtain the power of this Act themselves, or when they go before the Commissioners to let them understand they intend to seek these particular rights of examining for a degree, under their compact with the University of London and under the Act of 1898, but which lately the University of London has so carelessly and selfishly denied to them and to her partner. There is nothing to prevent this action, nor to hinder the Council from moving for a confirmatory Act.

The differences between the above views and those of the present President, Mr. Godlee, under the discarded Jenner and Westminster schemes, may certainly be judged to be reconciled. Indeed, it would be auspicious if his tenure of office coincided with his being able to pre-eminently carry out what he and other reformers, *and now the University and college reformers*, have aimed at on the common ground of a degree basis instead of the obsolete licences.

I am, Sir, yours faithfully

Dec. 7th, 1911. H. ELLIOT-BLAKE.

*** Mr. Elliot-Blake is advocating the granting of degrees by the Colleges in conjunction with the University.—ED. L.

PRESSURE-PAIN SENSIBILITY IN FACE AND TONGUE.

To the Editor of THE LANCET.

SIR,—In connexion with your annotation on this subject in THE LANCET of Nov. 18th, may I point out that two of the statements made by Dr. Maloney and Dr. Foster Kennedy are in excess of ascertained facts? They write thus of the hypoglossal nerve:[1] "It is probably a pure motor nerve in its peripheral course"; again, "The hypoglossal appears to be a purely motor trunk." They also write of "the purely motor function of the seventh nerve after it leaves the Fallopian canal." But all that their excellent research established on these two points was that these two nerves contain no pressure-pain sensibility fibres in those parts of their course. We are almost certain, however, that the main twelfth trunk and the six facial branches peripherad of the stylo-mastoid foramen contain postural afferent nerve fibres for the tongue muscles and the facial muscles respectively, because Professor Van Gehuchten found by experiment[2] that in the rabbit the peripheral seventh nerve at the stylo-mastoid foramen contains afferent fibres which rise in some of the cells of the geniculate ganglion; and also Professor Sherrington found in 1894[3]

[1] Brain, September, 1911, pp. 23 and 26.
[2] Journal de Neurologie, 1898.
[3] Journal of Physiology, vol. xvii., p. 255.

that the hypoglossal was one of several nerves mentioned by him "which contain abundance of fibres from sensory ganglia."

In my opinion, the present position of our knowledge, which is, however, incomplete in several directions, justifies the following provisional conclusions: (1) all the pressure-pain sensibility fibres of the tongue enter the organ by the communicating branches between the lingual branch of the mandibular nerve and the anterior part of the hypoglossal nerve; (2) possibly a few postural afferent fibres also enter by that path; (3) most, if not all, of the postural tongue muscle afferents enter the organ by the main hypoglossal trunk, probably from the second and third cervical dorsal root ganglia; (4) all the pressure-pain sensibility fibres for the facial muscles enter by the communicating branches on the face between the fifth and the seventh nerves; (5) some of the postural afferent fibres for these muscles probably also enter by these branches, in witness whereof I may refer to Dr. Harvey Cushing's well-known findings of postural facial palsy after Gasserianectomy in some cases; (6) most of the postural afferent fibres to the facial muscles rise in cells of the geniculate ganglion, and enter the muscles by the six peripheral facial trunks.

I have in this letter touched merely the fringe of this subject. I hope to show subsequently that all these points, and many more, can be studied, and in a large measure settled, by properly planned experimentation reinforced occasionally, as opportunity occurs, by pathological study.

I am, Sir, yours faithfully,

LEONARD J. KIDD, M.D.

Haverstock Hill, N.W., Dec. 2nd, 1911.

SANITATION AND SEWAGE DISPOSAL AT LEEDS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

LEEDS holds a good position among our largest towns so far as vital statistics are concerned. Perhaps the most remarkable figures are those that relate to the mortality from scarlet fever. In the "seventies" the death-rate from this disease occurred in the proportion of 1·11 per 1000, in the "eighties" it fell to 0·68 per 1000, in the "nineties" to 0·19 per 1000, while the average from 1900 to 1909 was only 0·11 per 1000. Yet it can hardly be said that vast public works have been pressed forward so as to better the sanitary conditions of the city.

Back-to-back Houses: the Rent and the Death-rate.

The building of back-to-back houses has, unfortunately, not been radically abolished, yet Dr. L. W. Darra Mair's report to the Local Government Board (Cd. 5314, 1910) on back-to-back houses was very conclusive. This official document gives the results of investigations in Leeds and 12 other industrial towns of the West Riding of Yorkshire. Care was taken to separate houses in good condition and in healthy localities from those less favourably situated. It was found that where back-to-back houses are built in continuous rows, even though they are of a relatively good type, the death-rate from all causes is from 15 to 20 per cent. higher than in ordinary houses which have windows both in front and behind. Such is the advantage of through ventilation and the purifying effects of light on both sides of the houses.

The inhabitants of back-to-back houses suffer especially from diseases of the chest and defective growth in childhood. The aged and the young are the principal victims. But the rents of such dwellings are one-fifth cheaper than ordinary houses of equal size and affording the same accommodation. The increase in the death-rate is about in the same proportion as the decrease in the rent paid for back-to-back houses. In other words, where back-to-back houses are replaced by houses with through ventilation a death-rate of 20 per 1000 per annum would be reduced to a death-rate of 16 per 1000 per annum. Of those who die in back-to-back houses, 20 per cent.—one-fifth, or 1 out of 5—are brought prematurely to the grave to save 4*s.* in the £ paid for rent.

In 1893 the Leeds Corporation obtained permission to allow the building of more back-to-back houses. The injury resulting from this mode of construction was not then as fully appreciated as it is to-day, nevertheless it was well known that such houses were comparatively unhealthy. But then there was the saving of money, so the corporation was left free to decide whether under certain conditions and restrictions builders should be allowed to construct yet more and more back-to-back houses. The chief hope now is that under the Housing and Town Planning Act of 1909 this harmful practice will be definitely stopped.

Wholesale Testing of Drains.

If the corporation is thus unprogressive in allowing such houses to be built, the sanitary authorities have displayed commendable energy in the inspection of inhabited dwellings. More than 18,000 houses are inspected in the course of the year, and this does not imply just a passing visit, but the thorough overhauling of the entire premises. Thus the air space and means of ventilation are noted, and the drains are not only outwardly examined but tested. Such methods revealed last year no less than 3955 defects or leakages in drains. This is really most important, because the fact that the closets are kept clean and that there is no noticeable odour does not prove that the drains are absolutely water- and air-tight. The scavenging department also seems to be very active, and altogether it appears likely that the low death-rate enjoyed at Leeds is due rather to careful attention to details than to any large sanitary measure or scheme.

Pollution of the River Aire.

So far as any great undertaking is concerned, Leeds is best known on account of its extensive experiments and works for the disposal of sewage. The last Census shows that Leeds has a population of 443,568 and stretches over an area of 21,572 acres. Considering that there are also many industries and no large river or sea front where the crude sewage can be discharged, it will be seen that it must be very difficult to dispose of the sewage satisfactorily. It was in 1848 that sewers were first built at Leeds, and then the crude sewage was allowed to flow into the small river Aire at Knostrop, which is about two miles south-east of the town-hall. This practice continued until 1870 when an injunction was obtained, and the corporation of Leeds was ordered to stop the nuisance. Four years were now devoted to experiments, and then settling tanks were built. By mixing chemicals with the sewage a sludge was obtained and a clearer and cleaner water thrown into the river. But if this was an improvement the results were still far from satisfactory. In 1893 the West Riding Rivers Board was constituted to act on behalf of those who were interested in the prevention of the pollution of rivers. In the course of time, certainly not with any reckless or undue haste, but in the lapse of four years, five new precipitation tanks were constructed, and now all the tanks put together could hold six and a third million gallons. Far more remarkable than this extension of an old system were the numerous and valuable experiments then made in the bacteriological treatment of sewage. The corporation has published in volume form a full account of these experiments which were conducted by Colonel T. W. Harding and Mr. W. H. Harrison, M.Sc. This appeared in 1905, and together with the Leeds experiments in general has been the subject of much discussion and comment. It would be somewhat out of date to travel over the ground again, but some of the main points ascertained may be briefly recalled.

The Aerobic Treatment of Sewage.

In contact beds effective aeration must be secured. The oxidising surface of small is greater than that of large filtering material. But, on the other hand, the smaller the filtering agent the more thoroughly does it retain all suspended matter, and thus the filter is very soon clogged. The coarser the material the longer will it remain serviceable. Now the great point ascertained at the Leeds experiments is that at least half the suspended matter in sewage cannot be dissolved by bacterial action. Further, if it is allowed to clog up the filter a fungus will grow upon it and complicate matters. A coarse filter will let mineral and inorganic matter pass through and only retain what can be digested—that is, transformed by bacteriological action. Therefore it was found that filtering for clarifying purposes should be the second and not the first operation. The experiments went on to prove that it was necessary to pass the sewage through a fine screen and then on to a coarse filter. In normal dry weather this sufficed to oxidise the sewage, and though it was still thick and contained

much suspended matter it was not putrescent. The sludge from sewage collected after passing through a coarse filter could be dried in the open without causing nuisance. This is a rapid aerobic treatment. In a quarter of an hour sewage could be passed through the screen, the coarse filter, then a finer clarifying filter, though a process of precipitation instead of the second filtration would require much more time.

The need of rapid and economic action may antagonise the claims of science that the purification should be reliable and absolute. Whether the sewage is thrown on land or on artificial filters neither medium must be overworked. There must be periods of rest for ploughing the land or for removing the accumulations and washing the materials of the filter. When fresh air is plentifully supplied the aerobic organisms rapidly and inoffensively destroy animal substances; but if the transformation of vegetable substances is similar it requires a much longer time, and this is especially the case with woody fibre, such as paper pulp. The present sewerage works, however, have not yet bacterial beds in operation.

The Importance of Screening Sewage.

A good deal of time and trouble can be saved by removing from the sewage the larger particles of suspended matter. They choke the filters, and for the most part cannot be transformed or digested by bacterial action. At Leeds, especially as a consequence of the local industries, there are large quantities of fibre and wool in the sewage. Last year the discharge of waste water into the sewers by the different trades amounted to a little over 3,500,000 gallons in the 24 hours. Of this more than 2,000,000 gallons came from piece scouring, wool scouring, and dyeing. Something like 20 per cent. of the average dry weather flow of sewage comes from the trades and industries of the city. To prevent some of the difficulties this would cause there are actually 88 settling tanks on the manufacturers' premises, where the waste water is submitted to a preliminary treatment before it is allowed to flow into the public sewer. Fifty-two of these tanks are under the direct control of the corporation. When, with the courteous assistance of the medical officer of health, Dr. J. Spottiswoode Cameron, I was enabled to visit the sewage works, the first thing examined was the screens used to prevent large particles of suspended matter reaching the tanks and filtering-beds. There are two screens 10 feet wide, made of strong bars with a wire mesh between, only 5/8ths of an inch apart. Revolving rakes, driven by an electric motor, automatically remove what is retained by this screen. It was black-looking stuff, but it is valuable, for the farmers are very eager to get as much as possible. It has also been advantageously used as manure by market gardeners.

Clarifying the Sewage.

The sewage arrives at the works by gravitation, but after passing through the screens is lifted 16 feet into tanks by a couple of pumps. Two dynamo pumps of 52 and 75 b.h.p., each driven by Delaval steam turbines, are also in action to supply power for the screens, the chemical precipitation machinery, and for lighting the works by electricity. Thirty million gallons of sewage can be lifted out of the main collector into the tanks in the course of a day. From the pumps the sewage is divided between two grit-pits. The heavy matter that settles at the bottom of these pits is lifted and removed by a Priestman grab or digger and a travelling steam crane. The sewage is now allowed to flow into a central chamber where it is mixed with milk of lime, for this is more expeditious than lime water. The lime is broken into fine dust, and there are ingenious contrivances to ensure that the quantity of lime shall be regulated according to the quantity of sewage to be treated. After this the sewage, distributed in different tanks, is allowed eight hours for sedimentation. From the tanks the effluent goes by the main channel to a gauge chamber, where it is measured by an automatic recorder, and finally discharged into the River Aire below Thwaite Mill weir.

Utilising the Sludge.

The total amount of sewage treated in the 12 months ending March 31st, 1911, was estimated at 5,929,754,000 gallons. This is a daily average of 16,290,535, or about 38 gallons per day per head, from a population of 427,500. The working expenses amounted to £2820, including the consumption of 3840 tons of coal at 10*s.* a ton. Nearly five million gallons of water were evaporated. The cost of lifting the sewage works out at 4·25*d.* per million gallons per foot lift. The screen stopped 1527 tons of garbage, or 4½ tons of large particles were arrested per day and prevented from clogging the sewage works. This is equal to 5 1/6th cwt. for each 1,000,000 gallons of sewage, and the cost was 1*s.* 1*d.* per million gallons of sewage. The amount of grit extracted from the pits near the entrance by the crane and grab amounted to 1755 tons, or 4 tons 16 cwt. per day, making 6 cwt. of grit per million gallons of sewage. For precipitating purposes, 929 tons of lime were used at 12*s.* 8*d.* the ton, and in the proportion of 10 parts of lime to every 100,000 parts of sewage. The total cost of chemical precipitation was £1098, or 3*s.* 8*d.* per million gallons of sewage.

The sludge from the tanks amounted to 120,365 tons, of which 91·10 per cent. is water, which is afterwards reduced to 86·6 per cent. by further treatment. After this the sludge is passed into presses, and the result for the year was the production of 36,786 tons of sludge cake. For the treatment of the sludge 1 per cent. by weight more lime is added. Altogether the cost of dealing with the sludge was £3035, or 10*s.* 3*d.*, per million gallons of sewage treated. This makes the cost of the sludge cake amount to 1*s.* 8*d.* per ton. It still contains 59·7 per cent. of water. The mineral residue is 23·0; the volatile matter, 16·8; the fixed carbon, 4·2; the total nitrogen, 0·61; and the total phosphate as calcium phosphate, 0·98 per cent. The making of sludge cakes has not proved a profitable enterprise. Only 3623 tons of the sludge cakes were sold and for the modest sum of £160. The greater part of the cakes, 28,459 tons, were conveyed on a narrow gauge railway to some low-lying land recently acquired in this neighbourhood by the corporation. Here it was tipped over to an average depth of six feet and then covered with a layer of soil. It is stated that the low land which is thus being raised to a higher level will be used for public gardens and not for private dwellings.

The Effluent Obtained.

The analyses made compare the crude sewage with the effluent after treatment. The results are in parts per 100,000. The crude sewage, giving the average of the whole year, showed: Suspended solids, 60·7; soluble solids, 108·8; albuminoid ammonia, 0·663; oxygen absorbed in four hours, 12·23. The effluent from the tanks of this sewage after treatment contained: Suspended solids, 7·3; soluble solids, 104·1; albuminoid ammonia, 0·367; oxygen absorbed in four hours, 5·16. Much better results are anticipated when, as embodied in the sewerage works extension scheme, bacteria beds are constructed. The great difficulty has been to obtain the necessary land. In 1900 the corporation, finding nothing closer at hand, bought 1880 acres 13 miles away near Selby. But then four years later the Selby urban district council, in spite of opposition from Leeds, obtained powers from Parliament to bore for water-supply and storage close to the land which the corporation of Leeds wanted to use for new sewerage works. Adjoining the existing Knostrop sewerage works there is land that would do admirably for the extension of the sewerage works, but the owner would not sell his land for such a purpose. Towards the end of 1904, however, his successor withdrew opposition. In 1908 Parliament passed a Bill by which the corporation was able to acquire 600 acres of land adjoining the Knostrop sewerage works from this estate, and there the bacteria beds will be constructed. In the meanwhile the corporation had been again prosecuted, and was ordered by the late Mr. Justice Grantham, in July, 1907, to remodel its works at Knostrop, so that the suspended solids in the effluent from the tanks in dry weather should not contain more than 11 parts per 100,000. It is these reconstituted works that I visited and have described. The analyses given above show that Sir William Grantham's instructions have been faithfully carried out. But it will be still more interesting to see the results when the land newly acquired is fully utilised.

The Workers at the Sewerage Works.

At present there are 70 workmen engaged at Knostrop. On inquiring about their health I was assured that some of them had been employed on the sewerage works for 20 years and had not suffered a day's illness. For the most part they are middle-aged men, and though in the immediate vicinity of sewage, they are constantly in the open air. The chief fear is blood poisoning. Therefore antiseptic dressing is

kept ready to hand, and great care is taken to use it even for slight cuts. Somewhat rough washing convenience and a mess-room are provided, together with a heating oven. Each man has a locker where his food can be kept clean and the dust and the flies cannot get to it. The men bring their food with them and are glad to be able to warm it up. Thus the essentials are provided, though it must be remarked that not a thought has been bestowed on relieving the roughness and dreariness of the mess-room. The scientific treatment of sewage is so essential to the well-being of the community that it is perhaps not too much to ask for a little attention to the comfort of those who labour all day long at the sewerage works.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Third South Midland Field Ambulance.

THE new headquarters of this ambulance were opened on Saturday, Nov. 25th, by Earl Beauchamp. They are situated in Kingsdown, Bristol, and provide excellent accommodation, including a spacious drill-hall, sergeants' mess, lecture-hall, commanding officer's room, officers' room, quartermaster's stores, a demonstration room, wagon sheds, and a harness room. Earl Beauchamp congratulated the corps on this evidence of the interest taken in the Territorial movement in the west country, and said they owed a great debt to Colonel A. W. Prichard and Colonel J. Paul Bush for their work of organisation.

Bristol General Hospital.

The work of building the new wing has begun; at least, the workmen are demolishing a large warehouse to make room for it. This warehouse, the property of the hospital, was purchased some years ago to make extension possible when the occasion arose. Its replacement by the new wing will make the circle of hospital buildings surrounding the main courtyard complete at last, for it has hitherto occupied the gap between the pathological block and the main body of hospital premises.

Bristol Hospital Sunday Fund.

At the annual meeting of the committee administering the collection and distribution of the Lord Mayor's Hospital Fund for Bristol, it was announced that a sum of £1887 13*s.* 9*d.* had been collected in 1911, the bulk of which had been divided among the medical institutions of the city as follows: Royal Infirmary, £739 10*s.*; General Hospital, £620 10*s.*; Children's Hospital, £232 13*s.*; Eye Hospital, £110 10*s.*; other institutions, £107 3*s.* Mr. William Garnett was appointed honorary treasurer in the place of Mr. E. J. Swann, who has retired. The Lord Mayor (Mr. F. W. Wills) said he hoped it would be possible to raise £2000 at least in 1912.

The Royal Hospital for Children, Bristol.

A meeting of the Ladies' Auxiliary in connexion with the Children's Hospital, Bristol, was held last week. The report stated that during the past 12 months 290 ladies had canvassed 253 districts for the funds of the charity and nearly £900 had been collected by them.

Mussels and Enteric Fever.

At a meeting of the St. Thomas (Devon) rural district council held on Dec. 8th a letter was read from the Derby council, stating that a case of enteric fever which had occurred in that town had been attributed to mussels brought from Lympstone, and asking the district council to take steps to prevent the mussel beds from being polluted. After a considerable discussion, during which it was stated that the pollution of the river Exe, where the mussel beds are situated, was principally due to the sewage of Exmouth, it was decided to refer the matter to the Lympstone parochial committee.

Death of Mr. George Arthur Slack.

Mr. G. A. Slack died at his residence, The Lodge, Uffculme, Devon, on Nov. 18th, in his sixty-fifth year. He was the son of the late Mr. T. T. Slack, of Paignton, and received his medical education at Guy's Hospital, London. He qualified as M.R.C.S. Eng. in 1886. Shortly afterwards he commenced practice at Uffculme and married the daughter of the late Rev. T. C. Tanner, vicar of Burlescombe. Mr. Slack was well known and very popular in Uffculme and the district, and much regret is felt there at his death. The funeral took place at Uffculme on Nov. 22nd in the presence of a large gathering, which included several of the local clergy and members of the medical profession.

Dec. 12th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool School of Tropical Medicine: Banquet Celebration of Foreign Expeditions.

AT the invitation of Sir W. H. Lever, the chairman of the School of Tropical Medicine, a banquet was held at the Adelphi Hotel, Liverpool, on Dec. 6th, to meet Professor Newstead on his return from the sleeping sickness expedition to Nyasaland, and Dr. Harald Seidelin on his departure to Yucatan, Mexico, on a yellow fever investigation expedition. Owing to having contracted a chill, Professor Newstead was, unfortunately, unable to be present, but forwarded a written communication which was read during the evening. Among the guests were Professor Sir Ronald Ross, K.C.B., Sir Edward D. Lawrence, Sir Alfred Haslam, Sir Edward Evans, Dr. Richard Caton (formerly Lord Mayor of Liverpool), Dr. J. W. W. Stephens (Walter Myers lecturer in tropical medicine), Dr. E. W. Hope (medical officer of health), and Mr. A. H. Milne, C.M.G. Sir William Lever proposed the toast of "Professor Newstead's Expedition and that of Dr. Harald Seidelin." He first of all expressed his great regret at the enforced absence of Professor Newstead. He remarked that it had always been the good fortune of the Liverpool School to attract to itself the very best men in the cause of scientific research. He thought Liverpool ought to have facilities for the treatment of sleeping sickness not to be equalled in any other part of the world. The trustees of their late revered chairman (Sir Alfred Jones) had intimated that they would come to their assistance, and in addition to better accommodation in Liverpool it was proposed to establish a laboratory on the West Coast of Africa where investigations into tropical diseases might be made on the spot, and so enable them to curb and check, and possibly to finally exterminate, this dreadful scourge. He took this opportunity of congratulating Sir Ronald Ross (Sir Alfred Jones professor of tropical medicine), and Mr. Milne (the secretary of the school) upon the honours recently conferred upon them by the King. Dr. Harald Seidelin, in responding to the toast, expressed his gratitude to the late Sir Rubert Boyce for having made it possible for him to become connected with the Liverpool School of Tropical Medicine. In Yucatan he himself had been afflicted with yellow fever, and it was his object to establish the principal points in regard to the mosquito parasite. He had demonstrated the parasite in the blood, and he now hoped to find it in the living state. He also hoped to find the parasite in the mosquito, and to find some new means of treatment of yellow fever. He expected to make important entomological investigation, if there were time. As yet he could not promise any great results, but he would do his best. The toast of "Research into Tropical Diseases," proposed by Sir Edward Lawrence, was responded to by Sir Ronald Ross, who said that Liverpool had become one of the greatest centres of medical research, and anyone who contributed to the movement would be making a gift to humanity. The chairman suggested (amid applause) the sending of a telegram to Sir William MacGregor, congratulating him upon the first report of the Queensland School, and also a message to Dr. H. W. Thomas, who was on the Amazon investigating yellow fever, conveying Christmas greetings.

Fatal Case of Anthrax in Liverpool.

The deputy coroner recently held an inquiry into the death of a workman in the Mersey Docks and Harbour Board's Wool Warehouse, which occurred at the David Lewis Northern Hospital on Dec. 2nd. The deceased had been employed at the warehouse for the last 10 years. His duties were to deal with bales of Persian wool, which had been imported into Liverpool by a ship from Bombay. Shortly after 6 P.M. on Nov. 29th he drew his landlady's attention to a pimple on his neck, and said to her, "That's anthrax." He went to

the hospital, where the lesion was dressed, and returned home. He returned to the hospital on the following day and was advised to become an in-patient, where an operation was subsequently performed. In spite of this he died on the following day. A verdict of "Death from anthrax poisoning" was returned by the jury.

Chester Infirmary: Improvement Scheme.

The board of management of the Chester Infirmary has decided to set in motion a scheme for extending and renovating the infirmary, which is estimated to cost about £25,000. The abandonment by the Chester town council of the electricity works as a site for the refuse destructor was reported, and in consequence the board unanimously agreed to proceed with its scheme. The plans of the extension and the reports from the medical committee will be submitted to the board of management at its annual meeting in January, 1912.

Dec. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Policy of the Medical Profession in Scotland.

THE profession in Edinburgh is deeply concerned about the Insurance Bill, to the exclusion of other topics, and this feeling is reflected in the lay press, to which many letters have lately been contributed by medical practitioners. In the *Scotsman* in particular an important discussion is in progress with regard to the attitude to be adopted by the profession in Scotland towards the Bill. The council of the Edinburgh branch of the British Medical Association on Dec. 8th passed resolutions urging all members to remain loyal to the Association during the present crisis, and determining that in the event of the Bill becoming law the Association should continue to insist on its demands being carried into effect through the Local Medical Committees. The meeting was also attended by representatives from most of the other Scottish branches of the Association. In a letter in the *Scotsman* of Dec. 11th Dr. William Russell and Dr. A. Logan Turner contend that the wage limit should from the first have been made "the centre and citadel of the medical position." Now, however, the controversy between the Chancellor and the profession has been transferred to one between the Local Insurance Committees and the medical men. Under these circumstances it lies with the Local Medical Committees to see to it that whatever predatory instincts may be manifested by the Local Insurance Committees should be restrained and opposed. The writers claim that the canvass of the different areas in Scotland has been so complete that it is now only necessary for the men who have pledged themselves to adhere to their pledges to insure that service under the Act will be such as the profession has continuously insisted upon. In conclusion, they declare that it is impossible for the profession in Scotland to wash its hands of the Act and decline to set up Local Medical Committees, because many local Scottish organisations of the Association have already decided to carry on the fight in the local insurance areas to be constituted under the Act. Dr. William Craig, in a letter in the same issue, criticises various points in the policy adopted by the executive of the Association, and maintains that the "quasi-strike resolution" has postponed definite decision, and that consequently the profession is now being led on against its wish "into a position from which it will have difficulty in retreating and in maintaining its ranks." Dr. J. Stuart Ross suggests in the same issue that the way out of the difficulty, so far as Scotland is concerned at any rate, is that proposed by Dr. Gibson. Let a Scottish National Committee be formed of men universally trusted by the profession, and let its first task be to investigate this alleged evidence of "a multiplicity of potential blacklegs." The profession in Scotland would then, Dr. Ross believes, be in a position to decide whether to refuse to enter into any negotiations, and wait for the breakdown of that part of the Act which refers to medical benefit, or to form Local Medical Committees to inquire at any rate what are the best terms to be obtained under the Act, as interpreted by the Insurance Committees and Commissioners. A large number of men wish to adopt the first course, while the second is recommended by the Association.

Aberdeen Doctors and the Family Medical Fund.

A circular has been sent to every medical practitioner in Aberdeen by the local branch of the British Medical Association, which states that at a meeting of the division held at 29, King-street, on Nov. 27th, the secretaries reported that the circular recently issued with reference to the abolition of the Family Medical Fund, and avoidance of competition for Friendly Society Lodges, had been signed by every practitioner in Aberdeen and suburbs. It was unanimously resolved that every practitioner undertaking Friendly Society work for 1912 should do so on the following terms:

I accept the appointment for the year 1912, unless the National Insurance Bill, now before Parliament, becomes an Act, and becomes operative within the year, in which event this contract shall cease.

Dec. 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Insurance Commissioners.

THE appointments to the Insurance Commission are better than rumour led one to expect. The chairman, Mr. Glynn, is known to be a liberal and fair-minded man and a good man of affairs. He is a solicitor, and has been for several years chairman of the Galway county council. Mr. Kinnear, the deputy chairman, is energetic and still young; he has been connected with insurance business all his life, and is at present President of the Insurance Institute of Ireland. Dr. W. J. Maguire, the medical Commissioner, is senior physician to the Mater Infirmorum Hospital in Belfast, and was formerly a lecturer on clinical medicine and examiner in medicine in the Queen's University, Belfast, and examiner at the National University of Ireland. The appointment of a woman Commissioner was not expected, but the Government has been well advised in securing the services of Mrs. Dickie. She has been for several years an inspector of boarded-out children for the Local Government Board, Ireland, and it is chiefly due to her exertions that the boarding-out system has proved a success.

The Milk Commission.

The Milk Commission has held several sittings in Dublin, and has examined, among others, Sir Charles Cameron, Professor McWeeney, Professor W. H. Thompson, Dr. O'Donoghue, Mr. Andrew Watson, M.R.C.V.S., and Lady Dunleath. Sir Charles Cameron stated that milk brought into Dublin from the country was more frequently at fault than milk produced in the city, and he urged the necessity of giving medical officers of health the power of tracing milk to its source. Professor McWeeney spoke of the relation of typhoid fever to milk-supply and of the danger of typhoid carriers. He suggested that all persons engaged in the handling of milk should be required to submit to the Widal test. He urged also that tuberculous cows should be slaughtered. Professor Thompson spoke of various substitutes for fresh milk when the latter cannot be got, and he recommended dried milk as the best. Lady Dunleath strongly advocated the use of goat's milk as a substitute for cows' milk, and referred to her experiments in the introduction of two varieties of goats, by crossing which with the old type a greater bulk of superior milk was produced. Dr. O'Donoghue gave disquieting evidence as to the condition of the dairy-yards in the northern part of County Dublin, of a large part of which he is medical officer. Of 70 dairies in his district 20 were not fit for the keeping of cows. In three recent epidemics of typhoid fever the cause was directly traceable to milk infection. Moreover, there was great laxity in the administration of the Dairies and Cowsheds Order, and no attention was given to the clothes or general condition of the persons handling the milk.

A Medical Assessor to a Judge.

In a case brought before him last week for the recovery of medical fees from the executors of a deceased patient, the Master of the Rolls postponed the hearing until he could have the assistance of a medical assessor. Sir Charles Ball ultimately sat with him throughout the case. Judgment was given for the full amount claimed.

Feeding of School Children.

For some time past there has been discussion in Dublin concerning the undue length of the school hours in the primary schools. In most cases children sit, or, worse still, stand, in class from 9 30 in the morning to 3 in the afternoon, with a break of half an hour in the middle of the day for lunch and exercise. The poorer children have no lunch, and have, therefore, to fast from early morning till late afternoon. The system is thoroughly unhygienic, and many suggestions have been made that the school day should either be shortened, or be broken into a morning and an afternoon session. A Ladies' School Dinner Committee has been formed in Dublin, which attempts, by subscriptions from the public, to provide midday dinners for the poorer children. A deputation from this committee waited on the corporation a few days ago to ask for a grant from the city funds. In Ireland, however, municipal authorities have no power to strike a rate for such a purpose.

The Exclusion of Medical Benefit from the National Insurance Bill.

At a meeting of the Belfast Trades Council held on Dec. 7th a resolution was passed condemning the action of the Irish Parliamentary party in excluding medical benefits from Ireland.

Medical Guild Formed in Belfast.

On Dec. 7th, at the Medical Institute, Belfast, when Dr. J. R. Davison presided over a large attendance, it was decided to form a medical guild in Belfast to include all branches of the profession. Its object is to watch carefully all movements likely to affect the interests of medical men in any way, and to take united action in regard to them. It will work in harmony with existing medical societies, but will deal with matters which cannot be treated in a satisfactory manner by the other societies—the Irish Medical Association, Ulster Medical Association, or British Medical Association—as at present organised. A committee was appointed, with Dr. Davison as chairman, Dr. George Elliott as secretary, and Dr. John Simpson as treasurer, to draw up the constitution and the rules of this new medical guild. The guild has forwarded its congratulations to Dr. W. J. Maguire on his appointment as Medical Commissioner in Ireland.

The Belfast Water Commissioners.

At a largely attended meeting of the Belfast Citizens' Association held on Dec. 11th a letter was read from a member of the Water Commissioners to the effect that people used too much water in Belfast, and that they had to blame themselves for its scarcity. This comment occasioned considerable amusement. There is a strong feeling that the time has arrived for amalgamating the board with the city corporation, and the chairman of this annual meeting of the Citizens' Association pointed out that the late Belfast Health Commission in its report strongly recommended that the Water Board should be amalgamated with the city corporation. It was also pointed out that this same arrangement had been advised by a special commission as far back as 1859.

Ballymena Cottage Hospital.

From the thirteenth annual report, presented to a meeting of the supporters of the Cottage Hospital, Ballymena, held on Dec. 5th, it appears that 128 patients—97 interne and 31 externe—were treated during the past year. Financially the income was £549 16*s.* 8*d.* and the expenditure £516 10*s.* 6*d.*, leaving a credit balance of £33 6*s.* 2*d.*, which is larger than in the previous year.

Dec. 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Illegal Practice of Medicine.

THE illegal practice of medicine unfortunately continues to find easy dupes in France. It is a singular fact that the public, although often distrustful of the properly qualified medical man and his prescriptions, has implicit confidence in irregular practitioners and readily follows their advice even when it is actually childish. At the last meeting of the Syndicate of the Medical Men of the Seine, this important association, which has about 1500 members, discussed the reasons of the present remissness in the application of measures for the repression of illegal practice. M. Levassor, to whom the syndicate had specially assigned this duty, regretfully acknowledged that these practitioners employed clever lawyers, and were using every endeavour to lead the syndicate into protracted and costly litigation. Legal proceedings of this description were not only deplorably slow, but they also required to be supported by expert testimony, the expense of which was often heavy and was not always repaid to the syndicate. It was nevertheless to be wished that the steps taken for this purpose should have some practical result in the way of putting down these abuses, which not only deprived medical men of a portion of the income which they might reasonably expect to derive from their profession, but even damaged the reputation of the profession itself, through the misunderstandings which irregular practitioners endeavoured to create in the minds of the public.

Opposition of the Students to the New Regulations for Medical Study.

By a decree bearing date January, 1909, some important changes were ordered to be made in the system of medical education, chiefly with respect to the duration of the curriculum, which was increased from four years to five. This prolongation was quite essential on account of the time required to be spent in hospital and laboratory work, a requirement designed to prevent the granting of medical qualifications on the ground of merely theoretical knowledge. Practical work in physiology, medical physics, medical chemistry, and bacteriology will, in fact, be obligatory and will be combined with theoretical instruction so as to provide experimental illustrations of the latter. Hospital attendance will extend over the whole curriculum, commencing with elementary clinical instruction and progressing through the various departments of study, so that under the tuition of the Faculty the future practitioner will have had opportunities of observing the clinical features and the treatment of all the serious conditions which he will encounter when subsequently practising on his own account. Finally, to diminish the effect of chance in the examinations the students will have a memorandum book in which will be entered the marks which they have obtained in practical work, in clinical exercises, and in previous examinations. This new decree has just been issued by the Minister of Public Instruction with the signature of the President of the Republic, but has not been well received. Medical teachers and students have requested that it should be referred back for modification, but their objections have been disregarded, as the decree has been issued after signature and the Chamber of Deputies will soon be requested to vote the funds necessary for carrying out the new scheme. This being the position of affairs, the manifestations of hostility to M. Nicolas had only just been quelled by the temporary cessation of his lectures, when turbulent scenes were again created by the first year's students on Nov. 28th, and the Incorporated Association of Medical Students resolved to carry on an energetic campaign for the purpose of obtaining from the public authorities the withdrawal of the new decree. Large posters to this effect have been displayed throughout the Quartier Latin and the first year's students have held a crowded meeting at the offices of the incorporated association. This meeting adopted a resolution to the effect that the students objected to the decree on the ground that it would be unworkable in practice and prejudicial in its action, for by extending the practical and special courses it would interfere with clinical teaching and deprive the students of opportunities for personal study; it was also incomplete because the prolongation of hospital attendance was not made applicable to all the departments of hospital work, but would, on the contrary, bring more students into wards which were already overcrowded with them. The students therefore requested that the decree should be withdrawn and referred to the Superior Medical Council; it was also decided to make arrangements for approaching the Minister of Public Instruction.

The International Sanitary Conference.

M. de Selves, the Minister of Foreign Affairs, opened the International Sanitary Conference which is being held in Paris under the presidency of M. Barrère, the French Ambassador to Rome. The idea of an understanding between

various Governments for the purpose of organising a combined defence against imported epidemics is of French origin, the first Sanitary Conference having been held at Paris in 1851. The present conference is revising the rules adopted in 1903 in order to bring them into conformity with recent discoveries as to the etiology of epidemic diseases, and enforce (1) better notification of infectious diseases, and (2) the application to shipping (with heavy penalties in case of default) of the sanitary requirements in regard to unwholesome dwellings. The conference is also recommending an improvement in the position of the medical officers of passenger vessels, officers who are ill-selected, ill-paid, and ill-provided with requisites for rendering all the services which might be expected from their knowledge and their devotion to duty.

Piroplasmosis among Horses in France.

The horses of some of the agricultural associations in the neighbourhood of the ponds of Camargue in the Department of the Gard have been suffering from a disease the nature of which has until lately remained a mystery. The principal symptom of this disease, which has a case mortality of from 80 to 90 per cent., is progressive anæmia, accompanied by pyrexia, and the attack generally proves fatal in a few months. A single proprietor has through this disease sustained a loss of about 300,000 francs. The nature of the malady has at last been elucidated by the patient researches of M. Dubois, chief veterinary surgeon of the Gard, and M. Grouzet, veterinary surgeon at Saint Gilles, in the same Department. It is caused by a parasite which multiplies in the blood of the horses. This parasite resembles the hæmatozoa found by Laveran in equine piroplasmosis, a very common condition in South Africa—especially in the Transvaal and Cape Colony—as well as in Algeria and Morocco. As in Africa, so in the Gard, the disease in conveyed by the bites of insects. The epidemic in the Gard is the first scientifically observed instance of equine piroplasmosis in France.

Presentation to Professor Armand Gautier.

On Nov. 25th the colleagues, friends, and pupils of Professor Armand Gautier held a celebration in honour of the fiftieth anniversary of his university career, and presented him with a medal and a bust of himself executed by M. Vernon and M. Theunissen. The Minister of Public Instruction was represented by M. Bayet, director of the department of higher education, who was in the chair. Successive addresses were delivered by M. Haller, president of the medal and bust committee; Professor Landouzy, representing the Faculty of Medicine; M. Lippmann, representing the Academy of Sciences, of which Professor Gautier is the president; M. Hanriot, representing the Academy of Medicine and the council of hygiene; and M. André Lefevre, representing the old pupils. Professor Gautier, who was deeply moved, expressed his hearty thanks to all those who had contributed to the success of the meeting.

Dec. 11th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Meeting of the Austrian Medical Councils.

THE yearly meeting of the delegates of all the Austrian Medical Councils has just taken place, and its proceedings on this occasion had a direct bearing on the various problems urgently requiring a decision. The proposed new series of regulations, called the Aerzteordnung (equivalent to a Medical Act), is now under consideration amongst the members of the profession, and there has seldom been a law or a legislative proposal which has evoked such a uniform opposition from the classes affected by it as this has done. The meeting of the councils has been arranged chiefly for the purpose of discussing and repudiating this unwelcome Bill, and for considering what steps should be taken for the protection of the profession against such a measure.

As has already been pointed out in this column[1] one of the chief grievances of the profession was the article which would in certain circumstances ignore the rule of professional secrecy. Since that time, however, it has become known that several other clauses have been proposed which appear to be equally inacceptable. Thus, for instance, the meeting has passed a resolution to the effect that a *numerus clausus*, such as has been proposed by the Government, is absolutely against the interests and wishes of the medical profession. This portion of the Act would introduce for towns with more than 50,000 inhabitants and for health resorts a stipulation that the number of medical men permitted to practise there should be regulated by the magistrates.

Another resolution adopted by the meeting was to the effect that practitioners should be entitled to refuse to render medical aid to certain corporations, institutes, or classes of people if such an understanding has been arrived at between a number of practitioners. This is in direct opposition to the view of the Government expressed in Section 35 of the Act as follows: "Arrangements by which a certain class of persons or a district or institute shall be excluded from receiving medical help are inadmissible and cannot bind the parties concerned." The intention of this article is to make a medical boycott of certain clubs impossible. During the last few years there have been serious disputes between the clubs and their medical officers, but the latter have hitherto been able to hold their ground owing to successful boycotting. Naturally, the profession would lose one of its most useful weapons if a boycott were made unlawful for them. For this purpose the Medical Act provides also the possibility of allowing foreign medical men to practise in Austria, and they would be allowed to do so by the Government if, for instance, a part of the Austrian medical men should declare a strike. Of course, the profession protests vehemently against this clause, and the councils have adopted a resolution condemning it. The Government is, in fact, trying to make the Act as useful for itself as possible in order to suppress the liberty of our profession and to make it subservient to Socialistic tendencies, without granting us any compensation. The meeting has sent its protest and its resolutions to the Government formulated in unmistakeable terms.

Amongst other subjects discussed was the problem of private practice by military medical officers on active service, who do not come under the scope of the regulations, and are in many respects much better off than the private practitioners. The meeting resolved to ask the military authorities that military medical officers engaged in private practice should be subject to the same regulations and laws as the civilian practitioners in the same district. Another question brought before the meeting was an old desideratum of the profession—namely, a law dealing with sanitary matters all round. This would require the creation of a special ministry for health affairs, the head of which should be a doctor of medicine. The question of dentists has also been under discussion during the last year or two. The Government intends the creation of a special class of dentists, who should be intermediate between the mere mechanical dentist of to-day and the doctor of medicine, without being surgeon-dentists. The profession has repeatedly protested against the introduction of this hybrid class of dentists, for if they were allowed it would not be possible to exclude such half-qualified men from other branches of medicine, and the effect would be that ophthalmology and pædiatrics would be invaded by opticians and truss-makers. The meeting repeated the old protest.

One of the final subjects under discussion was the formation of a medical bank which should work hand in hand with the medical insurance company already existing, and grant mortgages and loans on easy terms to medical men and corporations. An active discussion was devoted to the old but burning question of national insurance against sickness. Here, as in England, the profession insists on a certain maximum wage limit for those who will be eligible for compulsory insurance under this scheme; with us an annual income of 2400 kronen, or £100 a year, is the limit conceded by the profession, whilst the Government want the amount to be 50 per cent. more. The profession also wants the club members to have free choice of a practitioner, which, however, the clubs are stoutly refusing. These points are regarded as so important that preparations are being made to declare a strike if the above-mentioned proposals should become law in their present form.

[1] THE LANCET, Sept. 19th, 1910.

The meeting has therefore had very important questions to consider in order to protect the interests of the profession, and on the present occasion the proceedings of the meeting have received more attention from the general body of practitioners than ever before.

Dec. 9th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

Medical Legislation.

IT is anticipated that a measure will be introduced in the course of the ensuing session of Parliament to consolidate the laws of the different provinces in the Union relating to the registration of medical men, dentists, chemists, trained nurses, and midwives, and to the practice of medicine, the sale of poisons, and the like. Some curiosity and no little anxiety are being felt as to the provisions of the anticipated measure. Shortly after the consummation of Union, delegates from the four medical councils met in Johannesburg for the purpose of considering what should be done, and to advise the Government thereon. It is understood that the delegates to that conference, after considerable debate, at length mutually agreed to a series of resolutions. For some extraordinary reason, however, the delegates pledged themselves not to divulge for the time being their proposals to the profession, and to this date the secret has been more or less completely kept. This much has, however, leaked out, that the scheme outlined by the delegates was for a central medical council with four provincial committees, the latter to be enabled to effect registration and to deal with disciplinary cases, accused persons having, however, the right of appeal to the central council. In other words, the committees were to be more or less autonomous, and in all but name provincial medical councils. It appears to have been left to the Orange Free State delegates to draft a Bill for the consideration of the Government embodying the resolutions. They consequently wrote to the Minister of the Interior and asked for the assistance of a draftsman. In reply the Minister asked for the minutes of the conference, and stated that on perusal of these he would have a Bill drafted for submission to the medical councils embodying such of the resolutions as the Government might feel they were able to accept. The minutes were forthwith forwarded to the Minister, and nothing further has been heard of the matter beyond the fact that questions as to the position have been raised at the meetings of the various medical councils. The handing over of the minutes to the Government was a most unwarranted proceeding, for the conference was not in any sense a Government Commission, and the proceedings had no business even to have been withheld from the profession. From a well-informed source it is gathered that the Minister of the Interior does not approve of the proposals of the conference, and it would not seem improbable, therefore, that when the new Medical Bill is published it will be somewhat of the nature of a bombshell. At a recent meeting of the Orange Free State Medical and Pharmacy Council correspondence was read regarding the question of publication of the minutes of the conference, but the president maintained that the sanction of the Government should be obtained before the publication of any statement regarding the matter. On the motion of Dr. Manning, however, seconded by Mr. Hewit, it was resolved that it should be suggested to the Transvaal Medical Council that the Minister of the Interior be asked to publish the minutes of the conference or the Draft Bill, as prepared by the Transvaal Medical Council, and to circularise the same amongst the members of the professions concerned.

Cape Province Medical Council.

Under the Cape Medical Acts the medical officer of health for the colony is *ex officio* a member of the Cape Medical Council. With the retirement on pension of Dr. A. J. Gregory that office has been abolished, and consequently there should really be no such *ex-officio* member on the council. It is characteristic of the procedure now in operation that notwithstanding its obvious illegality the Government has informed the council that the assistant medical officer of health for the Union, stationed in the Cape Province, has been *nominated* to the position in lieu of the medical officer of health for the Colony. Several members of the council have objected, but it is understood that the President ruled that the appointment was to be regarded as a lawful one pending the receipt of advice from the Minister of Justice, which the Department of the Interior has been requested to obtain.

Friction in the Johannesburg Hospital.

Feeling is again running high in connexion with the Johannesburg Hospital, and the dissensions between the medical staff on the one hand and the board of management on the other are rapidly reaching a stage when it will become necessary for the former to consider whether they can with dignity continue to hold office. If they resigned they could at least rely on the support of the local profession, and unless conditions improve this course will probably become necessary to secure reform. A strong feeling of discontent with the existing system of administration has been simmering for several years. The medical staff is not only inadequately represented on the board, but it is ignored whenever any vital question of hospital policy has to be decided. If the medical staff were given adequate representation on the board it is probable that much of the ill-feeling and cause for dissatisfaction would disappear. For many years in other hospitals in South Africa the same defect existed, but these mostly are now administered by boards on which the profession is represented, a reform which in nearly every instance was achieved only after a prolonged struggle. A proposal is being made to replace the native wardmaids, porters, and orderlies at the Johannesburg Hospital with Europeans, at an additional cost of £1500 per annum. One influential member is responsible for the proposal, but it was accepted readily by the board, and it was decided to request the Government to provide the money for carrying it into effect. It is not likely that the request will be acceded to.

The Pneumonia Investigation.

Sir Almroth E. Wright landed in Cape Town on Sept. 26th on a six months' engagement with the Chamber of Mines. He was welcomed by Dr. C. F. K. Murray and Dr. D. J. Wood, representing the Cape Province Medical Council, Dr. A. J. Gregory on behalf of the Chamber of Mines, and Dr. M. Hewat and Dr. F. B. Morris, the President and secretary respectively of the Cape of Good Hope (Western) Branch of the British Medical Association. Sir Almroth Wright had intended to visit the Kimberley mines before proceeding to the Rand, but he received an intimation in Cape Town that there was a severe outbreak of pneumonia in one of the mine compounds, and he consequently was unable to carry out his intention. It is to be hoped sincerely that his mission may be successful, for pneumonia is responsible for hundreds of deaths annually at the mines, and all measures taken so far have met with but little success. Sir Almroth Wright was accompanied by Dr. R. W. Dodgson and Dr. W. Parry Morgan. The former gentleman has already had considerable experience of South African problems, for he was at one time in the bacteriological branch of the Cape Public Health Department, and also has had service under the Rhodesian Administration.

The Rietfontein Lazaretto.

The Government hospital, known as the Rietfontein Lazaretto, has recently attracted a good deal of attention in the Transvaal press. This is the chronic sick hospital for the Transvaal, but it also serves as an infectious diseases hospital and a syphilitic depôt. Not only are the buildings quite unsuitable for the purposes for which they are used, but the administration of the institution has during the last few years left much to be desired, and some of the conditions which have been brought to light can only be described as deplorable. The people on the Rand have at last become fairly roused over the matter, and some remarkably strong resolutions were passed at large public meetings held in Johannesburg on Oct. 16th and presided over by the mayor of that town. The hospital is little more than a collection of wood and iron shanties located anyhow on the veldt. The various branches of the institution are not properly separated, and no attempt is made to classify patients in a proper manner. The press has, as usual, exaggerated the condition of affairs, but much of what has been alleged has, at least, a substratum of truth. It is understood that as a result of the agitation the institution is to be rebuilt. It is to be hoped that the system of administration meanwhile will be overhauled.

NOTES FROM CHINA.

(FROM OUR OWN CORRESPONDENT.)

The Revolution and Red Cross Work in China.

IN my former notes I drew a sad picture of the troublous times the Chinese Empire was passing through from flood and famine. The present state of the country from the added political upheaval is little short of chaos. No one, Chinese or foreign, no matter what his official position may be, can predict what the morrow may bring forth, and in the absence of any efficient central control the different revolutionary centres in the provinces are keeping the country in an extremely unsettled state. Some sensational news has been sent to Europe which has caused anxiety among those having relatives here. Without wishing to make any invidious distinctions I might perhaps hint that those of your readers who wish to get the most sane and sober view of affairs out here would do well to follow the telegrams and articles sent to the *Times* by its well-known correspondent Dr. G. E. Morrison, who no doubt owes something to his medical training for the calm and deliberate methods of reasoning and deduction that he brings into his journalistic calling. When the outbreak took place at Wuchang it was soon seen that neither the Imperialist army nor the revolutionist force was in possession of any adequate medical corps. Shanghai was not long in organising a party under the auspices of the Red Cross Society mainly on the initiative of Mr. Shen Tun-ho, a Chinese gentleman. This party, led by Dr. S. M. Cox, of Shanghai, assisted by Dr. Bennet and Dr. Olesen, two Chinese doctors, and 25 medical students, left for the front and has since been doing good work on the field. At Hankow Dr. J. MacWillie, of the American Protestant Mission, lost no time in getting together a Red Cross Corps which has rendered great assistance. At Peking the Central Government invited the diplomatic body to call for the services of foreign doctors to work in a "Benevolent Society" it was forming. Some hitch has, however, occurred, as the foreign Ministers wished for an understanding that any medical work undertaken would be in accordance with the recognised rules of the Geneva Convention. So far this undertaking has not been officially given, and as racial feeling is at present very bitter between Manchus (the Imperial clansmen) and Chinese, especially in North China, it has not yet been considered advisable to allow foreign doctors and their ambulance staffs to enter the field unless the Convention is accepted in its entirety, though there is no lack of volunteers among the Legation and missionary medical men. None of the missionary hospitals in the fighting area have been in any way touched by either side, and most of them are busy receiving sick and wounded soldiers.

Abuse of the Red Cross Flag.

At the Geneva Convention Great Britain and America did not agree with the other powers that the Red Cross symbol should be restricted solely to work carried out under the society's regulations. In Germany, for instance, it is a punishable offence for any firm to use the Red Cross as a trade mark. Examples of the regrettable misunderstanding as to the proper work of the society are occurring in Peking, where there is more than a tendency to use the Red Cross flag as a means to protect property and possessions which, if extended, will cause the flag to lose its power of protection. A benevolent society, with American missionaries at its head, has been started and has already sold several hundred Red Cross badges to the general public (Chinese) at a dollar each as a sort of insurance for the safety of their lives. The money thus raised has been honestly applied to the renting of quarters to which all wearers of badges could come for refuge, but no adequate protection would be available in the event of an outbreak, as the various guards would be confined to the defence of their respective legations. Though China is a signatory to the Convention the authorities do not intervene to ensure the legal and legitimate use of the symbol. There is much need of some authoritative representation of the society in China at the present moment to see that the Red Cross flag is only employed within the strict limits of the Geneva Treaty.

Plague in Siberia.

It is reported from Manchuria that bubonic plague has broken out at Sharasun, in Russian territory, about 35 miles from the Russo-Chinese frontier. There have been up to the present four deaths, and the Russian doctors have confirmed the nature of the epidemic. An understanding has been arrived at between the Russian and Chinese doctors regarding quarantine measures. The Russian doctors will have charge of the railway area and the Chinese doctors of the roads leading to it. The provisional quarantine station will soon be ready. It is not believed the condition is serious. The Prefect of Manchuria District and the Commissioners of Customs are acting in coöperation with the doctors.

Peking, Nov. 20th.

Obituary.

HENRY ROBERT HEATHER BIGG, F.R.C.S. EDIN., L.R.C.P. EDIN., A.I.C.E.

WE regret to announce that Mr. Henry Robert Heather Bigg died on Dec. 7th at his residence, Wimpole-street, London, at the age of 58, after a long and painful illness borne with great fortitude. Heather Bigg was educated at Rugby, Dr. Temple being then headmaster. When this distinguished man left Rugby, Bigg prepared the illumination for the address presented to him on that occasion. Heather Bigg loved outdoor sports and was captain of the football team, and kept his cap to the day of his death as one of the most cherished mementoes of his school days. He desired to be an artist, but at his father's wish he entered the medical profession and trained at University College Hospital; here he distinguished himself in comparative anatomy and zoology, as well as in practical physiology. He qualified in 1884 at Edinburgh. On the unexpected death of his father, Heather Bigg became engrossed in the practice of orthopraxy. Following in the footsteps of his father he devoted himself to the mechanical treatment of deformities, particularly interesting himself in the improvement of existing substitutes for lost limbs granted to soldiers. Though his professional life was devoted to this class of work, Heather Bigg's mental horizon was by no means limited by artificial limbs and spinal supports. He took a broad interest concerning education, and wrote an admirable tract on "A New View of National Education," and one on "The Human Republic." His love for the classical writers of antiquity did not end with his school days; to the last he delighted in the Latin authors, and Horace had for him an especial charm. In 1900 Heather Bigg published a story in blank verse, "Nell: A Tale of the Thames," containing delightful descriptions of rural scenes in the country near Oxford.

Heather Bigg had a wide circle of talented friends, with whom he loved to discuss questions relating to art and literature. He was very kind to his patients, took keen interest in their welfare, and was beloved in return. He was a zealous Freemason, and held high office in the craft. He was formerly surgeon to the Royal London Irish Volunteers, and the regimental flag was sent to serve as a pall at the funeral service. His body was cremated at Golder's Green. His friends of the Savage Club sent a beautiful wreath for the coffin on that occasion.

WALTER WYMAN, M.D.,

SURGEON-GENERAL OF THE UNITED STATES PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

Dr. Walter Wyman, supervising surgeon-general of the United States Public Health and Marine Hospital Service, died on Nov. 20th, as stated last week, in Washington, D.C. Dr. Wyman was born in St. Louis in 1848, and graduated in medicine at the St. Louis Medical College in 1873. In 1876 he entered the United States Marine Hospital Service, and after serving in St. Louis, Cincinnati, Baltimore, New York, and Washington, he was appointed in 1891 surgeon-general of the service. In the following year the service was expanded in scope, becoming the United States Public Health and Marine Hospital Service. Under Surgeon-General Wyman's administration many far-reaching and important improvements regarding the health of the United States—civil, naval, and military—were effected. He was instrumental in the establishment of sanatoriums for consumptive seamen. He was especially interested in problems concerning the health of those engaged in the merchant marine service. Dr. Wyman made a special study of the physical conditions under

which seamen were employed, and the result of his investigations is embodied in recommendations for legislation which have been passed by Congress. At his suggestion the first hospital for tuberculosis under Government auspices was established in New Mexico, and he also sought to have a hospital for lepers established in New Mexico, but the plan was abandoned in deference to local sentiment. He was instrumental in securing the enactment of laws relating to quarantine, and rendered the most valuable service in the prevention of cholera and yellow fever, in the Government regulation of the manufacture and sale of vaccine virus, antitoxin, and other therapeutic sera, and in the founding of the Hygienic Laboratory at Washington. He was chairman of the Committee on International Quarantine of the Pan-American Medical Congress in 1896 and of the Section of Public Health of the International Congress of Arts and Sciences at St. Louis in 1904; he was also president of the Section of State and Municipal Control of the International Congress of Tuberculosis in 1908. Dr. Wyman was a member of many societies, both national and foreign, and was an acknowledged authority on matters concerning public health, while the nature of his official services brought him into contact with the medical profession of all countries.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. J. H. Hollister, formerly professor of clinical medicine in the Northwestern University Medical School, Chicago.—Dr. J. F. W. Ross, professor of gynæcology in the University of Toronto.—Dr. H. A. Robbins, professor of dermatology in Howard University, Washington.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. E. Heyl has been appointed Medical Adviser to the Prussian Home Ministry, in succession to the late Dr. Aschenborn.—*Boston (Harvard University):* Dr. Howard T. Karsner, of Philadelphia, has been appointed Adjunct Professor of Experimental Pathology.—*Buenos Aires:* Dr. Pedro J. Pando has been appointed to the chair of Medical and Biological Chemistry.—*Heidelberg:* Dr. Menge, professor of midwifery, who was offered the chair at Bonn in succession to Dr. Fritsch, has declined to leave his present post.—*Iurieff (Dorpat):* Dr. Westernrik, of the Military Medical Academy, St. Petersburg, has been appointed to the chair of Pathology and Therapeutics.—*Kiel:* Dr. Heinrich Zoeppritz has been recognised as *privat-docent* of Surgery, and Dr. Heinrich Schlact as *privat-docent* of Medicine.—*Königsberg:* Dr. Hahn, of Munich, has been appointed to the chair of Hygiene.—*Lyons:* Dr. P. Courmont has been appointed to the chair of Experimental and Comparative Medicine, in succession to the late Dr. Arloing.—*Marburg:* Dr. Heyde has been recognised as *privat-docent* of Surgery.—*Moscow:* Dr. V. Muratoff, of Tomsk, has been appointed Extraordinary Professor of Neurology and Psychology.—*Naples:* Dr. Annibale De Giacomo has been appointed Extraordinary Professor of Traumatic Affections.—*Palermo:* Dr. Ugo Soli has been recognised as *privat-docent* of Pathological Anatomy.—*Philadelphia (University of Pennsylvania):* Dr. G. W. Norris has been appointed Adjunct Professor of Medicine.—*Pisa:* Dr. G. Volterrani has been recognised as *privat-docent* of External Pathology.—*Sienna:* Dr. G. Razzaboni has been recognised as *privat-docent* of External Pathology.—*Washington (Georgetown University Medical School):* Dr. Ralph A. Hamilton has been promoted to the chair of Histology.

INSTRUCTION IN HOSPITAL ADMINISTRATION FOR THE DIPLOMA OF PUBLIC HEALTH.—A three months' course of lectures and demonstrations in hospital administration will be given at the North-Western Hospital, Hampstead, N.W., and at the Grove Hospital, Tooting, S.W., during January, February, and March, 1912. In the case of each hospital the lectures and demonstrations will be identical, and students can attend on the day that best suits them. The fee for the course is £3 3*s*. At the North-Western Hospital the lecturer will be Dr. J. MacCombie, who will attend on Mondays at 3 P.M. and Thursdays at 11 A.M., beginning on Jan. 8th; and at the Grove Hospital Dr. J. E. Beggs will attend on Wednesdays at 3 P.M. and Saturdays at 11 A.M., beginning on Jan. 10th.

Dr. Legendre, who was reported as killed while on duty with a French scientific mission, is now stated to have been wounded only and to have arrived safely at Yunnanfu.

WEST OF ENGLAND CENTENARIANS.—Mrs. B. Gay, of Kingsdown, Bristol, celebrated the hundredth anniversary of her birthday on Dec. 1st.—Mrs. Sarah Bishop, who was born in March, 1810, died at Wareham, Dorset, on Dec. 5th.

THE After Care Association for Poor Persons Discharged Recovered from Asylums for the Insane appeals for funds to carry on and extend the work, the objects of which are to assist in various ways recovered cases on their discharge from asylums. Contributions should be sent to the secretary, Mr. H. Thornhill Roxby, Church House, Dean's Yard, Westminster, S.W.

DONATIONS AND BEQUESTS.—The late Mr. James Cook, of Weston-super-Mare. has bequeathed £1000 to the Dunster (Somerset) Cottage Hospital, and the residue of his property (after payment of specific legacies), which is estimated at about £36,000, will be divided equally between the Bridgwater Hospital, the Royal West of England Sanatorium, Weston-super-Mare, and the Taunton and Somerset Hospital.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—A Ladies' Association, of which Viscountess Portman is president, has recently been started to assist the hospital by obtaining subscriptions, gifts of ward linen, and so forth. The committee has made a strong appeal to ladies to join this new association, and contributions may be sent to the secretary at the hospital, Marylebone-road, N.W. Like all our charitable institutions, Queen Charlotte's Hospital is feeling the stress of the present disturbed financial conditions of the country; and although we cannot find space for the many Christmas appeals that reach us, we willingly call attention to this new auxiliary for the helping of a deserving charity.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—On Dec. 1st, at Walter House, Bishop's Lydeard, the residence of Lieutenant-Colonel Dennis F. Boles, M.P., a 10 h.p. Darracq motor-car was presented to Mr. Emilien Edward Frossard, L.R.C.P. Lond., M.R.C.S. Eng. Mr. Frossard had a severe illness last spring, and several of his friends and patients thought that a car would be of great assistance to him in his professional work, and consequently subscribed for one for him.—At the Redland Park Mission, Bristol, Mr. William Ledingham Christie, M.D. New Zealand, F.R.C.S. Eng., was recently presented with a dressing-case by several friends and patients on the occasion of his leaving Clifton for Borneo.—At the annual distribution of certificates to members of the Bristol Great Western Railway Ambulance Class, Mr. John Thompson Wallace, M.B., B.Ch., B.A.O. Irel., was presented with a barometer, subscribed for by members of the class, in appreciation of his services as honorary lecturer.—The members of the Teignmouth (Devon) Section of the St. John Ambulance Brigade recently presented Mr. George Herbert Johnson, L.R.C.P.Edin., M.R.C.S. Eng., with a framed photograph of the members as a slight mark of appreciation of his services as honorary instructor.

THE SURGICAL AID SOCIETY.—The Lord Mayor of London presided at the annual meeting of this society, which was held at the Mansion House on Dec. 11th, when an eminently satisfactory report was presented and adopted on the proposal of Canon Simpson, seconded by Mr. Sheriff Briggs. The report showed that the total income amounted to £27,979 12*s*. 10*d*., as against £28,380 16*s*. 9*d*. in the preceding year. This apparent decrease was accounted for by the fact that legacies showed a decline of £2133. The real increase in the year's receipts, independently of legacies, was £1732 9*s*. 2*d*. Archdeacon Sinclair proposed, and Mr. Banks seconded, a vote of thanks to the governors of the society which was enthusiastically carried, as was also the re-election of Mr. Samuel Watson as treasurer. Mr. Watson, in his reply, pointed out that in 1869 when he first took

office the income of the society was £1050, while last year it reached £28,000, the number of patients relieved had increased from 692 to 26,000, and the number of appliances supplied to patients from 587 to 24,000. On the motion of Mr. Alderman and Sheriff Hanson, seconded by Mr. W. Wheatley, the committee was re-elected for the ensuing year, and the thanks of the governors to the honorary surgeons and other office bearers of the society were accorded to them on the proposition of the Rev. D. T. Young, seconded by Dr. H. G. Thompson. Mr. E. Muirhead Little having replied, the proceedings terminated with a vote of thanks to the Lord Mayor, who testified to the good work done by the society, and the great pleasure which it gave him and his sheriffs to lend a helping hand to so deserving a cause. During the course of the proceedings the secretary announced that nearly £450 had been collected in consequence of the meeting.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill and the Medical Profession.

IN the course of his speech on the debate on the third reading of the National Insurance Bill on Wednesday, Dec. 6th, the Chancellor of the Exchequer made a brief reference to the attitude of the medical profession. "On the question of the doctors," said Mr. LLOYD GEORGE, "I am treading on very delicate ground, strewn with suspicion. I am not going to say that the doctors are satisfied. After all, if they were to express satisfaction it would weaken what an honourable Member calls their trade union position. They have got to arrange with the Local Health Committee, and if they started by saying that they were satisfied of course it would be the greatest possible mistake that they could make. Still, what has been arranged at any rate in the Bill enables the process of free bargaining to go on between the Local Health Committees, the Friendly Societies, and the medical men. I defy anybody who undertakes this business to come to any other arrangements in an Act of Parliament. And why? Because the conditions vary in every locality. The system that suits Durham and South Wales is repugnant to Lancashire. There was danger of revolt among the doctors in the mining districts. We have given free choice of doctors. The system which suits part of Lancashire will not suit another part of that county. There is only one thing a Minister can do in any Bill dealing with the problem of national health, and that is to allow the Local Health Committee to arrange terms suitable to particular districts and suitable to particular individuals. If you were to keep it open, not for 12 months but for 12 years, you could not come to a better arrangement than that. Therefore, there is no real reason for postponement in that respect."

The National Insurance Bill in the House of Lords.

No obstacle it seems likely will impede the progress of the National Insurance Bill in the House of Lords. The attitude of the official opposition is to refrain from undertaking the amendment of the Bill and to leave to the Government full responsibility for its provisions. On the debate on the motion for the second reading of the Bill on Monday, Dec. 11th, the Marquis of LANSDOWNE reviewed the issues involved in the revision or rejection of the Bill by the House of Lords. He accepted the principle of National Insurance, but vigorously criticised many of the proposals of the Government's scheme. "We have," he said in conclusion, "to chose between the Bill, on the one hand, and, on the other, two or three years of bitter and disturbing controversy between the two Houses of Parliament which in the end would be absolutely fruitless. We have come to the conclusion that the acceptance of the Bill is the wiser course for this House to take. There is only one thing which we will not advise your lordships to do—a thing to which I should certainly decline to be a party. I mean a sham attempt to revise this Bill in the few remaining days of this session—an attempt which would be handicapped by the want of time at our disposal and by the knowledge that we are unable to touch or amend the greater part of the Bill. Such an attempt would be made with a certainty that we could not insist upon most of our amendments, and worse than that, we should be saddled with a share in the responsibility for the injustice and mischief which are written large upon many of the provisions of the Bill." After the leader of the Opposition had spoken those words it was evident that there would be no division on the second reading. Accordingly the Bill was read a second time without any vote being taken.

Viscount HALDANE, in moving the second reading of the Bill, made a long statement on its principles and purposes. With regard to the position of the medical profession, he had little to say. He made the brief statement that medical men would be dealt with by the Local Insurance Committees. He said that they would not be worse off than those who were now associated with the Friendly Societies, and on an average they would probably be 2*s*. better off than they now were in respect of each member of the societies.

In Lord LANSDOWNE'S speech reference was made both to voluntary hospitals and the medical profession under the Bill. He spoke of the alarm with which the former viewed the future, as their finances, now dependent to a large extent on the contributions of workmen and their employers, would suffer by the practical transference of this money to the Insurance Fund. As to the position of medical men under the Bill, he said that he scarcely ever opened his newspaper without seeing a fresh protest from them. He had always felt great sympathy for them. Medical men with working-class practices were about the hardest worked and least well remunerated amongst professional men. Some of the doctors certainly were still unsatisfied. Lord LANSDOWNE went on to say that the position of medical men under the Bill was not a very enviable one. They were at the mercy on the one hand of the Health Committees in which the insured persons would be a majority, and on the other hand at the mercy of the Insurance Commissioners who might strike medical men off the panel. He could not help thinking that if the Government desired the Bill to work successfully they would have taken pains to satisfy medical men on the points which they had raised. He wondered whether Lord Haldane had any knowledge of the movement for the establishment of a National Medical Union which he understood was to resist the effect of the Bill on the profession. A movement of this kind was not a negligible one, and he could not help thinking that the Government might have done more than they had to satisfy the apprehensions that had been felt.

Lord SANDHURST, in a speech which suffered a good deal from the acoustics of the House of Lords, also dealt with the position of the medical profession and hospitals. He expressed a doubt whether a flat rate of 6*s*. would constitute a proper remuneration for the services which the medical man would be called upon to give if he accepted the Act. He also thought that the demands on hospitals would increase, and that at a time when it was becoming more difficult to collect funds by voluntary donations. It seemed only too plain to him that now or in the near future the voluntary hospitals must take their place in the scheme. Lord SANDHURST pointed out that bound up with hospitals were the medical schools, and if they were shut down to any extent medical education would suffer greatly.

The Rag Flock Bill.

The Rag Flock Bill was read a third time in the House of Lords on Wednesday, Dec. 13th.

The University of Wales Bill.

The University of Wales (No. 2) Bill, which is designed to extend the provisions of the Medical Acts to the University of Wales and to graduates in medicine and surgery thereof, has been read a third time in the House of Lords.

HOUSE OF COMMONS.

WEDNESDAY, DEC. 6TH.

National Insurance Bill Topics.

Sir HILDRED CARLILE asked the Secretary to the Treasury whether, in view of the statement of the Chancellor of the Exchequer that the provisions for consultations and operations under the National Insurance Bill would be a matter for special arrangement, who were the parties to this special arrangement? and whether payments would be made under this head to the hospitals.—Mr. MCKINNON WOOD replied: The parties to the arrangement would ordinarily be the Local Insurance committee, the medical profession, and the patient. The answer to the last part of the question will depend upon the arrangements which are made.

Sir HILDRED CARLILE: Am I to understand that the hospitals will not be consulted in the matter?—Mr. MCKINNON WOOD: I said the medical profession. Of course, the medical profession represents the hospitals.

Sir HILDRED CARLILE: No. The honourable Member proceeded to ask the right honourable gentleman how the Chancellor of the Exchequer proposed to give effect to his intention that members of the medical profession who had shown themselves unfit for the performance of what would become a very responsible public duty must be prevented from securing work under the National Insurance Bill, and in what way doctors remaining on the Medical Register could be regarded as so unfitting themselves.—Mr. MCKINNON WOOD: The Insurance Commissioners will have power after due inquiry, in the exercise of their discretion, to remove from the panel the name of any medical man whose continuance thereon would be prejudicial to the efficiency of the medical service. The honourable Member can hardly expect me to enumerate the various possible causes that might lead the Commissioners to this conclusion, but I may point out that the Commissioners have power to delegate their duties of inquiry to referees appointed for the purposes, and such referees might be constituted as a court of medical inquiry.

Sir HILDRED CARLILE: Are we to understand that the medical men still on the Medical Register would be dealt with in this way and removed from the panels?—Mr. MCKINNON WOOD: A case might conceivably arise. I do not think it is very likely to arise, but in any case the medical committee would be able to express an opinion which would no doubt carry great weight with the Insurance Commissioners.

Sir HILDRED CARLILE: There is no medical committee.

Mr. MITCHELL-THOMSON: Have the doctors any right of appeal?

Mr. MCKINNON WOOD: Yes, to the referees.

Vaccination Officers.

Mr. PETO asked the President of the Local Government Board whether he was aware that the cases of vaccination officers on whose behalf he had intervened to get some compensation by gratuity or otherwise, to minimise their loss by the operation of the Vaccination Act and Order of 1907, were only those who had appealed to the Local Government Board past the guardians, and, seeing that these cases were

consequently only a small fraction of the cases in which loss and hardship had been suffered, and that many of the officers had thought it wiser to suffer loss rather than run the risk of antagonising their employers, whether he would state what action he proposed to take.—Mr. BURNS answered: I have had this subject before me for some time, but I do not at present consider that I should intervene unless I am appealed to. An officer with a genuine grievance need not, in my opinion, be deterred by the consideration suggested from making such an appeal.

The Royal Commission on Tuberculosis.

Mr. CHARLES BATHURST asked the President of the Local Government Board whether, in view of the admission by the Royal Commission on Human and Animal Tuberculosis in their final report that man's liability to infection from tuberculous animals remained a matter only of inference, he would consider the desirability of pursuing further investigations with the object of discovering whether the residence of human tubercle bacilli in the bodies of infant children or adults led to such modification as to render them indistinguishable from bovine tubercle bacilli.—Mr. BURNS replied: In regard to the first part of the question I would draw attention to the statement on p. 35 of the Final Report that the Commission has investigated many instances of fatal tuberculosis in the human subject in which the disease was undoubtedly caused by a bacillus of the bovine type and by nothing else. The conclusion of the Commission is that man must be added to the list of animals notably susceptible to bovine tubercle bacilli. I am not at present prepared to make any statement in regard to future investigations of the subject referred to in the second part of the question, but may I refer the honourable Member to the observations of the Commission on this point which appear on pages 35 to 37 of their final report.

Mr. BATHURST: Are all investigations into this disease at an end so far as the department of the right honourable gentleman is concerned.—Mr. BURNS: Before I answer that question I would suggest to the honourable Member that he should read the final report completely with the last memorandum.

Mr. BATHURST asked the right honourable gentleman whether the statistical information relating to abdominal tuberculosis, stated at page 49 of the Second Interim Report of the Royal Commission on Human and Animal Tuberculosis to have been received from the great hospitals and about to be published in a subsequent Report, had yet been so published; and, if so, what was the reference.—Mr. BURNS answered: A further reference to these records is contained on page 49 of the memorandum attached to the Final Report of the Commission, from which it will be seen that subsequent examination of the records showed that they were of little value for the purposes of the Commission.

Mr. BATHURST asked the right honourable gentleman whether any information had been published either by the Board or by any Royal Commission or Departmental Committee on Tuberculosis as to the efficacy of the process of the pasteurisation of milk in the destruction of tuberculous germs and as to the effect of such process upon its nutritive value; and if not, whether he proposed to institute such investigation.—Mr. BURNS said in reply: Information on this subject is contained in paragraphs 70 to 76 of the report of the Royal Commission on Tuberculosis of April 3rd, 1895. Since that time numerous other observations have been made by other workers, the results of which have been published in various journals. As to the latter part of the question, a report will shortly be published by the Local Government Board.

Mr. BATHURST: Will the results of these different investigations be assembled in one document?—Mr. BURNS: I think that sufficient reference will be made to them by the report which is now in process of preparation by the Local Government Board.

The Health of Postwick.

Sir ROBERT PRICE asked the President of the Local Government Board whether his attention had been drawn to the danger to health which was caused to the inhabitants of Postwick, near Norwich, by the deposit by the Corporation of Norwich of both sewage and dry refuse, and whether the department could do anything to improve this state of affairs.—Mr. BURNS wrote in reply: I have given close attention to this matter and have twice directed a visit by an inspector of the Board to inquire into it. The corporation are now taking steps to remove any cause of nuisance from their sewage farm, and they have improved the conditions under which the refuse is deposited.

Insurance Commissioners for Ireland.

On the motion for the adjournment, Mr. MOONEY asked the Home Secretary whether he was in a position to give information with regard to the Commissioners for Ireland under the National Insurance Bill.—Mr. MCKENNA: The names are: Mr. Joseph A. Glynn, chairman of the Galway County Council, who will be chairman of the Commission, Mr. Walter Kinnear, of Dublin, Dr. Walter Joseph Maguire, of Belfast, and Mrs. Dickie, of the Local Government Board, Dublin, will be the other Commissioners. The secretary will be Mr. J. Houlihan, an experienced member of the upper division of the civil service.

THURSDAY, DEC. 7TH.

The National Insurance Bill and Medical Practices.

Mr. DOUGLAS HALL asked the Chancellor of the Exchequer whether the Government proposed to take any steps to compensate doctors for the loss many of them would suffer in the price obtainable for the sale of their practices owing to the working of the National Insurance Bill when it came into operation.—Mr. LLOYD GEORGE said in reply: I see no reason to suppose that the consequences anticipated by the honourable Member are likely to occur. On the contrary, the value of most medical practices, especially in industrial areas, must be increased by the operation of the Bill.

TUESDAY, DEC. 12TH.

National Insurance Bill Topics.

Viscount WOLMER asked the Prime Minister whether he intended to appoint a Parliamentary Insurance Minister, and if not, who would be responsible to Parliament for the Administration of the Government's insurance scheme.—Mr. ASQUITH replied: The Treasury will be responsible for Part I. (National Health Insurance) of the insurance scheme. It may be convenient that I should state that the joint Committee to be set up under Clause 83 of the Bill will consist of a chairman, the four chairmen of the Commissions, Mr. Bradbury, Mr. Smith Whitaker, and the Chief Registrar of Friendly Societies. The present Under Secretary for the Home Office will be chairman, and will reply in this House in respect of the work of the joint Committee and of the four Commissions, and Sir Robert Morant will be vice-chairman.

Mr. CROFT asked the Chancellor of the Exchequer whether qualified compounders and dispensers of medicines of the Royal Army Medical Corps, having businesses of their own, would be allowed to submit their names as eligible to dispense prescriptions under the National Insurance Bill.—Mr. LLOYD GEORGE answered: Compounders and dispensers of medicine who are qualified under the rules of the Pharmaceutical Society and who have left the Royal Army Medical Corps are eligible to be placed on the list of dispensers under the National Insurance Bill.

Mr. BAIRD asked the right honourable gentleman whether a medical practitioner would be allowed under the National Insurance Bill to have his name included among the list of practitioners in more than one area administered by more than one Local Health Committee.—Mr. LLOYD GEORGE replied: The answer is in the affirmative.

BOOKS, ETC., RECEIVED.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London. KABITZSCH, CURT, Wurzburg.

The Accessory Sinuses of the Nose in Children. 102 Specimens reproduced in natural size from Photographs. By Prof. Dr. A. Onodi, Director of the University Clinic for Diseases of the Nose and Throat in Budapest. With a Preface by Prof. Dr. W. Waldeyer, Director of the Anatomical Institute of the University of Berlin. Translated by Carl Prausnitz, M.D., M.R.C.S., L.R.C.P., Head of the Hydrophobia Department of the Hygienic Institute, University of Breslau; late Assistant Bacteriologist to the Metropolitan Asylums Board, London. Price 21*s.* net.

Atlas of Killian's Tracheo-Bronchoscopy. Coloured Plates representing Pathological Preparations from Cases examined during Life by means of Tracheo-Bronchoscopy. By Sanitätsrat Dr. Mann, Director of the Ear, Nose, and Throat Department in the City Hospital, Dresden-Friedrichstadt. Translated by Thomas Guthrie, M.B., F.R.C.S., Liverpool. Price 22*s.* net.

DAVIS (F. A.) COMPANY, Philadelphia. PHILLIPS, STANLEY, 23, Creighton road, Queen's Park, London, N.W.

Diseases of the Ear, Nose, and Throat, Medical and Surgical. By Wendell Christopher Phillips, M.D., Professor of Otology, New York Post-Graduate Medical School and Hospital. Price 25*s.* net.

Modern Diagnosis and Treatment of Diseases of Children. For Practitioners and Students of Medicine. By Herman B. Sheffield, M.D. (Co-Author of "Practical Pediatrics"), Instructor in Diseases of Children at the New York Post-Graduate Medical School and Hospital. Price 19*s.* net.

The Internal Secretions and the Principles of Medicine. By Charles E. de M. Sajous, M.D., LL.D., Fellow of the College of Physicians and of the American Philosophical Society; Professor of Therapeutics in the Temple University of Philadelphia. Fourth edition. In Two Volumes. Price, cloth, 50*s.* net; half morocco, 65*s.* net.

Medico-legal Aspects of Moral Offences. By L. Thoinot, M.D., Professor in the Medical Faculty of Paris, Physician to Laënnec Hospital; Expert to the Tribunal of the Seine. Translated from the Original French and enlarged by Arthur W. Weysse, A.M., Ph.D. (Harvard), M.D. (Basel), Professor in Boston University. Only Authorised Translation into English. (The sale of this book is restricted to members of the medical and legal professions.) Price, cloth, 12*s.* 6*d.* net.

Diseases of the Stomach and Upper Alimentary Tract. By Anthony Bassler, M.D., Visiting Gastro-Enterologist to the People's Hospital, and Visiting Physician to the St. Mark's Hospital Clinic. Price 25*s.* net.

Handbook of Diseases of the Eye. A Text-book for Students and Practitioners. By Harry Caldwell Parker, M.D., Clinical Professor of Ophthalmology, Indiana University School of Medicine, Indianapolis, Indiana. Price 8*s.* 6*d.* net.

Handbook of Electro-therapeutics. By William James Dugan, M.D., Lecturer on Electro-Therapeutics at Jefferson Medical College, Philadelphia. Price 8*s.* 6*d.* net.

FISCHER, GUSTAV, Jena.

Pathologische Anatomie. Ein Lehrbuch für Studierende und Aerzte. Bearbeitet von L. Aschoff, Freiburg i. Br.; M. Askanazy, Genf; H. Beitzke, Lausanne; C. Benda, Berlin; M. Borst, München; A. Dietrich, Charlottenburg; P. Ernst, Heidelberg; E. v. Gierke, Karlsruhe; L. Jores, Köln; R. Kretz, Würzburg; O. Lubarsch, Düsseldorf; O. Naegeli-Naeff, Zürich; R. Rössle, Jena; M. B. Schmidt, Marburg; H. Schridde, Freiburg i.Br.; E. Schwalbe, Rostock i. M.; M. Simmonds, Hamburg; C. Sternberg, Brunn. Herausgegeben von L. Aschoff, Freiburg i. Br. Zweite Auflage. Erster Band: Allgemeine Aetiologie, Allgemeine Pathologische Anatomie. Price, paper, M.14; bound, M.15.75. Zweiter Band: Spezielle Pathologische Anatomie. Price, paper, M.16; bound, M.17.75.

HEFFER, W., AND SONS, LIMITED, Cambridge.

Arris and Gale Lecture on the Physiology of the Human Labyrinth. Delivered before the Royal College of Surgeons of England on March 18th, 1910. By Sydney Scott, M.S., M.B. Lond., F.R.C.S. Eng., Assistant Aural Surgeon to St. Bartholomew's Hospital. Price 2*s.* net.

MACMILLAN COMPANY, THE, New York. MACMILLAN AND CO., LIMITED, London.

Applied Biology. An Elementary Text-book and Laboratory Guide. By Maurice A. Bigelow, Ph.D., Professor of Biology in Teachers College, Columbia University; Co-Author of the "Teaching of Biology in the Secondary School"; and Anna N. Bigelow, M.S., Teacher of High-School Biology. Price 6*s.* net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CAMPAIN, JOSEPH HENRY, M.R.C.S., L.R.C.P.Lond., has been appointed Assistant House Physician at the Sheffield Royal Hospital.

CARR, W. J., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at the Evelina Hospital for Sick Children.

DUNNING, J. B., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Royal Cornwall Infirmary, Truro.

EADON, WILLIAM FREDERICK BAILEY, L.R.C.P. & S. Edin., has been appointed Public Vaccinator for the Iron Acton District by the Chipping Sodbury (Gloucestershire) Board of Guardians.

FRAGOSO, W. C., M.B., Ch.B. Edin., has been appointed to the Medical Staff of the General Dispensary, Birmingham.

FRASER, ROBERT, M.B., B.S. Edin., has been appointed Assistant Medical Officer of Health of Derby.

GRACE, ALFRED HENRY, L.S.A. Lond., has been appointed Public Vaccinator for the No. 1 District by the Chipping Sodbury (Gloucestershire) Board of Guardians.

GRAY, H. TYRRELL, M.C. Cantab., F.R.C.S. Eng., has been appointed Surgeon to Out-Patients at the Hospital for Sick Children, Great Ormond-street.

HENDERSON, JOHN, M.D., Ch.B., F.R.F.P.S. Glasg., has been appointed Assistant to the Muirhead Professor of Medicine in the Glasgow University, and Lecturer and Physician to Nurses at the Royal Infirmary, Glasgow.

KEOGH, A. L., M.B., Ch.B.Edin., has been appointed Junior Assistant Medical Officer at the Ayr District Asylum.

MORITZ, ARNOLD, M.B., B.C. Cantab., has been appointed Honorary Medical Officer to the Kensington Dispensary and Children's Hospital.

SAMUEL, H., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Skin Department of the Prince of Wales's Hospital, Tottenham.

TURNBULL, MARTIN, M.B., Ch.B. Glasg., has been appointed to the Medical Staff of the General Dispensary, Birmingham.

WALFORD, HAROLD R. S., M.R.C.S., L.R.C.P.Lond., has been appointed Second Assistant Medical Officer at the Worcester County and City Asylum, Powick.

WAUGH, GEORGE E., M.D. Lond., has been appointed Surgeon to the Hospital for Sick Children, Great Ormond-street.

WHAITE, J. H., M.D., B.Ch. Dub., has been appointed Deputy Medical Officer for the Heavitree District by the St. Thomas (Exeter) Board of Guardians.

WIGMORE, A. J. O., M.R.C.S., L.R.C.P. Lond., M.B., Ch.B. Bristol, has been appointed Assistant House Surgeon at the East Sussex Hospital, Hastings.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHNAL GREEN INFIRMARY AND WORKHOUSE, Cambridge Heath, E.—Assistant Medical Officer. Salary at rate of £100 per annum, with apartments, board, and washing.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant for three months. Salary at rate of 52 guineas per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £85 per annum, with board, residence, washing, &c.

BRENTFORD UNION INFIRMARY.—First Assistant to the Medical Superintendent, unmarried. Salary £185 per annum, with apartments, rations, washing, &c.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon unmarried. Salary £80 per annum, with apartments, board, and laundry.

BRISTOL ROYAL INFIRMARY.—Dental House Surgeon. Salary £100 per annum, with apartments, board, and laundry. Also Resident Casualty Officer for six monhs. Salary at rate of £50 per annum, with board, laundry, and apartments.

BURNLEY, VICTORIA HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with residence, board, and washing.

CANCER HOSPITAL, Fulham-road, London, S.W.—House Surgeon for six months. Salary £70 per annum.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—Resident Medical Officer, unmarried. Salary £90 per annum, with board, lodging, and washing.

CARDIFF, UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Assistant Lecturer and Demonstrator in Physiology, and Lecturer in Physiological Chemistry. Salary to first post is £140, and latter post £60 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Clinical Assistant.

DERBY, DERBYSHIRE ROYAL INFIRMARY.—Two House Surgeons and House Physician for one year. Salary in each case £100 per annum, with apartments, board, &c. Also Assistant House Surgeon for six months. Salary at rate of £60 per annum, with apartments, board, &c.

DUNDEE DISTRICT ASYLUM.—Junior Resident Medical Officer. Salary £110 per annum, with board and apartments.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £72 per annum.

EVELINA HOSPITAL FOR CHILDREN, Southwark, London, S.E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, and washing. Also Ten qualified Clinical Assistants.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury-avenue, W.C.—Honorary Dental Surgeon.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £30, with board and residence. Also Casualty Medical Officer. Salary £200 per annum, with luncheon.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

LEEDS GENERAL INFIRMARY.—Assistant Clinical Pathologist. Salary £150 per annum.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, residence, and washing.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

MANCHESTER SCHOOL FOR MOTHERS.—Medical Officer. Salary £250 per annum.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and washing.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Soho-square, W.—Honorary Assistant Physician.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £100 per annum, with board, lodging, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Physician.

PERTH ROYAL INFIRMARY.—House Surgeon. Salary £60 per annum, with board.

PRESTWICH UNION INFIRMARY AND WORKHOUSE.—Second Assistant Medical Officer. Salary £100 per annum, with apartments, rations, &c.

REDHILL, EARLSWOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and washing.

SHEFFIELD ROYAL INFIRMARY.—Junior Resident Medical Officer. Salary £60 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board, washing, and attendance.

WADSLEY, NEAR SHEFFIELD, WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary £140 per annum, with board, &c.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

WOKING, BROOKWOOD ASYLUM, Knaphill.—Third Assistant Medical Officer. Salary £150 per annum, with apartments, board, laundry, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, rooms, and laundry.

WOOLWICH INFIRMARY, Plumstead.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, rations, and washing.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Diss, in the county of Norfolk; and at Stromness, in the county of Orkney.

Births, Marriages, and Deaths.

BIRTHS.

COTES-PREEDY.—On Dec. 9th, at Harboro' Cottage, Gerrard's Cross, the wife of Digby Cotes-Preedy, M.A., LL.M., L.S.A., Barrister-at-Law, of a son.

MARRIAGES.

CRUDDAS—LUNHAM.—On Dec. 7th, at Trinity Presbyterian Church, Cork, Major Hamilton Maxwell Cruddas, I.M.S., Queen's Own Corps of Guides, Mardan, India, to Helen Madoline, youngest daughter of the late Thomas Lunham, J.P., and Mrs. Lunham, Lotamore, Cork.

SMYTH—RUBIE.—On Dec. 7th, at Bromley, Kent, Ernest Jackson Smyth, M.D., B.S., B.Sc. Lond., to Marion Janet, second daughter of Edward Rubie, Sidcup, Kent.

DEATHS.

BOND.—On Dec. 5th, at Beaufort-buildings, Gloucester, Francis Thomas Bond, B.A., M.D. Lond., F.R.S. Edin., aged 77 years.

MAPLETON.—On Dec. 10th, at Goudhurst, George Hubert Mapleton, M.B., C.M. Edin., after a short illness.

TREVELYAN.—On Dec. 11th, Edmond Fauriel Trevelyan, M.D., of Park-square, Leeds, aged 52 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

IMPRISONMENT FOR OVERLYING.

PUBLIC opinion has been considerably stimulated during the past few years on the question of infantile mortality, and it is believed that many of the provisions of the Children Act will be found in the course of time to have been the means of bringing about a considerable reduction in the number of deaths of infants. Within the past few months the Brighton coroner has had before him numerous cases of overlying, and on every occasion Mr. J. E. Bush has taken the opportunity of calling attention to the very dangerous practice of parents taking their offspring to bed with them instead of placing them in a cradle or making a bed in a drawer of a chest of drawers or a crude box; in fact, anything rather than the common practice of the child sleeping with the parents. Considerable prominence has been given to the coroner's utterances in the lay press, but apparently with little effect, for in Brighton during October there were no fewer than three cases of overlying. The month of November opened badly with another instance, but as both the mother and the father are now undergoing a term of imprisonment there should be, and perhaps will be, an appreciable absence of these cases in the Brighton coroner's court. There were certainly some very aggravated circumstances in the latter case. A railway employee and his wife had spent the evening together drinking and both went home, the husband "absolutely drunk and the wife not so drunk but under the influence of drink," according to the evidence. The man engaged in a street brawl with a male lodger, inflicting such injuries upon that individual as to necessitate hospital treatment. The husband and wife then went to bed, taking their month-old child with them, and in the morning the child was dead. A medical man found that the thymus gland was five times its normal size. Acting on the advice of a nurse the mother had purchased a cradle for the child, but pending the preparation of the bedding the cradle was only the bed of a cat. It is scarcely necessary to add that bearing in mind the condition of the parents the jury found there was negligence, but which did not amount to culpable negligence, and in returning a verdict of "Death from suffocation" the jury was agreed that the parents had rendered themselves liable under a section of the Children Act to summary conviction before the magistrates. The opinion was further expressed that it was time severe steps were taken in the matter. The National Society for the Prevention of Cruelty to Children at once instituted proceedings in the police-court, and on Nov. 16th both father and mother were sent to gaol for two months, the justices telling them that they were lucky in not being proceeded against on a charge of manslaughter. It was the first prosecution of the kind in Brighton, and it will be interesting to note what effect the sentence has upon parents who will not take heed of the frequent warnings that are given to them.

FEDERATED MALAY STATES: MEDICAL REPORT.

THE Federated Malay States are situated on the mainland of the Malay Peninsula, and are closely connected with the Straits Settlements; they consist of the States of Perak, Selangor, Negri Sembilan, and Pahang, which by treaty in 1895 renewed their engagements with the British Government and are administered under the advice of a British Resident-General, who controls the Residents subject to the instructions of the High Commissioner, who is also Governor of the Straits Settlements. The first three States named are on the west coast and extend from the border of Province Wellesley to that of the independent State of Johore. Pahang is on the east coast. All are governed by their native rulers under the above-mentioned control. Kuala Lumpur, the capital (population 40,000), is distant 8500 miles from London (transit, *vid* Penang, 21 days). The official report for 1910 has just been presented to Parliament. Subjoined is a summary of the medical section of the report. The death-rate, on the estimated population of the States—1,001,257—was 32·16 per 1000. The number of in-patients treated in hospitals was 89,824, as against 73,192 in 1909 and 84,105 in 1908. The death-rate there was 8·15 per cent., the lowest recorded. Of the 6192 deaths, 1092 were due to malaria, 1234 to dysentery, and 1357 to pulmonary diseases. The record number of 217,407 out-patients were treated during the year. The travelling dispensaries, which include dispensary boats on the Perak and Pahang rivers, supplied aid to the large riverside population and to places where no regular dispensaries are established. Anti-malarial measures have engaged attention. Some $21,000 were expended during the year on drainage and reclamation of swampy land at Kuala Lumpur; similar works have also been executed in Klang, Port Swettenham, Batu Gajah, Seremban, and elsewhere. Large quantities of quinine were also distributed. During the year 1909 there were no cases of cholera or plague, but unfortunately during 1910 cholera broke out in Perak, Selangor, and Pahang. It is believed that the outbreak at Pahang was introduced from Siam and that in the other two States from India. There were 378 cases and 332 deaths. 225 cases of small-pox were recorded, 60 of which were fatal. During the year 1909 33,782 persons were vaccinated; during 1910 the number rose to 121,568. The number of known successful vaccinations was 80,617, and of unsuccessful 8561; the remainder were not verified. At the Institute for Medical Research the investigation into the etiology of beri-beri was proceeded with. An inquiry on the distribution of anophelines was commenced and will be continued for the purpose of obtaining further data regarding the malaria-carrying mosquito. 246 reports were furnished on the examinations of specimens submitted by the medical and veterinary departments. In addition to 764 general analyses, a number were carried out in the research on beri-beri. 136 analyses were made under the Deleterious Drugs Enactment, and 94 of these were samples of anti-opium pills; the analyses proved that 89 of these samples contained a large proportion of opium or morphine.

HANDBOOKS ON DISINFECTION.

Messrs. Newton, Chambers, and Co., Limited (Thorncliffe, near Sheffield), ask us to state that they will gladly send their series of handbooks on disinfection to readers of this journal on receipt of a post-card. "Medical Izal" contains reprints from the principal medical journals of papers dealing with the use of izal in the treatment of phthisis, puerperal sepsis, tropical dysentery, enteric fever, cholera, and tinea favosa capitis. "Practical Disinfection" deals with the domestic uses of izal. "The Veterinary Handbook" is full of useful information for owners of horses, dogs, cats, poultry, &c. The last of the series, "Izal in the Dairy," apart from its purpose as an advertisement, is a really useful handbook at a time when the conditions of milk production are claiming so much attention.

SOUTH AMERICAN PARASITES.

A VALUABLE collection of parasites infesting human subjects and domestic animals in Dutch Guiana and a number of preparations illustrating them have been presented to the University of Utrecht through Dr. E. A. Koch, of the Dutch Colonial Medical Service in Paramaribo.

THE DOMEN ADHESIVE ELASTIC BANDAGE.

WHEN noticing this excellent make of elastic bandage we mentioned, owing to a misunderstanding of the description, that it contained no lead; we find that this is an error, but it does not affect the value of the plaster for the purposes for which it is intended. It is certainly a very useful and convenient form of strapping.

Rapier.—Our correspondent should advise any of his patients against having recourse to the treatment. The whole matter is still under our consideration, but we have already enough evidence to justify this warning.

Si Opus Sit.—Our correspondent's idea is ingenious and the coincidence is humorous.

"*Not to be Swallowed*" has failed to give his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1911:—

Dec. 19th-23rd (Moscow).—Third Pan-Russian Therapeutical Congress.
,, 27th-30th (Baltimore).—American Physiological Society.

In 1912:—

Jan. 20th-27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
Feb. 13th-14th (London).—Central Poor-Law Conference.
March 7th-11th (Berlin).—Thirty-third Balneological Congress.
,, 23rd-April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
,, (London).—First Congress of Pure Food and Health Society of Great Britain.
April 1st-7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
,, 14th-20th (Rome).—Seventh International Congress on Tuberculosis.
,, 15th-18th (Wiesbaden).—Twenty-ninth German Congress for Internal Medicine.
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 7th-17th (Washington).—Ninth International Red Cross Conference.
,, 27th-June 1st (London).—Eighteenth International Congress of Americanists.

May (London).—International Horticultural Exhibition.
June 24th-27th (London).—The (Biennial) Health Conference and Exhibition.
,, (London).—Missionary Exhibition.
,, (Dublin).—Celebration of the Bicentenary of the School of Physic in Ireland (Medical School of Trinity College, Dublin).
July 2nd-5th (London).—Congress of the Universities of the Empire.
,, 2nd-6th (Doncaster).—Seventy-third Annual Show of the Royal Agricultural Society of England.
,, 12th-16th (London).—Imperial Conference of Teachers' Associations.
,, 19th-27th (Liverpool).—British Medical Association, Eightieth Annual Meeting.
,, 24th-30th (University of London).—First International Eugenic Congress.
,, 25th-28th (Berlin).—Royal Institute of Public Health.
,, 29th-August 3rd (York).—Congress and Exhibition of the Royal Sanitary Institute.
Aug. 5th-10th (Oxford).—Second International Congress of Entomology.
,, 7th-10th (Glasgow University).—Thirty-second Annual Meeting of the British Dental Association.
Sept. 4th (Washington, D.C.) and Sept. 6th-13th (New York).—Eighth International Congress of Applied Chemistry.
,, 10th-12th (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.
,, 23rd-28th (Washington, D.C.).—Fifteenth International Congress on Hygiene and Demography.
September (Prague).—International Congress of Radiology and Medical Electrology.
(Budapest).—Tuberculosis Exhibition.
(Stockholm).—Olympic Games.
(Düsseldorf).—Third International Medical Accident Congress.
(Perth, Western Australia).—(Three days.) Health Congress.

In 1913:—
(Easter week) (Berlin).—Fourth International Congress for Physiotherapy.
Aug. 6th-12th.—(London).—Seventeenth International Congress of Medicine.
,, 22nd-28th (Cambridge).—International Mathematical Congress.
(London).—Historical Medical Exhibition. (Organised by Mr. Henry S. Wellcome.)
(Chicago).—Congress of the International Association of Refrigeration.
(Paris).—Congress of Physical Education.
(Milan).—Fourteenth International Anti-alcoholic Congress.

In 1914:—
(Vienna).—Third International Congress for Professional Diseases.
(Auckland, N.Z.).—Australasian Medical Congress.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL METEOROLOGICAL SOCIETY, Institute of Civil Engineers, Great George-street, Westminster, S.W.

WEDNESDAY.—7.30 P.M., Mr. W. Larden: Solar Halos and Brocken Spectres.—Mr. W. H. Dines: The Statistical Changes of Pressure and Temperature in a Column of Air that accompany Changes of Pressure at the Bottom.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon: Dr. Bernstein:—Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Pritchard: Clinical Pathology.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M.: Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Etherington-Smith: Clinical. (Lecture II.)

WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Dr. Beddard: Practical Medicine. (Lecture VI.)

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Pathological Demonstration (Dr. Duncan).

TUESDAY.—Clinic; 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld).; Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting).

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen): Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Pathological Demonstration (Dr. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld): Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Pathological Demonstration (Dr. Duncan).

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY AND FRIDAY.—3.45 P.M., Lecture:—Dr. J. Atkinson: Nose.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Baldness: Its Causes and Treatment.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.). Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (23rd).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

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IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 13th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Dec. 7	29·54	S.W.	0·15	46	46	38	42	43	Raining
,, 8	29·77	S.W.	0·20	57	45	35	35	36	Fine
,, 9	29·42	W.	0·27	63	45	36	41	41	Raining
,, 10	29·44	S.W.	...	47	47	41	43	43	Raining
,, 11	29·13	W.	0·45	70	48	41	41	44	Fine
,, 12	29·65	S.W.	...	59	50	38	40	41	Foggy
,, 13	29·52	S.	...	61	47	41	44	46	Cloudy

The following journals, magazines, &c., have been received:—Archives of the Middlesex Hospital, Journal of the Royal Army Medical Corps, Indian Public Health, Knowledge, Cleveland Medical Journal, Monthly Cyclopædia, Journal of the Royal Sanitary Institute, Revue de Gynécologie, Archives Internationales de Neurologie, American Journal of Medical Sciences, L'Hygiène de la Viande et du Lait, Tuberculosis, Annales des Maladies des Organes Genito-Urinaires, Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, Military Surgeon, St. George's Hospital Gazette.

Communications, Letters, &c., have been received from—

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The Bradshaw Lecture

ON

SOME POINTS IN HEREDITY.

Delivered at the Royal College of Surgeons of England on Dec. 6th, 1911,

BY R. CLEMENT LUCAS, B.S., M.B. LOND., F.R.C.S. ENG.,

CONSULTING SURGEON TO GUY'S HOSPITAL, AND TO THE EVELINA HOSPITAL FOR SICK CHILDREN.

MR. PRESIDENT AND GENTLEMEN,—There is, perhaps, nothing more remarkable, in comparing the teaching of former years with that of the present day, than to note the gradual recession and disuse of the word *diathesis*, as the true microbic cause of diease after disease becomes unravelled.

CRITICISM OF DIATHESIS.

This word was used to indicate a constitutional condition derived from the parents, rendering a person liable to a particular disease—a disease developed from the tissues conveyed to him by his parentage. Lecturers spent many hours in elaborating details of such diatheses as the strumous, cancerous, syphilitic, gouty, rheumatic, nervous, plethoric, lymphatic, and so on. But after a time it became evident that the types described as characteristic were those in which a particular disease or habit had already commenced its work. And now they have passed away like a dream, from which the slumberer awakes to enter into new realms of thought. Yet great was their influence, and mighty were the struggles made by observers to force their irregular cases under the unsympathetic wings of some particular diathesis.

The Gouty Diathesis.

Of these, the gouty is almost the last survivor, bolstered up by its aristocratic relations, and even more by the parvenu's wealth, waiting, as I believe, only for the discovery of a particular ferment which causes the precipitation of sodium urate in the most used joint of an overfed, often sedentary, and perhaps bibulous person.

In this relation it may be interesting to quote Professor Laycock's account of the diathesis of the revered founder of this great museum. The Professor of Medicine of Edinburgh thus describes his brother Scot:—

> John Hunter was of the strumous arthritic diathesis with a nervous element also. [A little mixed, you will observe.] His florid complexion indicated the vascular element, while his rounded forehead, thickened alæ nasi, thick upper lip, and caries teeth in the upper jaw marked the strumous tendency.

He then proceeds to account for these hereditary defects:—

> John Hunter, it is clear, owed his strumous arthritic diathesis to the circumstance that his father was in his seventieth year when John was conceived and had at least one of the diseases of the gouty habit, namely, "gravel."

He sums up:—

> He was a typical man of his diathesis; with a predisposition to tuberculosis and atheroma, he nevertheless, from the vigorous nutrition of his nervous system, was capable of great mental labour.[1]

Such is the libellous description given of the greatest surgeon of his day.[2]

Tuberculosis.

Of diseases believed to be hereditary, the constitutional origin of none was taught with more dogmatic certainty than tuberculosis before the discovery of Koch's bacillus; and even now, though the various modes of entry and the manner of its distribution have long been studied, it is difficult to disentangle men's thoughts from this erroneous teaching. So deeply was this view of its constitutional origin instilled in the minds of the profession that acute observers shut their eyes to the most obvious cases of infection; yet there must have been some sceptics even in those days of darkness, for I find Sir Samuel Wilks writing in the *Guy's Hospital Reports* for 1869 as follows:—[3]

> It does appear most remarkable that whilst many of us have been speaking in the most positive terms of the inherited causes of consumption, there have been those who have no hesitation in looking upon it as a disease like small-pox, accidently introduced from without.

These believers in an outside cause were at that time in a hopeless minority. The great text-book authority, Sir Thomas Watson, thundered out his opinion as follows:—

> Is phthisis contagious? No, I verily believe it is not. A diathesis is not communicable from person to person; nor is the disease ever imparted to another, even by one scrofulous individual to another.

He then proceeds to explain away a most obvious instance of infection:—

> A wife watches the death-bed of her consumptive husband, and presently sinks herself under consumption; and there may be no tubercle or acknowledged examples of scrofula in her pedigree. Yet even here the latent diathesis may fairly be presumed to have existed. Very few families are perfectly free from strumous inter-mixture.

Could the blinding effect of a predominant theory be more clearly exposed than by this explanation?

There is no such thing as hereditary tuberculosis. Infants are not born tuberculous any more than the children of leprous parents are born leprous. We are dealing with a disease both infectious and inoculable, the bacillus of which has been known for 30 years. During that period better hygiene, housing, and food have reduced the mortality due to tuberculosis from 25 to 10 in every 1000. By complete segregation the disease could be as certainly stamped out as hydrophobia was by the courageous muzzling order of Mr. Walter Long, to whom all honour is due. Of what service is it to inquire whether one family is more liable than another to this disease when all are liable, and 97 per cent. of 500 consecutive necropsies were found by Naegeli to show evidence that tuberculous infection had at one time taken place? Statistics to prove an hereditary predisposition are useless, unless taken of persons removed immediately after birth from the tubercle-infected house, and from contact with relatives already infected.

Syphilis.

Another diathesis we were taught was the syphilitic, but we know now that there is no such thing as hereditary syphilis. This is an inoculable disease, the organism causing which was discovered by Schaudinn in 1905, and it may be *transmitted* through the mother to her child when the placental protection breaks down, but there is no reliable evidence of its ever having been carried on to a third generation. It is a disease distributed by folly and reaped by innocence, and those well-meaning people who discovered in this disease a divine scourge to be carried on to the third and fourth generations must be disappointed by its limits. The moment the spirochæta pallida was demonstrated it became evident that as the greater could not be carried by the less, direct transmission from the male to the ovum was out of court. The mother must first be infected, though the disease may not have been noticed, and Colles's law, which states that a mother cannot be inoculated on the nipple by her syphilitic infant, receives additional support by this discovery. It also emphasises the importance of directing attention especially to the treatment of the mother in order that the children may be born free from the disease.

Leprosy.

Of diseases assumed to be hereditary, none has carried this reputation through a longer period than leprosy, which was regarded as hereditary as far back as Biblical times; and this belief will be kept in remembrance by Elisha's curse on his servant Gehazi: "The leprosy therefore of Naaman shall cleave unto thee, and unto thy seed for ever." Its contagiousness was also recognised from the earliest times, so that lepers became outcasts, and segregation has for centuries been the means employed to prevent the spread of the disease. Hansen discovered the bacillus lepræ in 1871. An Indian Commission failed to trace histories of the disease in the families of more than 5 or 6 per cent.; children born of leprous parents are not leprous, and if removed from their parents seldom become so. This, again, is a disease which has been placed among ordinary contagious diseases as the result of modern discoveries, and the belief in its hereditary

[1] Medical Times and Gazette, vol. i., 1862.

[2] The arthritic diathesis has been deprived of acute rheumatism by the discovery of the diplococcus rheumaticus, and if Mr. Goadby's observations prove correct as to a bacillus connected with tooth-sockets (published in THE LANCET of March 11th, 1911) being the cause of osteo-arthritis, the diathesis will be still further depleted.

[3] On the Nature and Causes of Disease, Guy's Hospital Reports, 1869, p. 19.

transmission which held sway for tens of centuries has been scattered to the winds.

Malaria.

Not many years ago malaria was described as a climatic diathesis, by which it was intended to imply that a constitutional condition was brought about by residence in certain climates, and that it became hereditary. The protozoon of malaria was discovered by Laveran in 1880, and its life-history and mode of inoculation have since been so clearly demonstrated that any idea of its being associated with a diathesis would strike everyone now as being utterly absurd.

Cancer.

The diathesis of cancer was never asserted with the same absolute confidence as was that of tuberculosis, and the profession has been about equally divided as to whether it was an hereditary disease or not. Sir James Paget taught that it was a blood disease which caused local manifestations, but the evidence of its commencement as a local disease is now overwhelming. John Birkett, at one time a great authority, going over his cases found cancer more common in families without history of cancer than in those families in which there was a history of the disease, and Paget could only trace a family history in one in three of his private patients, and in one in five or six among hospital patients; whilst Harrison Cripps, 33 years ago, showed that if the evidence of heredity derived from collaterals and doubtful cases were excluded there remained only a number similar to that expressing the normal frequency of cancer to the whole population. Dr. Bashford states that among persons over the age of 35 the chance that a man will die from cancer is one in eleven, and of a woman above the same age one in eight; and so great is the frequency of cancer as a cause of death above that age that in one of every two families a parent or a grandparent will, on an average, have died from cancer. The influence of heredity in man must therefore be regarded as insignificant. It is true that by careful selection and in-breeding Dr. Bashford has produced a race of mice more liable to spontaneous cancer than those of a sound stock, but he warns us that experiment shows that those of cancerous stock are not more liable to implanted cancer than others.

To my mind we arrived half-way to the discovery of the cause of cancer when it was shown that the disease was inoculable in animals of the same species. We are dealing with *a mildly contagious disease slowed down by age.* This conceded, many observations fall readily into line. Thus, Sir Henry Butlin's cases, indicating that the instances on which heredity was based were all on either the father's or on the mother's side, would admit of the explanation that these individuals were more intimately associated and so more liable to contagion. It explains the occurrence of several instances in the same house. It explains also the death of husband and wife from the same disease, of which I will mention three instances. A lady was operated on for cancer of the uterus, subsequently her husband died from cancer of the liver, and later she died from recurrence of the original disease. A gentleman I frequently meet in the City is one of six sons, all living and healthy, whose ages range between 53 and 70. His father died at 57 from cancer of the rectum and his mother at 61 from cancer of the breast. He had one sister who lived with her parents and attended them in their last illnesses. She died from cancer of the breast, and what makes the probability of contagion stronger is the fact that the nurse also developed cancer and died from it. I operated on a lady in 1898 with so extensive a recurrence of cancer in the axilla that I removed both axillary artery and vein in dissecting out the growth. The wound healed primarily and she had no after recurrence, but five years later she died from acute ptomaine poisoning from eating potted meat at a ball supper. A post-mortem examination showed no evidence of cancer anywhere, but there was extensive ulcerative colitis. Her husband subsequently died from cancer of the rectum.

The tendency of modern workers is to regard the cancer cell produced by irritation as the *fons et origo mali*, and this has recently been very forcibly put by Sir Henry Butlin, but I am loth to accept such a hopeless hypothesis, as there is nothing analogous to it in the whole field of medicine. The forces of nature are always directed to safeguarding the individual against attacks from without which may weaken health or endanger life. To produce a cell which wars against its parent and brings about self-destruction is contrary to every law of nature.

If chronic irritation were alone sufficient to produce cancer millions of people who wear boots ought to have cancer of the little toe, which is practically unknown. It is chronic irritation, *plus* abrasion, that is required; in other words, a surface through which a pathogenetic organism may find its nidus. Then the abrasion of the middle-aged woman's plump breast by the upper edge of her corset, the eczema of the nipple, the clay-pipe sore of the lower lip, the tooth ulcer of cheek or tongue, the syphilitic and smoker's sores of the tongue, the chimney-sweep's sores of the scrotum, the burns caused on the Kashmiri's abdomina by the wearing of charcoal ovens, the chronic ulcers which become malignant, the X ray eczema leading to epithelioma—are only means of entry for an organism yet to be discovered.

A QUESTION IN EUGENICS.

I pass now from my destructive criticism of what were formerly believed to be diathetic diseases, but have been proved to be due to organisms penetrating from without, to make a few remarks on diseases of the nervous system with the object of alluding to a question in eugenics. Those who study mental diseases would have us believe that nothing is more certain than the hereditary tendency to the reproduction of nervous diseases, nor anything more disastrous than the results of in-breeding of tainted stocks. When criminals repeat their kind and recurrent forms of lunacy occur, with lucid intervals in which children are conceived only to be a burden on the rates, the State may perhaps determine to interfere to protect itself in the future.

By the kindness of Dr. F. W. Mott I show two pedigrees indicating the classes among which State interference might be considered justifiable.[4]

I do not suppose for a moment that in a country such as this, where emotion plays so prominent a part in politics, any operative measures such as have been adopted in one of the States of America, would find favour. But political ideas gradually change. The "liberty of the individual" which was for a generation a great party cry has passed into oblivion, and we have in its place the political maxim that the minority must yield in everything to the will of the majority. This would therefore seem to be a favourable time for medical men to press on the Government measures for the protection of the State against the gradual increase of lunacy, and especially of criminal lunacy.

In this relation, I would remark that the germinal organs (testes and ovaries) do not actually belong to the individual, but to the next generation. As soon as they have determined his adult form they cease to be of service in his economy; and at times prove of great inconvenience—being not infrequently a cause of disease and of death. They are given him on trust for his descendants, and so badly does he often perform the duties of trustee that the blackest of bubble company promoters may appear innocent by comparison. If this view be accepted, and I maintain it is true in every respect, there should be less hesitation in employing humane and reasonable means for protecting the race. Within the last few years, and quite by accident, it has been discovered that exposure to the X rays destroys the reproductive function of the generative organs without injury to the individual. We have therefore a humane method at our command, which is not only painless but so insidious that it might, if necessary, be applied without the knowledge of the individual. It probably also would be of service to him in assisting him to maintain his mental stability in after years.

I now leave this somewhat uninviting subject to say a few words on twins, on whom I have a few observations to record.

TWINS.

The liability to the production of twins can, I think, be shown to be hereditary. It may be due to an excessive fecundity on the part of the female, or it may be caused by a tendency to the division of a fertilised ovum, which tendency may be transmitted either by the male or female parent.

[4] One of these showed suicide in four generations and all the offspring were lunatics. The other was a subject of recurrent lunacy who when out of the asylum continued to increase his family. Altogether he had eight children, five of whom were confined in asylums.

Mr. J. A. Rooth, in describing his case of Brighton united twins, gives the following family history :—

> The grandmother of the children had four separate births of twins, as well as other children, and was herself a twin. The mother of these children was one of these twins.[5]

That is, he records four generations of twins on the female side.

The following case, as indicating the influence of the male parent, I give on the authority of Dr. Wormell, formerly head-master of the Cowper-street Schools. An intimate friend and neighbour married, and his wife on two occasions gave birth to twins. After the second birth the wife died. Subsequently the gentleman married again, and his second wife gave birth to twins. In all these cases, each pair of twins was of the same sex.

Among domesticated animals twins are encouraged in sheep, because the greater the number of lambs the greater the profit as mutton, so ewes which throw habitually only one lamb are weeded out of a flock. On the other hand, among cows the profit is from the milk, and a cow that gives birth to twins falls into disgrace and is fatted and killed for beef, because the farmer sells the milk which is in excess of what is required for the calf ; twin calves are therefore very rare. Breeders also recognise the male influence, and if many ewes throw single lambs as the result of conception to a particular ram, that ram is discarded.

Dissimilar and Identical Twins.

There are two forms of twins generally recognised. In one there has been a simultaneous, or nearly simultaneous, fertilisation of two ova, an ovum descending probably from each ovary at the same menstrual period. Such twins may differ in sex, in height, in appearance, and in disposition, presenting only the general resemblance of brothers and sisters. The other form is believed to result from the division of an ovum after all the elements for development are complete. These are invariably of the same sex and are enclosed in the same membranes. In height, appearance, and character they so closely resemble each other as to be often spoken of as "identical" twins. Shakespeare in *Twelfth Night* was guilty of confusing the first form with the second, when he founded the plot of his play on the resemblance between Sebastian and Viola, as if they were identical twins.

I am able to give some remarkable facts concerning identical twins who entered as medical students at the same date and passed the examinations of the Royal Colleges and those of the M.B. and B.S. Lond. at the same time. After the Intermediate M.B. list was published I was able to find out their numbers, and by what some might consider a curious coincidence, the totals of a large number of marks proved to be identical. The marks were made up in five columns, two for papers, and three for *viva voce* and dissections. Taken alone, too much stress must not be laid upon the fact that their marks totalled the same, as among a large number of candidates this is sure to happen occasionally. But the next table signed by 17 different teachers, signing altogether 33 times for each student, shows a uniformity which could not be the result of accident. Out of all these 66 signatures there is but one variation. One teacher put "excellent" instead of "very good indeed," terms regarded at the hospital as equivalent. In the opinion, therefore, of 17 teachers, the abilities of these twins were indistinguishable or identical.

The difference between twins developed from the fertilisation of separate ova may be emphasised by disease occurring in one whilst the other escapes. Dr. R. Hutchison exhibited at the Section for Study of Disease in Children of the Royal Society of Medicine twin brother and sister, aged a year and a half, the girl being the subject of well-marked achondroplasia, whilst the boy was healthy, a photograph of whom he allows me to exhibit. By the kindness of Dr. G. E. Shuttleworth I am also able to show a photograph of twin patients of Dr. A. Jeffrys Wood, of Melbourne, by which it will be seen that the boy is normal and intelligent, whilst the girl is a Mongoloid idiot. A third case lent me by Dr. Hutchison makes the contrast still more evident, the boy being bright and intelligent, whilst the girl shows the Mongoloid type of idiocy in a marked degree. From these cases it will be seen that neither in sex, mental development, nor tendency to disease need there be any resemblance. These are known as dissimilar twins. It will be noticed that in each of these three cases the defects fell upon the girl, whilst the boy escaped.

[5] Brit. Med. Jour., Sept. 23rd, 1911, p. 654.

MODERN VIEWS ON HEREDITY.

It is almost impossible to allude to the various defects and deformities known to be hereditary without referring to the two modern schools of research, the Mendelian and Galtonian or biometrical schools, each of which is doing excellent work in its own sphere, but can see no virtue whatever in the work of the other. To those trained in biology, the Mendelian researches offer a fascinating inducement to further study, and appear to give a rational explanation of the occurrence of variations which breed true. But the precision that Mendel was able to give to his researches by crossing peas, so that he was able accurately to predict numerical results, can never occur among human beings, since such close in-breeding and back-breeding never occur in any human community. It is, nevertheless, much to anticipate approximate results.

The study of Mendelism is essentially a study of cross-breeding ; yet when in the human race a negro unites with a white, the result is a half-caste or mulatto. So also when a European unites with an Indian the result is a Eurasian. Mulattoes united in marriage should, according to Mendelian law, segregate out into pure blacks, pure whites, and intermediates, but they do not ; they continue to produce mulattoes, and Eurasians continue to produce Eurasians. The Galtonian or biometrical school rely upon a statistical method of investigation. By collecting a large number of measurements or observations they gain material from which to deduce laws of heredity. Galton began by taking height, and maintained that what was true of one quality would probably prove true for all. His statement that half the heritage of a child is derived from his two parents, one quarter from the four grandparents, and one-sixteenth from the great-grandparents, is so well known that I only mention it in passing. Professor Karl Pearson, repeating these observations, did not find the progression so regular, but the main results were not very dissimilar. Much has been done in this school since those early days, and the probabilities of many qualities have been worked out.

It will be gathered from my critical remarks on the old diatheses that I greatly dread the effect of a predominant theory, for if we are impressed by its truth we are too liable unconsciously to accept what tallies with it, and reject that with which it does not agree. How otherwise could such giants in observation have made such extraordinary and obvious mistakes in the past ?

A PEDIGREE OF 30 YEARS AGO.

It may be interesting now to show a pedigree that I buried in the Guy's Hospital Reports just 30 years ago, because its publication was long before the modern schools of heredity came into existence. I will leave it to you to judge whether it does or does not agree with the views of modern investigators. It is a pedigree of supernumerary digits associated with two other deformities, webbing of fingers and toes and an occasional development of cleft-palate. I can vouch that every possible care was taken to make it accurate, and where there was any doubt as to sex a neutral cross was used throughout the family. The man who furnished it was also of exceptional intelligence, and he traced the deformity for us through five generations. It illustrates further three points to which I wish to draw particular attention : first, the extraordinary tenacity with which a deformity once developed clings to the stock in spite of admixture of new blood in each generation ; secondly, the frequent association of altogether different deformities in the same individual ; and, thirdly, the gradual increase of a deformity in succeeding generations, which I intend more fully to enter into presently.

These deformities were transmitted without regard to sex, and it will be noted that in two instances, where the deformity in the mother was an extra finger on each hand, the children that were deformed had extra toes on each foot and no deformity of the hands. Altogether the great-great-grandmother had 80 descendants, of whom 24, or 30 per cent., were deformed. Supernumerary digits are said to have been reproduced after amputation. Darwin gives three instances in which this occurred, and explained the recurrence as due to "reversion to an enormously remote,

lowly organised, and multidigitate progenitor." The association of webbing of the fingers and toes with supernumerary digits appears to support the correctness of this view, and to suggest reversion to some highly remote amphibious ancestor.

TENACITY OF DEVELOPMENT OF DEFORMITY.

With regard to the first point, the tenacity with which a defect or deformity, once developed, persistently clings to a stock and is repeated generation after generation in spite of new blood being infused, there are pedigrees innumerable now to prove. Cannot a defect ever be washed out in its early beginnings by normal blood? My own small studies in search of hidden deformities appear to show that their tendency is rather to increase than decline. The normal appears powerless to overcome the abnormal, or, as the Mendelians say, the deformity is dominant, and the normal recessive. The pedigrees of spade hands or brachydactyly recorded by Farabee and Drinkwater are claimed as clearly illustrating these features, the abnormal only giving origin to abnormals, and the recessive normals yielding only normals. Nettleship's pedigree of congenital cataract is also claimed as following this law, but in some cases the defect was apparently transmitted through a normal. In future the closest attention should be applied to those exceptions, as from them new facts will probably be gathered. The best illustration we have of tenacity of descent of an abnormal condition is Cunier's ten generations of night-blindness. The descent appears to have been always carried on by an abnormal; but the numbers of normal and abnormal, which should be about equal, according to Mendel's law, when an abnormal unites with a normal, show a great excess of normals above the Mendelian anticipation.

MULTIPLE ABNORMALITIES.

The frequent association of different abnormalities, apparently quite unconnected, in the same individual, is another point deserving close attention and careful study. It would seem that the developmental process having once started in an abnormal direction may fail in its complex details at many points. Mr. Jackson Clarke published a case of clubbed hand due to absence of the radius associated with macrostoma, in the first volume of the Reports of the Society for the Study of Disease in Children. In the same volume the late Dr. George Carpenter published an account of two sisters, each of whom had a keel-shaped skull, congenital heart disease, ventral ruptures, webbed fingers, and six toes on each foot, who were also mentally weak. The mother was strong and healthy and showed no deformity; but a cousin, the child of a maternal uncle, had deformed hands. In the second volume, Dr. Hutchison and Dr. Sutherland published the cases of two unrelated boys presenting exactly the same deformities in association, viz.:—(1) Congenital heart disease; (2) a rudimentary hare-lip; (3) six digits on each hand; (4) shortening of the long bones of the extremities; and (5) defective development of the gums. Many other similar cases of multiple deformities might easily be added; but I have mentioned sufficient, I hope, to stimulate research into the origin of this failure of control of the developmental process in so many directions.

GRADUAL INCREASE OF DEFORMITIES IN SUCCEEDING GENERATIONS.

The last point, to which I desire to draw particular attention, is the origin of deformities from small, easily overlooked, beginnings. I feel sure a search for these will add much to our knowledge, and it may be possible by recognising the forerunners to prevent the development of the graver deformities. Among minor deformities the crooked little finger, which can easily be shown to be tenaciously hereditary, has been treated almost with scorn by Mendelians. Professor Bateson writes:—

> This peculiarity may descend both through the affected and through the unaffected, but the affection, I believe, is like that seen in chickens whose feet may be deformed through weakness ..... Pedigrees of such peculiarities cannot be expected to give results of much positive value.

I take a diametrically opposite view, and regard these minor deformities as those from which most will be gathered in the future, regardless of whether they conform to theory or not.

Weismann's Theory.

Several families in which this defect dwells I have kept in view for years, and finding it practically confined to the middle and upper classes, I used to teach, before Weismann's theory swept the field of Lamarckism, that it was probably brought about by generations of cramping of the little finger in writing, and by gloving. The adhesion between the little and ring-finger I thought might have been brought about in the same way. But Weismann has come and gone with his theory of the complete independence of germ-plasm and body-plasm, so that the effect of environment, use or disuse, upon any part of the body is not reflected, according to his theory, in the germ-plasm, and consequently not hereditary. His theory failed to account for the reproduction of lost parts, such as the salamander's tail, which is said to have been reproduced as many as ten times after amputation, and he was obliged to admit that certain influences such as lack of nourishment might influence and modify the germ-plasm which he regarded as continuous. His theory led to a discovery of inestimable value—the finding of the chromosomes of the nucleus, their reduction to half their normal number, and the restoration to the normal number on fertilisation, half being supplied by the germ and half by the sperm cell. But his theory has probably swung the pendulum of thought too much in one direction, and though it may be true that body influences of a few generations are not evident in the offspring, when we are dealing with hundreds, thousands, or millions of generations the effects of use and disuse seem to me scarcely to be denied. Perhaps no better illustration can be quoted than the gradual changes that are taking place in the human foot. It is 23 years ago that in a lecture on anatomy I pointed out that the gradual disappearance of the little toe was getting ahead of the text-books, for whilst it had already lost one of its extensor tendons, in quite an appreciable percentage of cases one of its flexor tendons was absent also. These at best, like its bones, are diminutive and useless, and its joints are commonly ankylosed. On the other hand, the great toe had undergone extraordinary development, because the inner side of the foot is the first to catch the centre of gravity in transferring the weight of the body from one foot to the other in walking; and I ventured to predict that if the world went on long enough, in perhaps half a million of years, as the useless outer toes, being less and less employed, gradually disappeared, man might become a one-toed race.

Relation of Defective Lateral Incisor Tooth to Hare-lip and Cleft Palate in Later Generation.

From this digression, which allusion to Weismann's theory has tempted me into, I return to the crooked little fingers, and I throw on the screen a sketch showing the gradual increase of this defect in three generations. (Father's, daughter's, and granddaughter's little fingers were shown, the latter's being bent to a right angle.) It is highly probable that Nature throws out warning signals of danger in the early stages of many hereditary deformities which may be discovered if a careful search be made for minor defects among the immediate ancestors. I have only worked this out in the relation of the lateral incisor tooth to hare-lip and cleft palate, but I refer to it in order to stimulate younger observers to turn their attention to this important study, and I have one further observation as yet unpublished. My attention was first drawn to it by observing that a gentleman who as a boy was noticed to have an absence of the left lateral incisor tooth, had an only daughter who presented precisely the same defect on the same side. As this only child has never married there was no chance of proving the relation to hare-lip and cleft palate in that family. It proved, however, that the defect could be transmitted and that the transmission might be through the opposite sex. Next an infant was brought among my out-patients suffering from hare-lip on the right side. This was the fifth child of a mother aged 25. The mother's lip was perfect, but she had an absence of the lateral incisor tooth of the right side which had never been extracted and was known never to have developed. The third case was the first child of a delicate woman aged 23. The mother had absence of the left lateral incisor, which she was certain had never been extracted; her infant had left-sided hare-lip and completely cleft palate.[6]

Further observations led to the discovery that an ill-developed lateral incisor tooth might foretell hare-lip and cleft palate in the offspring. A mother who showed the scar of a hare-lip on the right side, but no defect of alveolus or palate, was found to have an ill-developed lateral incisor

[6] Clinical Society's Transactions, 1888, p. 64.

on the right side. Her first child had an extreme deformity of hare-lip and cleft palate extending from the right side. The next case was the first child of young parents who was brought for operation on a hare-lip on the left side extending into the nostril. The mother was a nice-looking woman and showed no defect in her lip; but on the left side her lateral incisor tooth presented a remarkably defective development.[7] My last observation is on a young man who was operated on for hare-lip on the right side in infancy. On examining his teeth I found that the prospective division of the palate which did not proceed (or perhaps I ought to say lack of union) had divided his lateral incisor opposite the cleft into two separate small teeth. (Photographs or drawings of many of these cases were shown by the epidiascope.)

An Address
ON
THE ELECTRO-CHEMICAL (IONIC) TREATMENT OF CERTAIN GYNÆCOLOGICAL AFFECTIONS.

Delivered at a Meeting of the Glasgow Obstetrical and Gynæcological Society on Nov. 22nd, 1911,

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MR. PRESIDENT, LADIES, AND GENTLEMEN,—I fully appreciate the honour you have done me by asking me to address you to-night on the subject of electro-therapy in gynæcology.

INTRODUCTORY REMARKS.

Time will not permit me to go fully into the subject of electro-therapy, but I do not regret this for several reasons. In the first place, much of this treatment is purely empirical—that is to say, its value is based on experience only, and it does not therefore appeal to men of a scientific turn of mind. In the second place, much experience is required in order to get the best results from it, value at all indeed commensurate with the time and expense involved, and without this experience there is a danger of its gravitating into pure charlatanism. In the third place, the expense is too great if it is to be only occasionally employed; and for a fourth reason, the branch of electro-therapy I have chosen for our study to-night is not open to any of these objections. It requires little knowledge of electric science, is simple and not at all costly, whilst its application is based on strict scientific lines, so much so that, compared with other modes of applying electro-therapy, it may almost be said to be an exact science.

At the same time, whilst only an elementary knowledge of electricity is required for its profitable and satisfactory application, it is absolutely necessary that it should be carried out by those only who are, first, clinical physicians, and second, skilful in the diagnosis of gynæcological affections. This should make it acceptable to members of a society who show by their membership that they are specially interested in gynæcology, and presumably are experts in pelvic diagnosis, besides being at the same time practical physicians.

PRESENT POSITION OF GYNÆCOLOGY.

I think those of you who are original members of this society will agree with me that during the past generation there has been a revolution in gynæcology. It was a medical, it is now a surgical, specialty. If not entirely surgical now, the medical part of it has resolved itself into a matter of probes and pessaries, of plugs and douches. These are all very good in their way. I do not despise them; but it is sad that, when these have been tried and have failed, there is usually left only the knife. As the pathologist comes in when the physician has failed, so here the surgeon takes the place of the pathologist and removes the physician's failures. Thus medicine, through the weakness of the physician, fails in attaining its legitimate aim; the success of the surgeon is an evidence of the failure of the physician; the triumph of the former is a reproach to the latter.

I think it is time we were making a change in our mental attitude towards pelvic disease. We must anticipate and deal more effectually with the pelvic organs of women in the early stages of disease in order to keep them out of the hands of the surgeon, whose museum they were surely never meant to adorn. True, the surgeon is no more to blame than is the pathologist for removing the organs which have ceased to be serviceable, and he has, for the present at least, no need to fear that his occupation will soon be gone. There is a large harvest ripe for the reaper; there is perhaps a larger one fast ripening; whilst in many cases the canker has begun, and the road to the operating-theatre will probably be a *facilis descensus*.

TENDENCY TO CONSERVATIVE GYNÆCOLOGICAL SURGERY.

Can we as a society of humane men and women do anything to help this steady march of pelvic organs towards extinction? You may reply that surgery is steadily becoming more conservative; that healthy or even partially diseased ovaries are not now removed so recklessly. I hope this is so, though only a few days ago I observed in an official document that an ovary had been removed for "inflammation," and that two had been removed for "ovaritis." There must have been good reasons in the minds of the surgeons for this; all the same, it is to be regretted. It is less deplorable, however, than what was the case not so many years ago.

This recalls to my memory an able address in advocacy of conservative gynæcological surgery delivered in Newcastle by Professor Pozzi of Paris. When, in opposition to his views, a well-known gynæcological surgeon declared that, when one ovary was requiring removal for disease, his practice was to take away the sound one also "when he was at it," since it would in all probability become diseased. Any of you who were present on that occasion may remember the sensation which followed Professor Pozzi's application of the *argumentum ad hominem* to his critic, who, if not convinced, was certainly silenced.

I feel certain that it would be unjust to hint that the trend of late towards conservative surgery is due to timidity engendered in men by the cry of "Votes for Women." Let us hope it is due rather to increasing knowledge and increasing reverence for the distinctive organs of woman. Physicians are beginning, I find, to ask if all this operative work is to increase or to diminish in the future; and that this is not confined to pure physicians let me quote from an able and suggestive address delivered a few weeks ago by the President of the Obstetrical and Gynæcological Section of the Royal Society of Medicine, Dr. Amand Routh:—

> What (he says) is to be the future of gynæcology? Is it to continue to become more and more surgical? I think not. Is it not more than possible that in the near future some president of the section will give an inaugural address upon "Treatment Other than Operative in Gynæcology," and will base his remarks upon the wonderful discoveries being made in bacteriological, chemical, electrical, and radiographical therapeutics? Even as it is, without considering these new aids in treatment, is there not a tendency nowadays to consider ourselves surgeons only rather than a happy combination of physician and surgeon, to advise an operation because it is the easiest way to treat a case, or to operate on the rush of both hospital and private practice without previous adequate constitutional preparation of the patient?

GOOD RESULTS OF ELECTRO-CHEMICAL TREATMENT.

These are at least as strong words as I have employed, and practically amount to what, before I had read them, I had intended to say. You will observe that amongst the four "wonderful discoveries being made" he has placed chemical and electrical in the middle. I may not have wonderful discoveries to tell you of because many of you already know something of modern electro-chemistry, upon which has been based some of the work which for years I have been quietly doing in a corner of the gynæcological field; but since the results have often seemed to me wonderful, it is only natural that I should take advantage of your request to address you on electro-therapy in gynæcology; and if not to plead with you the cause of electro-chemistry at least to state my case honestly and I trust without undue bias.

If it is a Utopian idea to aim at the abolition of all pelvic disease in women it is at least a grand one; and it might well and fully justify our existence as a society. If this is an impossible consummation, however, let us do our next best, devoting, if not less energy to operations, at least more

[7] Reports of the Society for the Study of Disease in Children, 1905, p. 31.

to prevention; and where in the nature of the case this is impossible to the earliest possible arrest of the disease.

I trust to point out to you one way in which this attempt may be made. If you decide to try this, to many of you a new form of treatment, it will make your work much more interesting if you study it from the scientific side, and with your permission, Mr. President, I shall attempt to convince you that it is founded on a sure scientific basis.

SOME ELEMENTARY PRINCIPLES OF GALVANIC ELECTRICITY.

I do not think you will be offended with me—at least, those of you who have not recently been working in the department of electro-therapy—if I take it for granted that you have forgotten in the multitude of your studies much of what you previously knew of electric science, and if I, therefore, in a few words recall to your mind some of the elementary principles of galvanic electricity. As the ion plays an important part in galvanism, and as upon it are based largely the laws of chemistry, I shall first ask your close attention whilst I try to give you a mental picture of this entity, upon which is based the treatment I am about to advocate.

IONS.

Let me define an "ion" as a particle of matter, generally small, moving or capable of moving in virtue of an electric charge. It may be as large as a pith ball when charged by an electrified body or as small as a molecule of SO_3 or an atom of hydrogen; and that there are such things as ions so almost infinitely small I hope to be able to prove to you.

All solutions may be divided into electrolytes and non-electrolytes—that is, into those which are, and those which are not, influenced by the galvanic current. Examples of the former are acids, bases, and salts; of the latter distilled water, absolute alcohol, and solutions in distilled water of the following amongst others—sugar, gum, starch, pure albumin. Why do these latter refuse to conduct electricity? Simply because they contain no particles electrically charged, whereas the electrolytes are teeming with free electrically charged particles, these being the carriers of the current, and therefore called ions, which simply means goers. The electric conductivity of solutions in which these ions are is only one evidence of their presence. The special behaviour of solutions when tested for their osmotic pressure also reveals a difference. The amount of the osmotic pressure exerted by a solution is directly proportional to the number of particles in it—that is, to its concentration.

OSMOTIC PRESSURE EXERTED BY SOLUTIONS.

Suppose you place in a specially prepared porous pot a strong solution of sugar. Through an opening in a rubber stopper connect this by tubing of glass and rubber to a U-tube containing mercury; immerse the porous pot in water, and await the result; you will find in a short time that the mercury in the U-tube will be pressed upwards by the expansion of the contents of the jar through the inrush of water till a balance is set up between the weight of the column of mercury and the pressure within the jar. Let this be noted and then replace the contents of the jar with a solution half the strength of the previous one. After a few hours the mercury will be found to have risen just half as high, the pressure being in direct proportion to the number of particles, or molecules as it is in this case.

Take, on the other hand, the solution of a salt—say, NaCl—and compare the results as in the case of sugar. It will be found here that—instead of the half-saturated solution producing a rise of the mercury only half the height of that resulting from the solution of twice the concentration—it will raise the column of mercury nearly as high as did the latter solution.

Now what explanation of this have we? In the case of sugar all the particles are molecules, and these continue as molecules when the solution is diluted; whereas in the NaCl solution all the particles are not molecules, many of these having been split up—or dissociated, as the process is called—into separate particles—namely, sodium and chlorine ions, or sodions and chlorions as they are called, for they differ in nature from what is known as sodium and chlorine. These ions may join and split up again as they rush about and come into collision with each other, so that imagination may picture the molecules breaking up into atoms, these rushing about in a free state, re-uniting with changed partners and darting off again.

In both kinds of solutions the molecules have no electric charge, whereas when they become dissociated each part acquires a charge of electricity—one atom plus and the other atom minus. When they become united into molecules they lose their electric charge, the resulting molecule being neutral, owing to the union of positive and negative charges. Now, as dilution proceeds a larger number of molecules become dissociated, and so the ions increase relatively to the molecules. During osmosis each ion acts as a separate particle, adding to the osmotic pressure as much as a molecule does; and as the electric conductivity in fluids is proportioned to the number of its free ions, this is found to be greater in diluted solutions than would be the case if no increasing dissociation took place by increasing dilution.

ELECTRIC CONDUCTIVITY OF VARIOUS SOLUTIONS.

Let us take ordinary tap water, which in this town is, I find, almost as pure electrically as what is sold as distilled water. You will find that for a column of this water, six inches long and one inch in diameter in transverse section, you obtain from 50 volts about 0·2 ma. of current—that is to say, there are as many electrically charged particles in this water as will yield this amount of electricity. If the water were absolutely pure there would be no resulting current, since it would contain no electrically charged particles—that is, ions. Pure water is, therefore, a non-electrolytic fluid, its resistance to the flow of electricity being practically absolute.

Dissolve some sugar or starch in this tap water and with a similar column, and the same voltage, you will obtain no more, probably somewhat less, current, since the material dissolved has occupied some of the space previously occupied by the water with its electrically charged particles. Dilute this fluid with an equal quantity of water, and you get practically the same amount of current as before the sugar was added. The conclusion thus is that any current obtained is solely due to what ions there may happen to be in the water, none of the sugar having become ionised.

Now take the case of a similar column of a saturated solution of NaCl, and you will find that the amount of current obtained through it from the same voltage is enormous compared to that through a similar column of the water in which it is dissolved. Observe from Table I. what

TABLE I.—*Currents in Columns of Solution of NaCl from 50 Volts.*

Saturated = 36 per cent.	... 600 ma.	1/32 = 1·125 per cent.	... 140 ma
1/2 = 18 ,,	... 575 ,,	1/64 = 0·56 ,,	... 80 ,,
1/4 = 9 ,,	... 500 ,,	1/128 = — —	... 45 ,,
1/8 = 4·5 ,,	... 350 ,,	1/256 = — —	... 24 ,,
1/16 = 2·25 ,,	... 240 ,,	1/512 = — —	... 13 ,,

I have found to be the results of continued dilution in this case. You see that each dilution gives the indication of containing more free ions than would be expected from the amount of the dilution; especially is this the case in the more concentrated solutions. This relationship diminishes, however, as the dilutions increase, you will observe, till a dilution of about 1 per cent. is reached. By this time practically all the molecules have become dissociated, and with further dilutions the amount of current is practically directly proportioned to the amount of concentration.

DISSOCIATION OF MOLECULES IN DIFFERENT DILUTIONS.

Suppose in the strong solution there were in every 100 original molecules 20 dissociated, then the total number of particles for each 100 molecules would be 20 + 20 + 80 = 120 particles in all. If this be diluted with an equal quantity of water, then for each original 100 there will be left in the diluted liquid 20 separated ions and 40 molecules. Suppose that by the further dilution 10 of these molecules become dissociated, this will give of separate particles 20 + 10 + 10 + 30 = 70, and of these 70, 40 will be ions. Thus, to influence the osmotic pressure there will be 10 more particles than were in half of the original solution; whilst there will be the same number of ions as there were in the more concentrated solution; and so the same current can be obtained from the weaker solution as was obtained from the stronger if the same voltage were used.

This relative increase in the number of free ions, by further dilution, continues, as I have just remarked, till we reach the stage where there is about 1 per cent. of the saline in the solution, when practically all the molecules have evidently been dissociated; not permanently so, though at no time can there be more than the merest fraction of the molecules undissociated, since there will be occasionally reunions, but the free flight space has so much increased that these are

less likely to occur. These re-formed molecules, however, will be almost immediately broken up owing to conflict with some flying ions.

You see now how the conclusion is forced upon us that a saline solution contains, even in its most concentrated form, a large number of ions; and that by dilution the number of these has become relatively increased; *quod erat demonstrandum*.

To Arrhenius, of Sweden, we owe the placing of the dissociation theory of electrolysis on a sound experimental basis. To our own Faraday we owe the laws of electrolysis; whilst to Professor Leduc, of Nantes, belongs the honour in a pre-eminent degree of applying these discoveries in the service of medicine. Leduc is a man of transparent modesty, he is a charming personality, and it has been a pleasure to me to know him. For fuller information on the subject I commend to you his book on "Electric Ions and their Use in Medicine."

GALVANIC CURRENT.

We have seen how a galvanic current passes through an electrolytic solution in virtue of the ions existing in it, no ions meaning no electric current. I should like to point out, however, that not only is this the case, but the energy which has come from the battery is derived from ions existing in the cells of the battery.

If you place a piece of zinc on the one side of the tongue and a piece of copper on the other, you will find—if these plates are connected by means of copper wire with a galvanometer interposed in the circuit—that a deflection of the needle takes place as soon as the metals are placed in the mouth. Taking the ions of the saliva as NaCl only, you will observe from the diagram what chemical change takes place in the mouth when the circuit is completed; and if you try the experiment upon yourselves you will find that, with the formation of HCl at the zinc plate, an acid taste is distinctly felt at that portion of the tongue on which the zinc rests.

The cause of the migrations of these ions between the two plates, as you will see from the diagram, is that the copper plate has—as represented in the diagram—negative electrons attached to it, and the zinc plate positive electrons. These electrons do not travel across the fluid to neutralise each other; neither do they pass round the metal circuit in order to become neutralised; but they remain fixedly attached to the plates, indicating a state of elastic electrical tension existing between them—that is to say, they have relatively to each other a difference of potential. The electric charge on them acts only by attracting or repelling the different ions in the saliva; the positive ions being attracted to the negative copper plate, and the negative ions attracted to the positive or zinc plate.

As I have said, these do not, when they reach these plates, influence the electric charges of the plates by neutralising them, but may be said to accumulate at the junction of the wire and the plate—positive electrons at the junction of the copper plate, and negative electrons at the junction of the zinc. Thus is made plain what is difficult at first to understand—that, whilst the copper plate is negative, it is in contact with the positive pole of the cell, the zinc plate, which is positive, being in contact with the negative pole of the cell. So long as the wires attached to the plate remain unconnected the electric charges on each of them—plus and minus—cannot unite. This is shown in the diagram, whilst there is also depicted the circuit completed through a galvanometer.

When the circuit is completed these electrodes are capable of revealing their presence in two ways—first, by heating the connecting wire if it is thin enough or if the battery is powerful enough; secondly, by being able to deflect the needle of a mariner's compass if the wire through which the current is passing is held over or under it. The direction of the deflection of the needle from the north pole depends on the direction of the current at the time. The current has thus direction; it has polarity, and so we call the terminals of the wires poles.

GALVANIC BATTERY.

This is the principle of all galvanic cells, and in order to increase their power we join them into a row, connecting the minus pole of the one to the plus pole of the next in order, and so obtain an electric pressure in direct proportion to the number of cells we employ. This electric pressure we call electro-motive-force, and we calculate it in volts, each cell being equal to about one or one and a half volts, according to its construction.

For ionic purposes from 20 to 40 cells are required, yielding a total voltage of from 20 to 50. This voltage is not galvanic electricity; it is electric potential or static electric pressure. It becomes current, however, when the separated ends are joined, and it can then display its effects, thermic, magnetic, and electrolytic.

The amount of current which a given voltage can generate is determined by the difficulty or friction it has to overcome in order to complete the circuit. If there be much difficulty, or resistance as we call it, then the yield of current or actual (kinetic) energy is less, and *vice versâ*. The ratio is $\frac{E}{R} = C$, where E is the electro-motive-force, R the resistance, and C the current. As E is calculated in volts, so R is calculated in ohms, the current being measured in ampères, and a coulomb being one ampère-second. For ionic medication, however, our galvanometers register thousandth parts of an ampère—that is, milliampères.

Through some conductors of electricity the current passes with very little difficulty—silver and copper, for instance, if pure and moderately thick, have extremely little resistance; whilst others, such as platinum and the element carbon, especially if of a very small cross section, cause a very considerable amount of resistance, and therefore of heat. This, in the case of the platinum, is utilised in the galvanic cautery; whilst carbon is employed as graphite to restrain the current, where, with the given voltage, the amount of current would be in excess of the requirements. When so used it is called a rheostat.

The choice of a suitable battery and a suitable rheostat is not a very important one. Convenience and price may be permitted to determine this. I find the Leclanché cells and the graphite rheostats satisfactory, though the latter are less safe than more expensive ones, for the gradual and steady increase of the current by the rheostat is apt to suffer if this is at all out of order, and for the comfort of the patient and the peace of mind of the medical man sudden increase or decrease of the current is to be deprecated.

QUESTION OF VALENCY.

We have hitherto been considering ions as having one electron charge only. As you will see from Table II., some

TABLE II.

Element.	Atomic weight.	Valency.	Electro-chem.-equiv.
H	1	1	1
O	16	2	8
Cl	35·5	1	35·5
I	127	1	127
Cu	63·5	2	31·7
Zn	65	2	32·5

ions carry two; and though others carry three or more the chemicals likely to be used in ionic medication are either monovalent or divalent—that is, they carry one or two electrons. They are therefore called monads and dyads. From this table you will see that the valency of oxygen is 2—that is, it carries two electrons. It is thus, in the case of water, able to neutralise the two electrons of H_2; and so in $CuCl_2$ the Cu is divalent so as to neutralise the two Cl electrons, and thus form a neutral molecule. This, you will find, must be recognised when calculating the total of a substance transferred by ionic penetration.

KATIONS AND ANIONS.

Note that the electrons are given up at the poles only, where, having lost their electric charges, they assume their ordinary qualities—two atoms of the same element uniting to form an ordinary molecule of that substance as we know it in nature, or they may as atoms attach themselves to one or more of the atoms of the molecule water, and thus cause decomposition of the water. So great is the attraction of the hydrogen and oxygen in water that to tear them asunder in this way requires nearly two volts. These electrons are discharged always as one atom of electricity, as they are considered to be, or as a multiple of one; never a fraction of one. They are therefore indivisible, like the atoms of ordinary matter.

Those ions which, being charged with positive electricity, and therefore travelling towards the negative pole, are called kations—that is, cathode travellers; the other anions, or

anode travellers, seeing that they migrate in the direction of the anode or positive pole. That is, these ions are repelled from the pole which has the same sign as themselves and are attracted to the pole of opposite sign. The kations are called electro-positives and the anions electro-negatives. You will find in Table III. examples of some of these; those only, however, in which we are at present interested.

TABLE III.—*Examples of Kations and Anions.*

Electro-positives (kations).		Electro-negatives (anions).
Cu.	Cocaine.	Cl.
Zn.	Strychnine.	I.
Quinine.	Atropine.	Salicylic acid.
		Sulphurous acid.

CALCULATION OF IONIC PENETRATION.

You are all familiar with what is meant by atomic weight in chemistry, and I have pointed out that some atoms carry one, some two, electrons or atoms of electricity. Now it will be obvious that twice as much electricity will be given up at the electrodes in the case of the latter as in the case of the former; and, according to the laws of electrolysis, the amount of ions displaced is directly proportioned to the amount of current registered during the process.

The electro-chemical equivalent, therefore, will be found to be the atomic weight divided by the valency—that is, by the number of electrons with which the ion is charged. In the case of the monads the electro-chemical equivalent will be the same as the atomic weight; whereas in the case of the dyads the electro-chemical equivalent will be the half of the atomic weight. Now, as one coulomb, that is one ampère second, is capable of displacing 0·0000104 of one gramme of hydrogen, or this amount multiplied by 108 in the case of silver—this being the atomic weight of the latter—and as the total amount of ions displaced or transferred into the tissues is equal to the product of the number of coulombs of electricity passed, multiplied by the electro-chemical equivalent of the substance, multiplied again by the amount of hydrogen displaced by one coulomb, the total amount of ionic penetration can thus be calculated.

For example, the total weight of the ions introduced from 20 ma. for 15 minutes—that is, from 18 coulombs—equals

$0{\cdot}02 \times 60 \times 15 \times 0{\cdot}0000104 \times 31{\cdot}7 \times 15{\cdot}5$ (grains in 1 gramme) $= 0{\cdot}1$ grain.

This gives no idea, however, as to the number of ions which this weight may imply, and before we can even in imagination conceive of this it is necessary that we should know the size and weight of the ultimate atoms of matter. All atoms may be considered to be of the same dimensions—at least, that is the present belief—and this dimension is given as 10 raised to the power of minus 8 of a centimetre (10^{-8} cm.); that is to say, a ten-millionth part of a millimetre. The weight of an atom of hydrogen is 10^{-25} of a gramme—that is, the ten-quadrillionth part. The weight of an atom of oxygen will therefore be 16 times that, the weight of an atom of copper 63 times that, and so on, being the weight of an atom of hydrogen multiplied by the atomic weight of the particular substance. It may be interesting to know that the weight of an atom of electricity has been calculated as the 700th part of the weight of an atom of hydrogen and its linear dimension about the 100,000th part.

RELATIVE NUMBERS OF IONS AND GERMS.

You will observe that I have calculated the medicinal dose of copper ions in gynæcological practice as about one-tenth of a grain. It may appear to you that the mountain having been in labour a very small mouse has been born; but think of what this small fraction of a grain means, if you are capable of thinking in such minute fractions. It means 1000 millions of millions of millions of ions of copper. It is even more difficult to grasp the meaning of this than to appreciate the practically immeasurable distances of some of the stars in infinite astronomical space.

Now the object of the introduction of these ions into the tissues in gynæcology is the destruction of the armies of the septic fiend. You are accustomed to look on these microbes as the infinitely little, and so you may, perhaps, be able to imagine what this fraction of a grain may do in this warfare when I tell you that it would be capable of introducing into each of a million million millions of streptococci a garrison of a thousand ions with abundance of elbow-room for each ion.

COMPARISON OF ELECTROLYSIS AND IONIC MEDICATION.

Some of you are more familiar with the term electrolysis, in the application of electricity to gynæcology, than with ionic medication. These two terms signify the same thing from the point of view of physics. For therapeutic application, however, they are exactly opposites. In electrolysis the aim is to utilise the effect of the ions when they reach the electrode; in ionic medication, on the other hand, it is the ions which leave the electrode that are utilised in the treatment.

The application of chemicals to any part of the mucous membrane or the skin results in the absorption of the substance dissolved; this we might call osmotic diffusion. This process is also in action during the application of ionic medication, but with this difference, that whilst in the case of the former the fluid passes into the capillaries and lymph channels as soon as it has reached them, and then finds its way into the general circulation, in the case of ionic penetration besides this there is a steady march of the ions right through the tissues—not going round the cells but straight through into the protoplasm of the cells and remaining there. This it is which gives the ionic treatment its peculiar therapeutic properties.

The choice of the suitable pole for the active electrode is of importance both in electrolysis and in ionic medication. In the former, if astringent and caustic effects are desired the positive electrode must be applied. If softening and breaking down are required the electrode applied to the negative pole must be the active one. But in either case the effect is due not to any extrinsic ion but to the ions of the tissues.

In ionic medication, on the other hand, it is more a question of the chemical to be employed, since to it is practically wholly due the effect produced. The decision as to the pole to be employed is determined simply by the electric charge on the ion selected. Electro-positives are driven into the tissues by the positive pole, as might be inferred; electro-negatives from the negative pole. In electrolysis a non-electrically soluble electrode is employed, such as platinum or carbon; in the case of ionic medication the electrode is the substance whose ions it is intended to introduce where this is possible.

PHYSICS OF ELECTROLYSIS.

I show you now a series of U-shaped tubes illustrating the physics of electrolysis, osmotic diffusion, and ionic penetration respectively.

In the tube containing the solution for illustrating electrolysis there is contained in solution iodide of potassium, starch, and a few drops of phenol-phthalein, the object being to prove the migration, in the solution, of the ions of iodine to the positive pole and of the potassium ions to the negative pole. When the iodine becomes un-ionised by contact with the positive pole it will produce the strong blue colour of iodide of starch. When the potassium yields its electrons at the negative pole, being unable to exist in water as a metal, it will combine with hydroxyl extracted from the water molecule, setting the remaining atom of hydrogen free as a gas, and changing the phenol-phthalein into a distinctive red colour, indicating the presence of an alkali.

OSMOTIC DIFFUSION.

In the case of the U-tube containing the solutions to illustrate osmotic diffusion solution of common salt may be introduced into the tube, and on the top of this in each limb say a solution of methylene blue to the extent of about one inch in depth. If these added coloured solutions are denser than the solution of salt in the tube they will almost at once be diffused down the column of water by gravity. If of exactly the same molecular concentration they would practically never change their position. A degree of concentration less than the salt solution is therefore chosen, and, given sufficient time, complete diffusion will result.

The next U-tube contains the same as the middle one, but to each limb has been attached an electrode from a battery of cells. The experiment in this case was begun just before the hour of meeting in order that sufficient time might elapse to show the effect produced.

In the diffusion tube a slight extension downwards of the colouring matter in diminishing depth of colour is seen, but the deepest hue of colouring is at the very top. In the case

of the electrically treated tube, however, there is a difference: the junction between the coloured and the uncoloured solutions remains sharp. The upper part of the coloured portion, moreover, is not now at the highest part of the fluid in the limb of the tube to which the electrode from the positive pole is attached, there being a depth of colourless liquid of about a quarter of an inch in this case at the upper part, the current having driven the ions of the coloured fluid to that distance from its original position. In this case the total length of the coloured fluid, however, remains the same.

IONIC PENETRATION.

I show you in two tubes examples of ionic penetration, compared with ordinary diffusion, through a piece of the wall of the fresh stomach of the ox, the animal having been killed a few hours only before the experiments.

In these two specimens a solution of $CuCl_2$ has been placed on the mucous surface of each piece. In the simple diffusion case after five hours the copper had absolutely failed to enter into the mucous membrane, there being only a slight colouring on the surface, easily washed off.

In the case of the specimen under the same conditions in the other tube a current of 5 ma. during five hours has been passed through the copper solution and the tissue from the positive pole, the total current being thus 90 coulombs, or about five gynæcological doses.

You will find under the microscope on the table a section of this specimen. The report from Dr. Leslie Buchanan, who kindly made the sections for me, is as follows: "That which was subjected to ionisation is readily distinguished by having a portion of bluish-green colour highly condensed and fairly firm in comparison with the rest of the tissue. The cut surface of this condensed portion shows a greenish colour to about half its thickness [the total thickness of the tissue is 6 mm.] and exposure of the cut surface to a solution of sulphide of ammonium results in the conversion of the greenish colour into a very deep brown or almost black. The portion treated simply by diffusion shows no change from the normal either in colour or texture. Sections prepared for the microscope show that in the case of the ionisation the metal has passed through the mucous membrane and submucous tissue and lodged in the tissue of the muscle below. The metal is exceedingly finely divided, and is manifestly lodged in the tissue, not simply deposited on it—i.e., the metal is intra-cellular, not simply inter-cellular. It is evident that the mucous membrane has opposed considerable resistance to the passage of the metal, as a large amount of it is deposited on the surface of the tissue in addition to what has penetrated. In the case of the diffusion no metal is found either by the microscope, or by change of colour with ammonium sulphide, in the tissue itself."

COMBINED ELECTROLYSIS AND IONIC PENETRATION.

I have here a piece of flesh meat, and I can show you by means of it an example of combined electrolysis and ionic penetration. I push an electrode of copper and one of platinum into the tissues, attaching the copper probe to the positive pole and the platinum to the negative. I am not placing them too far apart, since I have here only a small electro-motive-force to work with, and so I am diminishing the resistance and thus increasing the current.

We will allow the current to remain in action for about 15 minutes, and you will find at the end of that time that the platinum probe is easily lifted out of the tissue, for the reason formerly mentioned, whereas the copper is adherent, since the O and the HCl which have separated at the positive pole out of the NaCl and the H_2O of the tissue have coagulated the albumin of the meat around the electrode. If the action is allowed to continue sufficiently long a severely caustic action will be produced.

These are the results of electrolysis; but something else has taken place as well. If you examine the part where the copper was you will find that the HCl resulting from the electrolytic action has gradually dissolved some of the metal, and the resulting copper ions have travelled a certain way on towards the negative pole. This is ionic penetration. If the process had been allowed to continue sufficiently long it would have been impossible to remove the copper rod without tearing away some of the flesh. In that case, if the current be reversed for a few minutes, the copper being thus attached to the negative pole, sodium ions will come to it; the tissue will be softened and the copper can then easily be lifted out.

If by this time you are coming to the conclusion that I am over-estimating the importance of ions, let me point out to you what I mentioned in proof of the fact that in a solution of 1 per cent. or less of NaCl practically all the particles were ionised. Now the salines of our body are in a concentration of about 0·9 per cent., so that all the salts in our tissues must be present as ions; and since all vital action is accompanied by electric change, and no chemical alterations can take place without these electrically charged bodies, life must be impossible in the absence of ions.

ACTION OF CHEMICALS ELECTRICALLY DRIVEN INTO THE TISSUES.

I have said that all vital action is accompanied by electric change, and therefore by electric currents, since, whenever there is a difference of potential in the presence of ions, a current must result. Now Pauli, in his book "Physical Chemistry in the Service of Medicine," states that "differences in the concentration of ions brought about through [bringing about?] differences in their migration velocities constitute the source of differences in the electrical potential."

That this was true I had long hoped, since it would explain what to me had formerly been puzzling—namely, how was the chemical, which had been electrically driven into the tissues, and had then assumed an insoluble form as in the case of copper—how was this to be disposed of, and how could it in that form act therapeutically? For more than a year I have, by means of a very delicate mirror galvanometer, made many attempts to prove or disprove this. I asked an expert in electro-physics and one in electro-therapeutics to join me in the investigation, with the result that we all came to the conclusion that this statement was not true. However much it might be true to others it, therefore, had to remain to me untrue.

Recently, however, I again attacked the problem and discovered that, though not true, it was yet a half-truth. No matter how great might be the difference in concentration of contiguous saline solutions, no current could be observed. I noticed, however, that there was sometimes a slight deflection of the needle at the moment of insertion of the platinum wires, but this current immediately stopped when the wires were at rest in the solutions. This led me to the conclusion that the difference in concentration alone was not sufficient to cause a current. If, however, whilst the wires were at rest and dipping into solutions of widely different degrees of concentration, the fluid was then shaken, at once and on every such occasion a marked amount of deflection of the galvanometer needle ensued. Therefore, there is a difference of potential and a resulting current, but only when there exists at one and the same time a difference of concentration *and a flow*.

Since then this is exactly what exists in a greater or less degree throughout living organisms, there must in and around the deposited insoluble powder (in the present case the insoluble oxy-chloride of copper) be constant, though weak, galvanic currents, and consequently some degree of dispersion of the substance by galvanic action. These vital electric currents, which are continually in action, will therefore continue to carry on the work and thus cause the diffusion and final removal of this apparently inert powder by means of ionic migration.

I find that the more the disturbance of the solutions of different degrees of concentration the greater is the current generated. Every muscular movement, therefore, must assist in the diffusion of the substance introduced into the tissues, even when it has been rendered insoluble by the action of the oxygen and chlorine of the tissues.

SELECTION OF CASES AND ION.

In the selection of a suitable ion, one must be guided by the nature of the case. The object of the treatment is to remove sepsis and the accompanying inflammatory exudations. Cases of acute inflammation, of threatened suppuration, and, *a fortiori*, cases of actual pus formation, and also cases of cystic disease are absolutely unsuitable. Apart from these unsuitable cases, however, there remains a very large number of gynæcological affections hitherto treated in a more or less perfunctory manner because with very little hope of permanent benefit. Is it not possible, however, may I venture to say is it not almost certain, that nearly all of those

pathological conditions unsuitable for this treatment might have been prevented if ionic medication had been applied in time and in a thorough manner?

As to curettage, the nature of the case must determine the wisdom of doing this before trying the ionic treatment. This operation is not excluded, but I have found it, since I began the method I am advocating, very seldom necessary.

THE IODINE ION.

When the affection partakes at all of a subacute nature I prefer to start with iodine as the ionic agent. Iodine being electro-negative, the minus pole must be the active one, and the electrode there should be a carbon one, such as I show you. There is no advantage in applying the iodine wholly in an uncombined form, because, as you will observe from one of the diagrams, it at once becomes converted in NaI when it enters into the tissues. The solution I employ is a 2 per cent. one of iodide of potassium combined with 0·2 per cent. of liquor iodi.

The iodine ion will reach the cellular tissue of the pelvis by diffusion, whilst it will penetrate electrically into the protoplasm of the tissues which it has reached during the process of diffusion. I find that it can be detected in the saliva 25 minutes after the beginning of the application, whereas by diffusion alone it takes several hours to reach the mouth from the vagina.

Where there is inflammation of the tubes, the ovaries, or the cellular tissue, if no suppuration is present the iodine ion has given me good results. I am bound to admit, however, that I do not confine the treatment to ionic applications in these cases, but usually finish off with some other form of electric energy, usually the high frequency. Therefore it may be difficult to determine the relative value of these two forms of electro-therapy. The high-frequency currents may be able to complete the cure, but I am certain they can never destroy sepsis as ionic medication can.

Of the *mercuric ion* I have no experience. It is said to have been very serviceable, however, in cases of malignant disease when the diseased tissue is within reach. In such circumstances, however, the dose is enormous and the treatment necessitates the administration of chloroform.

ZINC AND COPPER IONS.

If the case is one of simple cervicitis then the zinc or copper electrode, covered with cotton wool, is inserted into the cavity of the cervix through the speculum, which is filled with a 1 per cent. solution of the bichloride of the metal employed.

When the endometrium is involved the zinc electrode should be introduced into the uterine cavity, and if insufficient action result, or the case be a very chronic one, the copper electrode must be used. It should be remembered, however, that the latter is more likely to cause pain and bleeding, as might be inferred from the meat experiment made. The zinc electrode, however, comes away easily and without the necessity for reversing the current.

In cases of prolonged uterine hæmorrhage the copper will be found the more potent electrode, although, where the patient is very sensitive or there is any reason to fear pelvic cellulitis, it is well to avoid the use of the bare copper electrode. This at least has been my experience.

Either the zinc or the copper can be used with perfect safety in solution by means of the speculum in all cases of sepsis of the cervix. Before an electrode is introduced into the cavity of the uterus, however, the vagina and the cervix must have been rendered as far as possible aseptic by ionic treatment if necessary, after which with moderate care no harm can result from the intra-uterine application.

DESCRIPTION OF INSTRUMENTS.[1]

My first difficulty was with electrodes. I have had some made, however, which give me every satisfaction so far as convenience goes; and this is more important to the physician and to the patient than might be at first imagined. I have had a glass speculum made which suits much better than the ordinary one. It has openings in it near to the cervical end, thus partly distending and filling the vagina.

The holder of the electrode is kept in position by a bag of shot which rests on its broad end on the couch, the patient being on her back with a bed slipper under the pelvis. This holder, as you will observe, keeps the speculum in position, preventing it from slipping out or from dropping. Everything being fixed, the cervical or intra-uterine electrode can, after inserting it through the speculum, be kept in position with perfect ease and safety.

A spiral of copper wire or of zinc, as the case may be, inserted into the speculum and fixed to it in the way shown in the plate, serves for vaginal applications, and also for vulvar by using it for the purpose of pressing against a pad of cotton wool soaked in the fluid and packed carefully against the open vulva.

METHOD OF APPLICATION.

In order to avoid shock the current should be started and stopped slowly and steadily. I formerly applied the neutral electrode to the hypogastrium or to the sacral region, but this involved the undressing of the patient and prevented the current from being diffused equally throughout the cavity of the uterus, since it takes the most direct course to the neutral electrode. I find the hands a convenient place for the application of this electrode—a large clay one—because, being at a distance from the uterus, the current will more readily diffuse itself over the whole of the uterine wall. All rings must be removed whilst the current is flowing, otherwise the fingers may be burnt beneath the rings.

No pain need accompany or follow the application when the method I now follow is adopted; but in some of my early cases considerable pain, and in two instances some pelvic cellulitis, followed. No permanent injury, however, resulted.

I prefer to obtain the current from a battery instead of taking it by a shunt circuit off the electric main. The latter, in my opinion, is less safe. I show you a vulvo-vaginal electrode, which is relatively more troublesome to use; but in cases of combined vulvar, vaginal, and cervical sepsis it will give results well worth the trouble as a preliminary to deeper applications.

CLINICAL RESULTS.

It would only weary you to give clinical details of the cases which I have successfully treated by this method. You can find fairly full details of these in THE LANCET of July 10th, 1909, and Feb. 5th, 1910. Suffice it to say that the cases have been as a rule obstinate, but not in the sense of being obscure, difficult to diagnose, or fit for treatment by the gynæcological expert only. Far from being so, they were all such as the general practitioner is probably treating every day in his practice, and if he is satisfied with my results he can easily carry out the treatment for himself.

When the patient has given a fair chance to the treatment all the septic cases have benefited in a manner gratifyingly monotonous. The discharge, from being purulent or muco-purulent and copious, has become milky and of small amount, whilst the gaping os has become normal in size with the everted mucous membrane drawn in, and erosions have healed with a rapidity which was a revelation to me.

That the general health invariably improved coincidently with the cure of the septic condition and that the tongue, which in some cases had been foul for years owing to auto-toxæmia, should without any gastric treatment become clean and remain so is one of the evidences of this constitutional improvement. In two of my cases this toxæmia was accountable for periodic attacks of severe gastric pain, due evidently to the effect of the toxæmia on the solar plexus. In one of these cases, where the pain had lasted for 12 years, this was completely removed after a few intra-uterine applications of the copper electrode. This was several years ago, and there has been practically no return of the pain since.

In cases of long-continued retro-displacement of the uterus I find that, whereas under ordinary treatment a pessary has had to be worn for many years, this instrument may become unnecessary after a course of ionic medication, the uterus resuming its normal position in the pelvis and remaining there. Patients whom I used to treat periodically have been apparently perfectly and permanently cured. Though under my observation for years after, the pelvic condition has required no attention. This has been to me a new experience since I have adopted the ionic treatment, and so I invite you to try it. That it will give you satisfaction I have no manner of doubt.

The special instruments are here for your inspection, and for fuller details I refer you to my published papers already mentioned. I thank you for your patient attention to my address, and I trust I have succeeded in interesting you.

[1] These instruments are described and illustrated in THE LANCET of July 10th, 1909, p. 72.

A CASE OF RUPTURED ŒSOPHAGUS.

BY D. W. ROY, M.A., M.B., B.C. CANTAB., F.R.C.S. ENG.,

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A MAN, aged 43, a shunter, was admitted to the Royal Free Hospital on July 31st, 1909, at 3 A.M. He was suffering from a severe compound fracture of both bones of his right leg. The accident occurred in the following way. He was conducting shunting operations at night. After uncoupling a carriage in motion, he endeavoured to spring on to the footboard, miscalculated the distance, slipped, and fell, the wheel running over his right leg.

On admission to hospital he was conscious and able to give an account of his accident. He was slightly dazed, but not suffering much from shock. His temperature was subnormal; his pulse 100 and of good volume. He did not complain of any symptoms referable to any other part but his right leg. His right leg was very severely crushed in its lower third, being practically a bag of bones held by the skin and some tendons. It was obvious that there was no hope of saving the limb, so amputation without delay was decided on.

The patient was anæsthetised with A.C.E. mixture and his leg was amputated by Farabœuf's method at the site of election. During the early part of the operation he did not take the anæsthetic well, and strained and retched violently enough to cause defæcation to take place and to interfere with the preliminary cleansing of the limb. He brought up a few mouthfuls of a brown fluid. From this time till the end of the operation he was rather cyanosed and embarrassed in his breathing. Owing partly to this delay the operation lasted about 1¼ hours. The patient was suffering considerably from shock when removed to the ward. He was cyanosed and sweating freely; his temperature was 97° F., his pulse 120 and small in volume, and his respirations 40. He was given one pint of saline solution per rectum, and the foot of the bed was raised. He came round partially from the anæsthetic, and moved his limbs but did not speak.

At 10 A.M. the patient's breathing suddenly changed in character. He was still cyanosed but now deeply unconscious and breathing stertorously; his pupils were moderately dilated, slightly unequal, and reacting sluggishly to light. The corneal reflexes were very faintly marked; neither the knee-jerk nor the plantar reflex on the sound side could be obtained. There was nearly complete flaccidity of the limb. The temperature was 101°; the pulse 118, of moderate tension, and fairly full. A catheter was passed and urine drawn off and examined. This was found to contain neither sugar nor albumin. The skull and spine were again carefully examined, but no external sign of injury could be discovered.

Mr. E. W. Roughton now saw the patient and decided that, considering the history of the accident, a decompressive operation might be of value. The patient was taken to the theatre and a crown of bone was removed from the left occipital region. The dura mater was normal and was not opened; there was no sign of raised intracranial pressure. No anæsthetic was needed, the patient showing no sign of reflex movement during the operation. The patient's temperature on his return to the ward was 103°, his pulse 120; he remained cyanosed, stertorous, and deeply unconscious.

When seen again at 4 P.M. the same afternoon he exhibited rather a remarkable condition which was difficult to account for at the time. He was partly propped up in bed, and with each expiration was projecting from his mouth to a distance of 3 or 4 feet a finely divided spray of a brown fluid, of which there seemed to be an endless supply. This dark fluid, speckling the counterpane almost at the foot of the bed, at once caught the attention. This continued for some hours until the patient's breathing became feeble. His condition was evidently hopeless and he died at 3 A.M. on August 1st, 24 hours after admission.

Necropsy.—The post-mortem examination took place on August 2nd, 31 hours after death. The skull was normal, with the exception of the trephine hole in the left occipital region. There was no fracture or dislocation of the vertebræ either in the cervical region or elsewhere. The meninges were normal to the naked eye, showing no hæmorrhage or other vascular lesion. The brain was congested, but as far as naked-eye appearances went was otherwise normal both externally and on section. The stomach contained a small quantity of acid-smelling fluid. All the abdominal viscera were normal. The operation wounds and the stump of the right leg were healthy. There was no subcutaneous emphysema of the chest wall or neck. When the incision made in the throat to remove the larynx and œsophagus reached the base of the neck, the cellular tissue to the right of the œsophagus was seen to be infiltrated with a dark brown fluid. On opening the thorax the fluid could be traced down in the posterior mediastinum to a spot in the œsophagus about 3 inches above the diaphragm. On opening the œsophagus a hole easily admitting a large probe was found at this level, posteriorly and somewhat to the right of the middle. The opening was ragged and discoloured but showed no sign of corrosion or thinning of mucous membrane round it. Except for the opening described, the mucous membrane of the œsophagus appeared smooth and normal. On removing the œsophagus it was seen that there were two roughly circular areas, each of about the size of a shilling, where the wall was considerably thinned, but thinned at the expense of the outer muscular and connective tissue coats chiefly. It was through the lower of these two areas that perforation had taken place. The other area was about an inch higher up and more directly in the posterior wall of the œsophagus. Opposite to these thin places and projecting quite half an inch from the thoracic vertebræ were two very sharp irregular exostoses which seemed to be exaggerations of the normal lipping. No preparation had been made for demonstrating a pneumothorax, so its existence remains uncertain though probable. The right pleural cavity contained about half a pint of acid-smelling fluid slightly blood-stained but otherwise resembling the stomach contents. Both lungs were œdematous and congested; the right lung was partly collapsed. The trachea and upper part of the bronchi showed traces of the brown fluid, but the smaller bronchi were free from it. The heart and pericardium were normal. The fluid from the pleural cavity and the stomach and the intestinal contents were examined by Dr. L. Freyberger. The first two were reported to be gastric contents containing traces of pickles. No abnormal constituents were discovered. Unfortunately no portions of the brain were examined microscopically or stained for fat, and the specimen of œsophagus was not recovered from the analyst.

Remarks.—Cases of ruptured œsophagus are among the rarities of medicine, only 30 cases having been recorded up to 1903 as passing the criticism of authorities. Many cases have been rejected as examples of post-mortem digestion. The claims of this case to be regarded as an ante-mortem condition are pretty strong. The absence of any sign of digestion or erosion of mucous membrane round the perforation, the fact that the perforation had taken place through one of two areas where the muscular coats were thinned or deficient, and the presence of gastric fluid as high up in the mediastium as the root of the neck are all in favour of this contention. The continued respiratory embarrassment noted after the retching, with the disproportionate shock after the operation and the remarkable respiratory condition seen a few hours before death are susceptible of explanation from the post-mortem findings. One would explain the projection to a distance of the finely divided spray of stomach contents, which exactly resembled the intermittent blast of a throat spray with a single bellows, by analogy with that instrument. Assuming that the cardiac orifice was closed, the œsophagus as far down as the perforation could act as the vertical tube of the throat spray, and the extravasated fluid in the posterior mediastinum and right pleura could be gradually aspirated up into the œsophagus in a finely divided state, mixed with the air that almost certainly would find its way into the pleural cavity. When this material reached the level of the larynx, the forcible expiratory movements of the lungs could act as the bellows of the throat spray and propel the particles to a distance. The expiratory movements of the chest, by increasing the intrapleural pressure, would assist fluid to pass up the posterior mediastinum towards the neck as well as through the opening in the œsophagus if that remained open.

As to the causation of rupture of the œsophagus, excluding cases where there is some gross injury of the parts around from accident or from the extension of tumours, in nearly

all the cases there is a history of more or less violent straining or vomiting. This cause was not absent here, but it operated while the patient was under the anæsthestic.

The experiments of Mackenzie [1] and some incomplete experiments made by Bowles and Turner [2] have shown that the posterior wall of the œsophagus in its lower third is the weakest part, and that here the œsophagus is unexpectedly easy to distend, or even to rupture.

McQueeney [3] has described a condition of inflammatory softening with round-celled infiltration in this situation, and supposed that in certain cases this was a predisposing cause.

Zenker and Ziemssen [4] consider that an intra-vitam œsophagomalacia, due to the retention of acid and peptic material, can take place even in apparently healthy individuals.

Brosch,[5] quoted by Whipham, and other observers have noted the occasional partial absence of muscular fibres in this situation.

In the present case two areas of thinning of the muscular coats were seen; but it seems probable that they were not unconnected with the presence of the sharp exostoses of the thoracic vertebræ, and may have been caused by the pressure of boluses of food in their passage down the œsophagus. The accident which caused the original injury to the leg, combined with the sharp exostoses, may have caused a rupture of some fibrous tissue at the seat of perforation, but the absence of symptoms or of shock precludes the presence of any extravasation when the patient was admitted to hospital. Extravasation apparently took place when the patient strained violently under the anæsthetic. The symptoms in this case, as in one described by Whipham,[6] were masked by a superadded cerebral condition which caused unconsciousness. The only sign noted was the projection of the brown spray previously described. Subcutaneous emphysema was absent in this case, as in 3 out of 19 cases in which it has been looked for. A pneumothorax, probably present in this case but not proved, has been noted in 16 out of 19 cases described.

The diagnosis in this case was not made during life and in the presence of another condition causing coma was not suspected. The actual cause of the coma and death of this patient was never certainly ascertained. In the absence of evidence of any gross lesion of the brain or meninges, of uræmic or diabetic coma, or narcotic poisoning, one was left to consider the question of a late anæsthetic effect or of fat embolism of the brain. The anæsthetic employed was the A.C.E. mixture given by a skilled anæsthetist in moderate amount, so that it is possible almost to exclude that as a cause of the condition. As regards the second possibility, unfortunately no microscopical examination of the brain sectioned and stained for free fat was made; but the case clinically closely resembles three cases of fat embolism of the brain described by Godlee and Williams in April of this year and proved microscopically. The sudden onset of cerebral symptoms without definite localisation, with high temperature but without definitely raised blood tension, within a few hours of an operation for compound fracture of a long bone, render this explanation at least a feasible one.

Perhaps the occurrence of two such rarities as a rupture of the œsophagus and fat embolism in the same subject may be somewhat difficult to accept, but they seem to be the only explanation of a case which was an extremely puzzling and difficult one to explain to a coroner's jury when it occurred.

I have to thank Mr. Roughton, under whose care this patient was at the Royal Free Hospital, for permission to publish this case.

[1] Mackenzie: Diseases of the Throat and Ear, vol. ii.
[2] Bowles and Turner: Transactions of the Royal Medical and Chirurgical Society, 1900, p. 241.
[3] McQueeney: THE LANCET, July 21st, 1900, p. 158.
[4] Zenker and Ziemssen: Cyclopædia of Medicine.
[5] Brosch: Virchow's Archiv, 1900, quoted by Whipham in THE LANCET, Sept. 12th, 1903, p. 750.
[6] Whipham: THE LANCET, Sept. 12th, 1903, p. 749.

THE LEAGUE OF MERCY.—At the annual meeting of this body, which was held at St. James's Palace under the presidency of Lord Farquhar on Dec. 15th, Sir Henry Burdett, the honorary treasurer, reported that the league would be able to distribute £19,200, the total collection for the year having amounted to £19,385.

FIBROID INDURATION OF THE MEDIASTINUM PROBABLY SYPHILITIC.

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AND
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THE following case of extensive fibroid induration of the mediastinum and right lung, with ulceration and sclerosis of the right bronchus, as well as perforation of the pulmonary artery of the same side, is reported chiefly on account of the difficulty in diagnosis and also because it probably belongs to the class of pulmonary syphilis.

The patient, a man, aged 62, first came under observation on Feb. 10th, 1910, suffering from hæmoptysis and swelling of the right hand.

History.—The family history is unimportant. The patient's habits were temperate. He stated that his own health up to the commencement of the present illness had always been very good. He denied ever having had syphilis. Six months ago he began to suffer from cough and shortness of breath, and three months later had a slight hæmoptysis. He was, however, able to perform light work, and continued doing so until two days before admission in spite of the frequent spitting of small quantities of blood and pain across the front of the chest.

Condition on admission.—On admission the patient was a man of good muscular development. He was cyanosed and had constant dyspnœa. The superficial veins of the chest and neck were very full, especially on the right side; there was also a well-defined bow of dilated venules, roughly following the line of attachment of the diaphragm on both sides. He suffered from a harassing cough, accompanied by a little thick yellow expectoration which was streaked with blood. The pulse was 86, full and bounding, regular, and equal at both sides. The superficial arteries were thickened and slightly calcareous. Respirations 30; temperature 97·4° F.

The thorax was well formed, but the respiratory movements on the right side were impaired. There was absolute dulness on percussion over the right side from apex to base, both in front and behind. In front the dulness extended across the middle of the chest to an inch beyond the mammary line from the level of the third costal cartilage downwards to the sixth rib. The resonance was normal over the rest of the left side, except at the base, where there was slight dulness. Over the whole of the right side tactile vocal fremitus was much diminished; on the left side it was normal. On auscultation the breath sounds over the right lung were very faint and bronchial in character. Over the left lung they were harsh, and the expiration was prolonged. Very fine inspiratory râles were audible at the bases.

The cardiac impulse was palpable in the sixth left intercostal space just outside the mammary line. The heart sounds were distinct, the first normal, the second accentuated; no murmurs were present. The pupils were equal, no tracheal tugging could be obtained, and there were no signs or symptoms suggesting pressure on the recurrent laryngeal nerves. The urine was of specific gravity 1008, slightly alkaline; no albumin was detected.

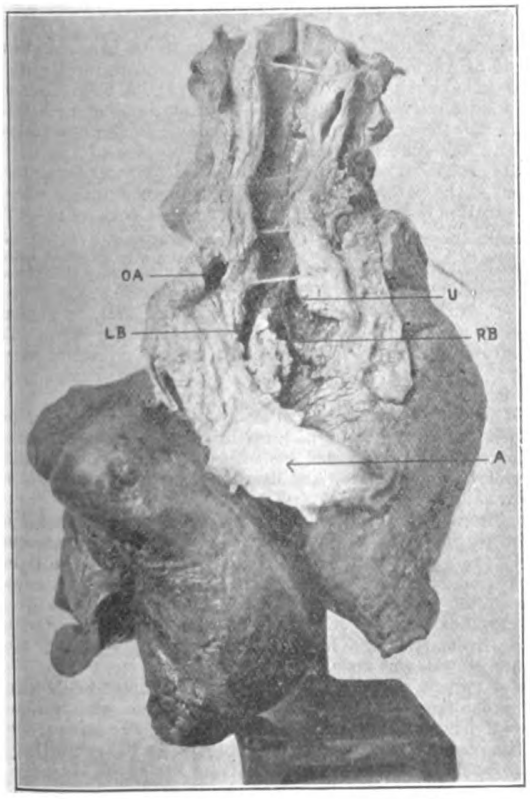
After being kept in bed for three months, with 30 grains of iodide of potassium three times a day and a restricted diet, he gradually improved, but when allowed up for a little time he had paroxysmal attacks of dyspnœa and slight hæmoptysis. On April 24th, 1910, he coughed up 3 ounces of bright red blood. He remained under treatment until July 15th, 1910, when he was discharged by request; he still had some signs of intra-thoracic pressure. During the five months he was under observation his temperature was never raised above normal. He gained 2 pounds in weight.

Clinical history.—The patient was re-admitted to hospital on Dec. 13th, 1910, on account of frequent hæmoptysis and dropsy, and was obviously much worse than on Feb. 10th, with more definite signs of intra-thoracic pressure. He had orthopnœa, extreme cyanosis, and œdema of the face, neck, upper part of the thorax, and both arms; also much distension of the superficial veins. There was slight œdema of both legs. The right pupil was contracted and the pulse in the right arm was smaller than that in the left.

The right side of the chest in front bulged at the level of the third, fourth, and fifth ribs The movements of the right side of the chest were diminished, but no visible pulsation was noticed. On percussion of both sides of the chest the areas of dulness were similar to those on his first admission, but the auscultatory phenomena differed. There were tracheal breath sounds over the upper part of the sternum, and these were also present over the right side to the middle point of the clavicle. There was bronchial breathing with sonorous accompaniments over the remaining part of the front of the chest and behind over the right side. No breath sounds were audible below the angle of the scapula. The heart sounds could not be heard. The abdomen was rather full, and the hepatic dulness extended to two inches below the costal margin, where its lower border was distinctly palpable. There were no signs of ascites.

During the next month the patient was treated on similar lines to those of the first admission, the result being that the œdema, except that in the right arm, rapidly disappeared, and a week later the heart sounds were heard. He always complained of pain, which frequently radiated down the right arm, and he had a persistent cough with purulent expectoration, accompanied by attacks of hæmoptysis, the quantity varying from 3 to 6 ounces. On Jan. 10th, 1911, when apparently quite comfortable, he had his fatal hæmoptysis, over a quart of blood being lost. There were no tubercle bacilli in the sputum.

Pathological findings.—On palpating the mediastinal contents *in situ* a large mass was felt above and in front of



Posterior aspect of lungs and trachea. LB, Left bronchus. RB, Right bronchus. U, Ulceration into right bronchus. A, Aorta. O A, Opening made into aorta.

the roots of the lungs, and on the right side it was found to be firmly adherent to the spine. The right pleural cavity contained about 8 ounces of blood-stained fluid. The whole of the thoracic contents were removed intact, and it was then discovered that all the structures in the posterior mediastinum were involved in this dense fibrous mass. After careful dissection—which included the opening of the trachea and bronchi from behind—the following conditions were found (see figure).

Immediately below the origin of the right bronchus there was a small opening large enough to admit a penholder, which was ulcerated, as well as showing much induration. The opening communicated with a cavity in the uppermost lobe of the lung, which was about two inches in diameter. The cavity did not appear to have any definite wall, but presented a shaggy appearance. It contained some blood clot, which on being cleared away revealed a small opening into the main trunk of the right pulmonary artery. Apart from the cavity, the uppermost lobe of the right lung was solid and indurated. On section it had a dull greyish appearance, and there was much thickening of the surrounding pleura, especially behind. There was no bronchiectasy, and the rest of the lungs showed no abnormality beyond emphysema at the margins. The bronchial glands were slightly enlarged.

Sections were made from the dense tissue surrounding the roots of the lungs and the margins of the opening in the bronchus, and were found on microscopical examination to consist of fibrous tissue, while sections from the apex of the right lung and from a part near the cavity showed fibrous overgrowth with excessive pigmentation.

In spite of a negative history, these pathological findings suggest that a gumma existed at or near the right bronchus which gave rise to much fibrous induration and interstitial pneumonia. In the latter excavation had taken place, and the necrotic process produced ulceration of the trunk of the pulmonary artery.

Sheffield.

CARCINOMA OF THE BOWEL

COEXISTING WITH BENIGN GROWTHS OF THE FEMALE PELVIC ORGANS.

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CLINICAL observation and pathological investigation of cases of morbid growths are still of interest, even in these days of their study from the experimental side. The following are the details of two cases which occurred recently in my practice here.

CASE 1.—The patient was a widow aged 39 years. She married when she was 19, and had five children, two of whom are alive. The last child—a boy—was born when she was 30 years old, and she had not been pregnant since. Her husband died five years later. She had typhoid fever when she was 27, but no other illness. There was no history of malignant disease in the family.

During the early part of 1910 she complained of abdominal pains, and on April 11th she passed some blood per rectum. I saw her for the first time on April 14th, and was shown about half a pint of clotted blood, which was said to have come from the bowel. She was very pallid and sallow. The body was well nourished. She complained of pain in the right iliac region. The abdomen was slightly distended. In the right iliac region and lumbar regions there were dulness on percussion and considerable resistance to palpation. Vaginal examination revealed a hard moveable mass in the pouch of Douglas. Rectal examination proved negative. Nothing of the nature of growth or ulceration could be felt by the examining finger. In front the hard moveable mass in the pouch of Douglas could be easily palpated.

A diagnosis of ovarian tumour was made, and it was thought that the intermittent bleeding from the rectum was due to congestion from pressure of the mass on the rectum.

About the latter end of July the patient was sent to the Manchester Royal Infirmary, where Dr. A. Donald removed from the right side a cystic ovarian tumour of about the size of a fœtal head, and from the left side a solid ovarian tumour almost as large. Palpation of the rectum at the time of the operation showed nothing in the nature of growth. Both tumours had very distinct pedicles; they were not adherent and gave no difficulty in removal.

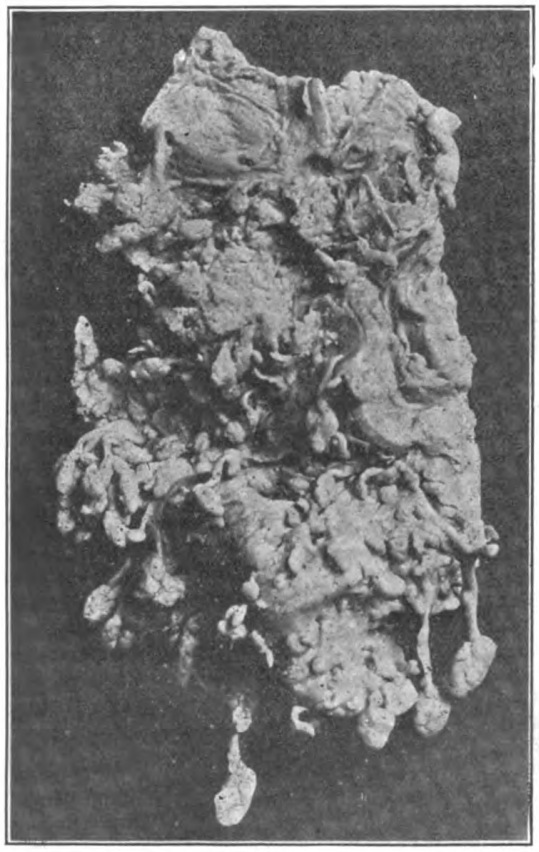
Examination of the tumours proved that the tumour from the right side was an ordinary multilocular ovarian cyst, while the left tumour was an ovarian fibromyoma.

So far the case seemed quite simple, although it was unusual to find double ovarian growths of a different nature. After the operation the patient's health did not improve

much, except that she was free from the oppressive pain of the right side. After a stay of a couple of months in hospital and convalescent home, she returned home in September, when I again attended her. She was then very ill and cachectic-looking, and had passed blood per rectum. The left leg and foot were swollen, and through the now flaccid abdomen a hard nodular mass could be felt in the left iliac fossa. There could be no doubt now but that she was suffering from malignant disease of the sigmoid colon. She died on Oct. 21st.

Necropsy.—On the next day I made a post-mortem examination of the abdominal cavity and removed the sigmoid colon for further examination. The liver was studded with nodular masses of growth of various sizes. I removed one of the nodules for microscopical examination. There were a few enlarged glands in the mesentery, but there was no further evidence of disease in any other part of the bowel or other organs. The stumps of the ovarian pedicles were adherent to the lateral walls of the pelvis and showed no sign of growth.

On slitting up the removed portion of colon a remarkable appearance presented itself. Studded over the whole surface of the mucosa were numerous red polypi, some sessile, some with fragile pedicles, which easily washed off by the stream of water used in cleansing the part. The accompanying illustration shows this appearance very well. The



Reproduction of photograph of columnar-celled carcinoma of sigmoid colon with polypoid growths, from Case 1.

muscular coat was irregularly thickened, and in one part was a large nodule of degenerated and friable material. There was no stricture.

Microscopical examination of the polypi showed them to be composed of columnar-celled acini with very attenuated basement membranes and stroma. Sections of the muscular coat showed groups of columnar cells invading the muscle tissue. Sections from the liver also showed groups of columnar cells invading the liver tissue, although here the growth cells were more of a mixed character.

This case illustrates in one individual the simultaneous development of three, if not four, distinct varieties of morbid growth without any apparent common causal relationship between them.

The multilocular cyst of the right ovary and the fibromyoma of the left ovary were apparently benign tumours. They gave rise to no other symptoms but those due to local pressure. As there is a history of sterility between the ages of 31 and 35 it is possible that these tumours commenced to form about this time, growing steadily awhile, until the left solid tumour fell by its own weight into the pouch of Douglas, causing pressure on the rectum. Long-continued congestion may have been a factor in the production of the numerous innocent-looking polypi.

Cases are quoted where such polypi become in time associated with malignant growth, and Professor Hansemann in his recent atlas on malignant growths calls special attention to this point. Cathcart[1] quotes a case by Dr. H. Handford at great length. While the polypi may be primary or secondary to the carcinoma, no other relationship can be established between it and the ovarian tumours than that of coexistence.

CASE 2.—The patient was an unmarried woman, aged 48. Towards the end of 1910, and during the early part of 1911, she suffered severely from paroxysms of abdominal pain. She had also severe metrorrhagia, which was almost continuous during the early months of 1911. In March, 1911, she was sent as an in-patient to a London hospital, and in April she had supravaginal hysterectomy performed for a simple fibromyoma of the uterus. At the time of the operation several hard nodules like calcified glands were found in Douglas's pouch, and at the back of the right broad ligament. These were thought to be old tuberculous glands. There were no other signs or symptoms of disease at the time of the operation.

After the usual stay in hospital she returned in May to Warrington. I saw her first on June 26th. She was then complaining of severe pains in the abdomen, and chiefly on the right side. These continued off and on in spite of treatment, and she did not put on flesh, as was to be expected after successfully passing through a major operation for a simple growth.

Suspicions of malignant disease began to be aroused about the end of August, when an icteric tinge appeared in the conjunctivæ. About the middle of September Dr. A. T. Wilkinson, of Manchester, was called in consultation, and after a prolonged and thorough examination he came to the conclusion that she was suffering from malignant disease of the liver, probably secondary to a focus in the bowel. Shortly after this I received the pathologist's report from the hospital at which the operation took place. This report ran as follows:—

A simple fibro-myoma of the uterus and a small fibroid of the broad ligament. On one of the tumours mentioned there is attached to its surface a patch of typical columnar-celled carcinoma like that of the rectum. No other signs of any malignant growth found.

Dr. E. H. Shaw, the pathologist to the hospital, on finding the patch of carcinoma, visited the patient in the ward, and specially investigated the case from the point of view of any symptoms of malignant disease and found none present.

The progress of the case was steadily downward, and at no time were there any signs of intestinal obstruction excepting the occasional paroxysms of severe pain. The patient gradually became more jaundiced and emaciated, and died on Nov. 23rd.

No internal post-mortem examination was permitted, but careful palpation of the abdomen after death revealed more clearly than during life a hard nodular mass in the right lumbar region, and in addition the liver edge could be felt as hard and nodular. Like Case 1, this patient also died from carcinoma of the lower bowel, with secondary growths in the liver, although in this case the exact site of the primary growth was not determined.

These two cases seem to be of special interest in showing that carcinoma of the lower bowel may coexist with various forms of benign growths of the female pelvic organs, and that the prominence of the latter may mask almost entirely the graver disease which gives so little sign of its presence. In both of these cases the presence of malignant disease of the bowel was suspected and looked for while the patient was in hospital, but the symptoms and physical signs were wanting, and no further operative procedure seemed justifiable.

Nothing could be more disappointing to all concerned than this complication, for the surgery of the benign tumours of the female pelvic organs is usually so satisfactory that it is cheerfully recommended and readily undertaken.

I must thank Dr. G. F. Blacker for his suggestions and information in Case 2.

Warrington.

[1] Essential Similarity between Innocent and Malignant Growths.

A TYPE OF NERVOUS VOMITING IN CHILDHOOD.

BY ERIC BELLINGHAM SMITH, M.D. LOND., M.R.C.P. LOND.,
ASSISTANT PHYSICIAN, QUEEN'S HOSPITAL FOR CHILDREN.

THIS paper proposes to deal shortly with a type of nervous vomiting occurring in children about the age of the second dentition. The condition in question has received but little attention in modern text-books, is not uncommonly seen in the out-patient department of a children's hospital, and is not infrequently overlooked.

Inquiry into the time and nature of this vomiting reveals the fact that it is not periodic, but is of a persistent character; and that often, when untreated or when treated unsuccessfully, it may continue for many weeks. It occurs during a meal, or more usually directly the meal is finished, and is of frequent, if not of daily, occurrence. Further inquiry shows that it is painless and effortless, and that it is neither preceded by any organic disturbance, nor followed by any after ill-effects. No diet, no ordinary gastric sedatives, appear to influence it. But with all this—and this is a feature to which I would draw special attention—the child seems neither to lose weight nor to suffer in any respect an alteration in its general appearance of well-being.

This nervous phenomenon, however, while apparently inducing little or no change in the general health of the child, creates a great deal of distress in the minds of the relatives concerned, and generally reflects very little credit on the therapeutics of the practitioner who fails to recognise its real nature. On the other hand, when diagnosed, a very simple remedy suffices in most instances to effect a cure.

Observation of both parent and child is often of value. The mother is frequently of a neurotic temperament, one who suffers from headaches and backaches, and has little or no control over her own offspring. The child, sometimes thin, sometimes well nourished, is frequently of a reserved and introspective nature. Occasionally, and I think much less commonly, the child is emotional and highly timid, one who cries on being undressed, or struggles and shrinks from any examination that involves a stethoscope or spatula.

A review of the histories of these cases generally discloses the presence of other functional nervous disorders, such as enuresis, migraine, and habit-spasm; or in some cases a rheumatic diathesis.

The further description of this complaint is, perhaps, best served by reference to some seven cases which have come under my notice during the past two years. Of these I intend to deal fully with the first two, which were under observation for a considerable period, and which to a marked degree exhibit all the symptoms and associations that have been described above.

Notes of Cases.

CASE 1.—The patient was a boy, aged 8, who for three months previous to being brought to hospital had suffered from constant sickness. Advice had been sought in many directions, but without success. According to the mother the vomiting was of daily occurrence, and took place almost immediately after a meal, and involved, if not all the food taken, at all events a great part of it. Further, the vomiting was not associated with any pain, and was apparently effortless in character. Previously to the onset of the sickness the boy had been subject to periodic attacks of severe headache, the nature of which suggested migraine. The child was also said to be very nervous, a fact which was borne out on examination.

The most careful scrutiny, however, failed to elicit any evidence of disease beyond a history of slight constipation, and the presence of some arrested dental caries. But one feature in this case was very noticeable; despite the three months history of repeated emesis the boy presented a picture of perfect health and more than average nutrition.

Treatment was commenced by a visit to the dental and ophthalmic departments of the hospital, and what little dental caries was present was treated, while the ophthalmic report showed him to be free from any error of refraction or any gross fundal change.

A careful revision was then made in the diet, and for some weeks a variety of anti-dyspeptic remedies and gastric sedatives were tried, but without any success. At this point the similarity of the condition to another nervous intestinal trouble—lienteric diarrhœa—suggested the use of two drugs which have proved of undoubted value in the latter condition—namely, arsenic and opium. A dose of liq. arsenicalis (m i) and tinct. opii (m ii) was therefore prescribed to be taken before each meal. The effect was almost immediate, the vomiting ceasing after the first two or three doses. At the end of a month the mother ceased her attendance, with the result that the vomiting recurred. A few days later treatment was again instituted and again proved successful, this time permanently. Five weeks later, however, as if to confirm the diagnosis, enuresis commenced, but this was easily controlled by the administration of belladonna. A year later both vomiting and enuresis returned, and were again successfully combated by the above drugs.

CASE 2.—The patient was a girl, aged 11 years, who was described by her aunt as always languid, nervous, and subject to headaches. For some weeks she had been fidgety and making faces, and more recently had been very sick after her meals. The vomiting was of the same effortless, painless variety as in the above case, occurring directly after the ingestion of food, and apparently unassociated with any alteration in the child's nutrition. On examination she was a tall, thin, overgrown girl, who flushed and fidgeted when spoken to; and who, when not under observation, exhibited marked signs of habit-spasm. As before, a thorough examination failed to detect any symptoms of organic disease.

The same steps were taken as in the previous case to eliminate any possible underlying gastro-intestinal disturbance or any peripheral or external causes which might be affecting the child's general health, but with no success as regards the vomiting. A change of scene was arranged, which was beneficial for a short time, but with no permanent result. Finally, with the experience of the former case in mind, resort was had to the same combination of drugs which had been so successful before—a step which was again attended by the same happy result. The medicine was continued for a few weeks and then stopped altogether. There was no immediate recurrence of symptoms.

In the course of the next year two trifling attacks of sickness occurred during periods of ill-health due to other causes; these were easily controlled by a repetition of the old formula.

CASE 3.—The patient was a girl aged 10 years, who also was described as being very nervous. A year previously she suffered from an attack of chorea, while more recently she had exhibited all the symptoms of the type of vomiting under discussion. As in the previous cases, the sickness ceased rapidly under treatment. Three weeks after all vomiting had stopped the child was seized with an attack of acute rheumatism.

CASE 4.—The patient was a girl aged 6 years, who, directly her midday meal was finished, would immediately leave the table, go to the scullery, and be sick. Here, again, the vomiting was a simple easy regurgitation of food taken, and was unassociated with any pain or discomfort. This case was lost sight of after a fortnight, at the end of which time all vomiting had ceased as the result of treatment.

CASE 5.—The patient was a girl aged 9 years, in whose case the vomiting occurred, not at the end of a meal, but during the course of it, so that she had frequently to leave the table in a great hurry. She was a fat, healthy looking child, said to be nervous, cried when spoken to, and was easily upset by schoolwork. The mother was a thin neurotic woman, with an obvious lack of control over her child. A brother and a sister of this girl both exhibited definite stigmata of a nervous inheritance. It is of interest to note that this child never vomited when she partook of meals at school. In this case a reptition of the treatment employed in previous cases was again successful.

CASE 6.—The patient was a boy, aged 10 years, who had been sent to hospital as a case of chronic appendicitis. This boy shrieked and struggled when he was undressed like a child of 2 years old, and complained of pain everywhere he was touched. On examination there was no evidence of any intra-abdominal disease, and a few days of judicious hospital control, and the administration of arsenic and opium as before, sufficed to cure his persistent vomiting.

CASE 7.—The patient was a girl aged 8 years, described as very nervous. In her mother's words, "she gets up after almost every meal and goes outside and is sick, she never has any pain, and never appears to experience any discomfort after the sickness is over." As an infant this child suffered from severe rickets, and neither walked nor talked till after 2 years old. At the date of examination, with the exception of some defect in her speech as regards certain consonants, she presented no evidence of any functional or organic disease. The only other child in the family was a somnambulist. Treatment was conducted along the same lines as before, and, as in previous cases, a successful result was not obtained until the administration of arsenic and opium was set on foot. Relief was then rapid and permanent.

Remarks.

It will be noticed in all these cases that every effort was made, in the first instance, to eliminate any factor, local or peripheral, that might possibly give rise to vomiting. The evidence in favour of the condition being a purely functional one is—1. The underlying current of nervous instability or nervous inheritance present in every case. 2. The fact that the vomiting in at least the first two cases was preceded, accompanied, or followed by other functional nervous disorders—e.g., migraine and enuresis in the first case, and habit spasm in the second, while the third case was a rheumatic subject, and the seventh case suffered from that common precursor of functional nervous disorders—namely, rickets. The effects of unsuitable environment are well shown in the fifth case, where the child, though said to constantly vomit at home, never did so when fed at school.

Pathology.—The explanation of the causation of this disease seems sufficiently simple. The vomiting in question appears to be due to some inherited or acquired hyper-excitability of the nervous mechanism of the stomach, which fails to allow of the retention of any considerable quantity of food. This complaint is thus comparable in many respects to the hyper-excitability of the bladder in enuresis, and to that increase of nervous irritability of the intestine which gives rise to lienteric diarrhœa. Moreover, as we have seen above, the same drugs which are of value in the latter complaint are of inestimable use in neurotic vomiting. The retention of fair nutrition and good health can only be explained on the assumption that the vomiting is either never complete, or never, as a rule, takes place after every meal.

Diagnosis.—If the principal features of this disease be

borne in mind—namely, painless, effortless vomiting, occurring directly after meals, without alteration in the general health, and having its origin in children of nervous habits or inheritance—there should be little difficulty in making a correct diagnosis. The child with chronic intestinal dyspepsia, or mucous disease, generally wastes, has epigastric pains and other symptoms, but rarely vomits. In cerebral tumour there may be effortless, painless vomiting, but it has no direct relation to meals; headache is usually persistent and severe, and later there will be optic neuritis, and perhaps localising symptoms.

The regular and daily nature of the sickness easily distinguishes it from that large group of cases of cyclical or periodic vomiting which are dependent on sundry auto-intoxications or are manifestations in the child of migraine. Vomiting due to any intra-abdominal lesion should be easily recognised by a careful examination.

Treatment.—This resolves itself into an elimination of all causes that may aggravate the underlying nervous instability. Removal from unsuitable home surroundings and the application of a little firm moral control will often effect a cure. In obstinate cases the same treatment as is applicable to lienteric diarrhœa—namely, small doses of arsenic and opium given just before meals—has in the author's experience always proved immediately efficacious.

Weymouth-street, W.

TWO CASES OF ECTOPIC GESTATION WITH PRIMARY RUPTURE INTO THE ABDOMINAL CAVITY.

BY W. MANSON FERGUSSON, M.D. ABERD., L.M. ROTUNDA,
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THE following two cases occurred within six weeks of one another, are typical examples of their kind, and present certain interesting features.

CASE 1.—The patient, married, aged 25 years, was admitted into Chalmers Hospital at noon on July 22nd, 1911. She was the mother of two children, aged 4 and 2. There had been no miscarriages, and her periods had been very regular up to the end of the previous April.

About 7 P.M. on the day before admission the patient had been seized with pain all down the middle line of her abdomen and severe vomiting. She went to bed but did not sleep, and getting up to pass urine at 2.30 A.M. fainted. At 7 A.M. she got up and started to make her husband's breakfast, managed to light the fire and partly cook the porridge, and again fainted. At 10.30 A.M. she was feeling very ill and at last sent for Dr. J. C. Galloway, who diagnosed extra-uterine pregnancy and called in consultation Dr. J. Anderson, who agreed with the diagnosis and advised immediate removal to hospital for operation.

Dr. Anderson met me at the hospital and gave me the following particulars about the case. The abdomen was remarkably soft, and extensive dulness could be made out on both flanks, the dulness being slowly moveable. There was pain on deep palpation over the right side. Vaginal examination: The cervix was somewhat soft and patulous but closed, with the canal pointing slightly to the right. The uterus could be easily palpated bimanually and seemed very little enlarged, but was carried bodily towards the left side for about two inches at the fundus. To the right of the uterus there could be felt a soft boggy swelling of about the size of a small lemon, and there was also a boggy feeling in Douglas's pouch. Immediately prior to operation her temperature was 96° F. and her pulse 150; she was absolutely blanched, and her abdomen was dull on percussion all over.

Dr. Chance put the patient under with chloroform and then changed to ether by the open method, and a very satisfactory anæsthesia was maintained.

On going through the abdominal wall there was no bleeding at all, and when the peritoneum was opened there was a rush of very dark blood. The peritoneal cavity was full of this and large clots of the size of one's fist. On bringing up the uterus I found a rent in its right side beginning on the fundus and extending downwards for 1½ in. to 2 in. At the lower end of this rent I could see the cross section of the uterine artery, which was not bleeding at all. On exploring the rent I found a cavity of about the size of a pigeon's egg with no appreciable opening into the uterus. I pushed my way through into the uterus and scraped out the false decidua with a curette and opened up the cervix. I then trimmed up the edges of the rent and closed it by two layers of iodine catgut, ligaturing the artery referred to and its accompanying veins. The right ovary was twice the normal size and cystic, so I removed it along with its tube.

The abdomen was irrigated with saline solution, a pint or two of which was left in, and the abdominal wall was sutured in the ordinary way. When suturing the peritoneum and also the rectus I was struck with the extreme friability of those tissues, the slightest traction on them producing extensive tears. I had never seen anything like it, and remarked upon it to Dr. Anderson, who was assisting me, and he said that he had seen a similar condition in a case of hæmorrhagic pancreatitis.

On the completion of the operation the patient was given a rectal saline containing 1 oz. of brandy and 1 dr. of liq. adrenalin. The foot of her bed was raised and rectal salines, omitting the brandy, were continued for 24 hours. She was then gradually moved up into Fowler's position, and then there commenced a fairly abundant tarry-looking discharge per vaginam, which persisted for a few days. Low pressure douches of biniodide were given for a few days. The patient made an uninterrupted recovery. So well was she that on the ninth day after operation she got up out of bed when her nurse was out of the room, and walked to the window to see what was passing along the street.

This interstitial form of ectopic gestation is generally recognised to be the most fatal if rupture into the abdominal cavity should occur, owing to the large vessels which may be involved. Jellett refers to 26 cases, collected by Hecker, of this variety, all of which proved fatal.[1] Munro Kerr gives an account of a case of his own which ruptured and the patient almost died, but rallied and was operated upon some time afterwards successfully.[2]

Since I did the case I have often wondered whether the uterus will give way where it was torn should the patient become pregnant again, and also if I should have sterilised her at the time, seeing she had such a narrow escape. I had no knowledge of any other case except the one given by Munro Kerr, and in it he had to do hysterectomy. I did not think it necessary to do hysterectomy, especially in my patient's collapsed condition, and I resolved not to sterilise her at the time, but to wait until I had an opportunity of discussing the case with others.

If one were quite sure that a scar in this situation were as strong as the Cæsarean section scar, then there would be no question of sterilising such a case as mine. I consulted several gynæcologists about the case and they were all of the opinion that I would not have been justified in sterilising the patient at the time, or even in advising that procedure subsequently. I must say I am rather inclined to the opposite view, but perhaps some of the readers of THE LANCET may have had similar cases which I have not come across in looking for references to this variety of ectopic gestation.

CASE 2.—The patient, married, aged 29 years, sent for me on August 29th, 1911, and gave the following history. On August 11th she had not menstruated for seven weeks, and on that date she passed a "fleshy lump," accompanied by a certain amount of blood. She was quite well until the 25th, and on that day was seized with pain in the lower part of the abdomen and severe vomiting. This attack lasted only a few hours, and she felt fairly well until the 26th, when what she thought a period started, along with very severe pain in the left iliac region and vomiting. She kept her bed and applied hot fomentations. The pain and vomiting ceased, but the vaginal discharge continued.

When I saw her for the first time at about 1 P.M. on August 29th she was feeling quite well, but had a little tenderness in the left iliac region, and on vaginal examination a distinct swelling was palpable immediately to the left of the uterus. I suspected that it was a case of tubal pregnancy, told her husband of my suspicions, and advised a consultation the following day. About three hours after my visit she was again seized with pain and vomiting and fainted. I was sent for, and on my arrival found her very collapsed, her pulse running at 130 and her temperature would not rise above 96° F. There was dulness on percussion

[1] Jellett's Manual of Midwifery, p. 649.
[2] Munro Kerr's Operative Midwifery, pp. 542-3.

all over the lower half of the abdomen and up to the left flank.

As it was a small house in the country I had her taken into hospital, although it was five miles away. She had no radial pulse on arrival at hospital about 10 P.M., but was put on the table immediately and given a rectal saline with brandy and adrenalin. On opening the abdomen I found it almost full of blood and blood clot. The left tube was distended to the size of a hen's egg, and had ruptured on its posterior aspect. The left tube was removed and the abdomen sutured up, after irrigating with saline solution, a quantity of which was left in. Rectal salines containing ½ oz. of brandy and 1 dr. of liq. adrenalin were given four-hourly for 48 hours, and the patient gradually rallied and made an uninterrupted recovery.

Case 2 is undoubtedly a very typical case of ectopic gestation ending in primary rupture into the abdominal cavity, and the only rather rare feature is that the attacks of abdominal pain were accompanied by severe vomiting. The reason why I have reported it is that I consider it a very good example of the harm which may be done by a vaginal examination if the least force is used to determine the pelvic condition. I was extremely careful in my examination, but I am convinced that my examination had something to do with the final rupture.

Banff.

SEVERAL ATTACKS OF APPENDICITIS IN AN APPENDIX SITUATED IN THE SAC OF A SCROTAL HERNIA; OPERATION; RECOVERY.

BY C. H. JAMES, F.R.C.S. ENG.,
LIEUTENANT-COLONEL, I.M.S.

THE following case presents several unusual peculiarities which make its publication desirable. The fact that the cæcum with the vermiform appendix has frequently been found during operation in a scrotal hernia, especially of the right side, is too well known to need more than a passing mention in these notes, but the fact that such displacements of the appendix are liable to inflammation and even suppuration is not generally known or, at any rate, appreciated. The early age of the patient and the fact that the operation in the present case was a long and tedious one add to its interesting features.

The patient, the son of a labourer, was admitted into hospital complaining of excessive pain, tenderness, and swelling of the scrotum. The boy, whose age was stated to be seven years, but who from his size looked less, was very ill. He had high fever (102° F.), the pulse 120, and was evidently in great distress. The history given by the father was that when the child was 2 months old a swelling was noticed in the right inguinal region, but that it was easily reducible by pressing with the fingers, and therefore nothing in the way of treatment was done for it. Indeed, there was no inconvenience at all till about a year ago, when the child began to have attacks of pain in the scrotum, which increased greatly in size. In these attacks he had vomiting and diarrhœa, which lasted three or four days, and then the symptoms gradually ceased and the swelling of the scrotum subsided. There had been three such attacks during the year, after each of which the patient recovered more or less completely, but it was noticed that the hernia could not be reduced as had been the case formerly. In fact, it had become irreducible. The last attack was the worst, and for this the boy was brought to the Rajindar Hospital, Patiala.

On examination the right side of the scrotum was found to be swollen to the size of a man's fist. The skin was red and shiny and acutely tender, and fluctuation could easily be detected. The lower abdomen was rigid and the boy complained bitterly of griping pains which came on at intervals and then passed off. There had been vomiting before admission but none afterwards. The bowels acted after admission, and therefore there seemed prospects of spontaneous relief. The case was put down by the house surgeon for operation next morning, but during the night the abscess in the scrotum burst of itself and a large quantity of pus escaped. The temperature and pulse quickly came down to normal, and the little patient seemed in every way convalescent. The scrotum, however, did not diminish much in size and the tympanitic resonance of inflated intestine within it could still be easily elicited on percussion. There was a small sinus at the upper part of the scrotum near the middle line—the result of the abscess—which showed no signs of healing.

After the patient has been in hospital a month and had sufficiently regained his strength I decided to operate. On May 1st I opened up the scrotum by making an oblique incision commencing over the situation of the internal inguinal ring and extending to the bottom of the scrotum. The sac was filled with large intestine which was everywhere firmly adherent to the walls and the separation of which was a matter of patient and tedious dissection. The vermiform appendix soon came in sight. It was about three inches in length and distinctly thickened and rigid. It ran for about an inch from the lower end of the cæcum to the skin opening, where its lumen communicated with the external sinus already mentioned. At this point it was sharply bent on itself and the remaining two inches of its distal portion lay imbedded in adhesions. The whole appendix was dissected out and the opening in the cæcum closed in the usual way. The remaining portion of protruding intestines was next freed from its attachments to the sac and returned into the abdominal cavity. The neck of the hernia was large, easily admitting three fingers. A radical cure was performed by tying the neck and cutting away the rest of the sac and suturing together the sides of the inguinal canal with buried sutures. The testicle lay in a separate sac—the tunica vaginalis—and was not disturbed.

The operation lasted over an hour. The patient made an uninterrupted recovery and left hospital on May 24th, 1911.

It will be observed that the boy had three distinct and typical attacks of appendicitis, the last of which resulted in abscess of the scrotum which opened externally and formed a permanent sinus. The track of the sinus was the lumen of the proximal portion of the appendix. In spite of this no fæcal matter ever escaped by this route. The case seems an easy one to diagnose when viewed by the light of after events, but was certainly very puzzling when first admitted to hospital. The history of previous attacks was only elicited with difficulty from a stupid and illiterate father after the operation had been performed. It is also interesting to note that although the hernia was noticed soon after birth it was not of the congenital but of the acquired variety, that is to say, the tunica vaginalis was not continuous with the hernial sac, but formed a separate compartment.

Patiala, Punjab.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SURGICAL SECTION.

Intestinal Obstruction following Ovariotomy.—Radical Cure of Hernia in Infants.—Treatment of Clawfoot.

A MEETING of this section was held on Dec. 12th, with MR. CLINTON T. DENT, the President, in the chair.

The PRESIDENT read a paper on a case of Intestinal Obstruction following an operation for Ovariotomy performed 45 years previously. In the course of his remarks he said that a surgical point of the greatest interest was the formation of adhesions. All the pregnancies of the patient had been quite normal. There had never been any perimetritis or parametritis, nor had there been any illness that might have led to the formation of adhesions. It might be taken as certain that there was no malignant disease of the large intestine, although the possibility of that had been suspected. On the other hand, there was a history of trouble following the ovariotomy, and of suppuration about the pedicle, which was fixed to the abdominal wound. His own view was that the adhesions commenced at that time, and that they had persisted throughout the patient's life, though they had never given rise to any serious trouble. Adhesions of other serous membranes, such as the pleura, might undoubtedly persist for an indefinite length of time without ever being suspected. In the case of the pleura they were less likely to undergo any material changes, but the free movements of the intestines and the alterations in the disposition

of the viscera resulting from pregnancies would profoundly modify peritoneal adhesions. Some of them might disappear; others might become tougher until adjacent coils of intestine became firmly welded together or to the abdominal wall or other viscera; or the adhesions might become stretched, avascular, tough, and string-like according to the local conditions, and those changes might take place gradually and extend over a great number of years, never being suspected, until ultimately they led, perhaps suddenly, to grave symptoms. The patient had been troubled with constipation for a good many years, and that condition might have been partly or even wholly dependent on the presence of the adhesions; on the other hand, the constipation might have been quite independent of them. All pathologists would, he thought, agree that extensive intestinal adhesions were frequently found post mortem when there had been no symptoms during life to indicate their presence, and where there was no obvious post-mortem explanation of their original formation. They were certainly found, and not infrequently, where abdominal operations had been performed, although to all appearance the patient made an absolutely uninterrupted recovery without any complication at all. When a pedicle in an ordinary case of ovariotomy had been ligatured with silk the ligatures might come away years after the operation, and in such cases it was highly probable that some adhesions had formed. They might have disappeared again, but that was not likely, and he thought that after almost any abdominal operation, however uncomplicated and apparently complete recovery was in every respect, some intestinal, or at any rate omental, adhesions were usually present. Once present, they might persist, for the mere fact that adhesions were present was likely to lead to formation of further adhesions, so that although some might disappear others might take their place. Hysterectomy, particularly abdominal hysterectomy, was especially liable to be followed by the formation of extensive adhesions.

Mr. THOMAS H. KELLOCK read a paper on the Radical Cure of Hernia in Infants and Young Children. He said there was probably no operation in surgery of children that had come more into practice during the last few years than that for the cure of inguinal hernia, and rightly so, he thought; for he held very strongly the view that all of those were congenital in origin, as far, at any rate, as the sac was concerned, and that the only "acquired" factor was the protrusion of some viscus into an already existing sac, and he thought, too, that the removal of that congenital deformity was the proper course, and the only course, if a cure in the proper sense of the word was to be brought about. One heard of, and apparently saw, cases that were said to have recovered spontaneously or been cured by the application of a truss, yet he believed in those cases an unoccupied sac remained only waiting for some unaccustomed internal pressure to bring about what one so frequently saw, the sudden, almost painless, occurrence of an inguinal hernia of some considerable size in a young adult How operations for hernia had increased in number was shown by the statistics of the Hospital for Sick Children, Great Ormond-street, for he found that whilst in the year 1898 18 operations for that condition were performed, in 1910 the number had risen to 369. He thought an operation could, and should, be done at an early age; as to the nature of the operation that gave the best results there would seem to be some difference of opinion; for his own part, for several years past he had reduced it to the very simplest form that he thought would answer the purpose. The test of the efficiency of any operation for that condition could only be made by investigating the results some years subsequently, and in order to see what those results had been in some of his own cases he recently, with the help of his late house surgeon, Mr. C. Bryan, made an investigation into a number of cases which proved to be of considerable interest. From the hospital registers they took 75 cases which had been operated on from two to four years ago; they did not go further back because it was only about four years ago that he began to perform the simple operation which he should presently describe. To 50 of the cases they sent postcards asking the mothers to reply on them as to whether there had been any return of the rupture; whilst to 25 who lived within reasonable distance letters were sent asking them to come and be seen. To the 50 inquiries they had received 28 replies; three of the children had died since the operation, two from pneumonia and one from peritonitis 14 months after the operation; one had left the country. In each case the statement was made that up to the time of death or emigration there had been no return of the hernia. One mother stated that there was a bulging when the child coughed. (This patient was sent for and seen subsequently; he had some weakness of the abdominal muscles on both sides above and outside the inguinal canals, but there was no sign of any protrusion through the inguinal canal itself.) In all the other cases the reply was that there was no return of the rupture, and on nearly all the postcards there was some expression of gratitude. Of the 25 patients who were asked to come and be seen 14 presented themselves, and in every one of them the cure seemed to be absolutely satisfactory, so that after the lapse of from two to four years one might claim that a satisfactory result had been obtained in all of them. The ages of the patients at the time of operation varied from a few months to 8 years; 5 were under a year old, 18 between 1 and 2 years, 7 between 2 and 3 years, and smaller numbers at the succeeding ages. In 6 cases the condition was bilateral and the operation done on both sides at the same time. Mr. Kellock attached considerable importance to what might be called the preparatory treatment in these cases; when an infant had a hernia of any size that came down easily he had kept him for a few days before the operation in the Trendelenburg position; it was quite easily managed by fastening the feet and legs over a wedge pillow, and it was rather wonderful how rapidly they became accustomed to the position. After a few days the hernia rarely if ever made its appearance, and when it had not been seen for a day or two the operation was done and the child returned to the same position again for another five or six days. As to the operation itself, he generally made a 1-inch incision through the skin at right angles to the direction of the spermatic cord and just above the external abdominal ring. This incision was well away from the genitals, and being on the line of the blood-vessels was accompanied by very little bleeding; then, dividing the coverings of the cord longitudinally, the sac was found, thoroughly isolated, drawn down with a little force, transfixed and ligatured as high up as it could be reached, and the skin wound closed, his aim being to remove the sac, the whole sac, and nothing but the sac.

Mr. ROBERT JONES (Liverpool) demonstrated some points in the treatment of Clawfoot by means of photographs on a screen.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Cystic Degeneration of the Chorion.—Exhibition of Specimens.

A MEETING of this section was held on Dec. 7th, Dr. AMAND ROUTH, the President, being in the chair.

Dr. R. D. MAXWELL communicated a sequel to a case of Cystic Degeneration of the Chorion. The patient, aged 21, had been married six months. Seven weeks before admission to the London Hospital a hydatid mole was removed under chloroform. A month later some more "white stuff" was passed. On admission on Nov. 10th, 1910, Dr. A H. N. Lewers found the uterus considerably enlarged and the os patulous. On Nov. 15th typical cystic material was removed from the uterus after dilatation with Hegar's bougies. Numerous vesicles could be seen with the naked eye. On section there were some large œdematous villi, and in close relation to them were parts of the uterine walls. Numerous large and small capillary spaces were seen in the muscular wall of the uterus, and in these spaces were numerous chorionic epithelial cells. The patient was discharged on Nov. 26th, but was re-admitted on March 7th, 1911, as hæmorrhage recommenced in January, and continued off and on till admission, when she was found to be markedly anæmic. Ten days later the uterine cavity was again explored under anæsthesia, and a small nodule of tissue measuring two-thirds of an inch by one-third of an inch was removed with a curette. On microscopic examination of the nodule removed there were a few dropsical villi, which were covered with many layers of papillary projections of the chorionic epithelium. There were some small portions of the mucosa and muscularis, on the surface of which were masses of chorionic epithelium. The patient's blanched condition suggested the possibility of widespread blood destruction by a latent syncytial metastasis which produced no physical signs.

For five weeks the patient's anæmia was medically treated, and she rapidly improved both in red corpuscles and hæmoglobin percentage. On April 21st the uterus was again explored by Dr. H. Russell Andrews in the absence of Dr. Lewers, and a small portion of tissue, the size of a pea, was removed. This tissue had the appearance of normal endometrium, which was confirmed by the microscope. When last seen on Nov. 20th the patient was very much improved and felt quite well. Dr. Maxwell said the case illustrated the difficulty that often arose before being able to decide as to the advisability or not of removing a uterus in such cases as the present. Were there any histological features whereby they could distinguish the trophoblast persisting in utero as an innocent parasitic growth nourished by the maternal circulation without invasion of the maternal tissues, from trophoblast of the more dangerous and infiltrating type? In the light of the present case he felt bound to conclude that many hysterectomies, though justifiable in the present state of their knowledge, were probably unnecessary.

Dr. EARDLEY L. HOLLAND showed a specimen of Ovarian Pregnancy. The specimen was removed by Dr. John Phillips from a woman, aged 40, who had never borne children, but who had had one miscarriage nine years before the present pregnancy. After a period of six weeks' amenorrhœa she had an attack of severe abdominal pain and uterine hæmorrhage. She was treated by rest in bed, and no operative interference was undertaken. During the next five months, however, she had recurrent attacks of a similar nature, and was sent into hospital, where operation was immediately performed. The specimen consisted of the enlarged right ovary. A complete capsule of stretched ovarian tissue enclosed old blood-clot, in the midst of which was situated the collapsed gestation sac. Owing to the time which had elapsed between the date of death of the ovum and removal of the specimen, finer histological details were lacking. The specimen, therefore, had only an anatomical value, and threw no light on the mode of embedding of the ovum in the ovary or its subsequent development. In a blood-clot which was expressed from a recently ruptured follicle in the opposite ovary a remarkable structure was found, which undoubtedly consisted of plasmoidal trophoblast. It might be hazarded that this represented an ovum fertilised at a later date than that found in the right ovary; if so, the case was a unique one of bilateral ovarian pregnancy.

Mr. H. BECKWITH WHITEHOUSE exhibited a Primary Carcinoma of the Female Urethra. He referred to the little attention that had been given to this disease in the standard works on gynæcology in this country. He had succeeded in collecting 43 undoubted records of this disease, chiefly from the recorded cases of Wassermann, Ehrendorfer, Burckhardt, and Karaki. No case was included to which a microscopical report was not appended. He first referred to a case seen at the General Hospital, Birmingham, in which the patient, aged 59, had suffered severe pain and difficulty in micturition for about four months. When first seen the bladder was distended, and urine was dribbling from the urethra. The urethral orifice was dark purplish red in colour, depressed, and puckered. The urethra and bladder were explored by Kelly's cystoscope. The bladder mucosa was somewhat œdematous, but no nodules were seen. On withdrawing the cystoscope an ulcer half an inch long was seen in the floor of the urethra, readily bleeding and surrounded by much induration. No glands were felt in the inguinal region. The patient's condition was very feeble and did not admit of a radical operation. Microscopical reports of a portion of growth removed proved it to be a rapidly growing squamous-celled epithelioma. The relationship of carcinoma of the urethra to urethral caruncle and again to urethritis was discussed. Mr. Whitehouse divided the cases into vulvo-urethral and urethral. The vulvo-urethral growths were the more common, 32 out of the 43 cases coming under this category. These appeared either (1) as an irregular dark purple papillomatous growth, bleeding on examination, and resembling a polyp; or (2) in the form of an ulcer produced by the breaking down of an ulcer on the floor of the vestibule at the urethral orifice; or (3) as an induration surrounding the urethral orifice, leading to puckering and contraction of the orifice. Urethral growths were much rarer, and only 11 were included in the list. These appeared either (1) in the form of an irregular, elongated ulcer, involving the mucous membrane of the urethral floor, and having a tendency to extend towards the urethral orifice; or (2) as a peri-urethral induration, with ulceration only in the later stages. As regards pathology, the preponderating type of growth was the squamous-celled carcinoma. Adeno-carcinoma was rare, and occurred in 14 of the cases. Where practicable, wide excision of the growth, together with the inguinal glands, should be practised.

The following specimens were also shown:—

Dr. J. P. HEDLEY: Cervix Adherent to the Posterior Vaginal Wall.

Mr. J. D. BARRIS: Solid Malignant Growth of the Ovary.

Dr. H. MACNAUGHTON JONES: (1) Section of Carcinoma of the Vulva; and (2) Cyst growing from Remains of a Resected Ovary.

Dr. WALTER TATE: Extra-uterine Gestation; Death of the Fœtus near Term; Removal of the Entire Sac three months later.

Mr. WHITEHOUSE: Ruptured Four Months' Gestation in the Rudimentary Horn of a Bicornuate Uterus.

MEDICAL SOCIETY OF LONDON.

Some Remarks on 400 Operations involving the Peritoneum.

A MEETING of this society was held on Dec. 11th, Dr. J. MITCHELL BRUCE being in the chair.

Mr. J. D. MALCOLM read a paper on 400 Consecutive Operations in which the peritoneal cavity had been opened. There were 113 of various kinds on the uterus, with 2 deaths; 103 on the ovaries and Fallopian tubes, with 2 deaths; and 184 on the abdominal wall, intestines, kidneys, gall-bladder, &c., with 4 deaths. Special attention was paid to the fatal cases, and the circumstances surrounding them were compared with those of Mr. Malcolm's earliest work, which showed a mortality nearly three and a half times as high as that of the recent cases. The difference was attributed in part to want of experience and to less effective methods, but it was urged that one of the greatest advances in abdominal work was attributable to a better selection of the time for operating. The more judicious use of opium and of purgatives was considered very important and also the administration of fluids during convalescence, but it was urged that fluid might be given in too great quantity when shock was developing. Trendelenburg's position was considered one of the most useful aids in operating, how useful could only be really appreciated by those who had worked without it. Modern methods of attaining asepsis were also important. There were in the series 54 hysterectomies for fibromyoma uteri without a death, and these were compared with 29 operations by the old method in which the serre-nœud was used, when patients were advised to have no operation until the tumours threatened life or seriously interfered with health. In these early cases there were five deaths, all but one of which, and perhaps all, would have had a very good chance of recovering by modern methods and by earlier operations. Hysterectomy by the vaginal route was performed in one case of complete prolapse of the uterus of ten years' duration, and death from suppression of urine followed. It was found after death that both ureters were dilated to a size of almost half an inch in diameter. In regard to Wertheim's operation for cancer of the cervix, it was urged that the full benefits of this improved method could only be obtained if the disease was diagnosed and treated early. It was urged that the operation should not be performed if the mischief was so widespread that the death-rate was high and the duration of life afterwards was short. There were 44 ovariotomies which all recovered, and these were compared with 54 of the first 100 operations performed by Mr. Malcolm. In these there were five deaths, including incomplete and malignant cases. All these fatal cases were already published. Forty cases of removal of the Fallopian tubes, generally with the ovaries, showed two deaths. In the first fatal case the small intestine ruptured four days after the operation without any sign of inflammation around the perforations. This was the only case of the kind Mr. Malcolm had seen. In the other case there was a very acute salpingitis with pools of pus amongst adherent coils of intestine, such as one had often seen after death. The state of shock was profound at the end of the operation, but the patient lived a week, and at the necropsy it was discovered

that the uterus had fallen back and blocked the drainage opening in the vaginal wall. The advantages of obtaining free drainage, if necessary by removing the uterus, were urged. The contrast was pointed out between cases of intestinal adhesion treated by purgatives and a case operated upon recently in which obstruction was complete but no purgative had been given. There were 20 cases of intestinal anastomosis with two deaths, in which treatment had been long delayed. Of seven intestinal resections one died. A fatal case of nephrectomy was recorded. The kidney was atrophied and contained colourless matter and was surrounded by hardened fat, so that it appeared to be very much enlarged. There were 64 cases of appendicitis with two deaths. The advantages of early operation were urged. A case was recorded in which a gangrenous appendix was successfully removed from a girl aged 22 who was dying from pulmonary tuberculosis, and who did die 15 months later. In another acute case the woman was delivered of a full time child the night after the operation, and both mother and child did well. A child, aged 2½, was operated upon when all symptoms had subsided and the appendix was found ruptured, and in another patient all pain ceased within three days of its onset, but a ruptured appendix and a piece of gangrenous bowel a foot long were removed, the patient recovering without complication. Such cases illustrated the advantages of selecting the proper time for operating in appendicitis and other cases.

HARVEIAN SOCIETY OF LONDON.

Some Surgical Cases illustrating the Diagnostic Value of X Rays.—On Chloroformisation of Patients Sitting in the Upright Position.

A MEETING of this society was held on Dec. 7th, Mr. J. ERNEST LANE, the President, being in the chair.

Mr. E. W. ROUGHTON gave a lantern demonstration on Some Surgical Cases illustrating the Diagnostic Value of X Rays. The cases referred to included many examples of fractures in which, for various reasons, satisfactory apposition of the fragments could only be obtained by operative methods such as wiring, screwing, plating, &c. Cases of chronic abscess were detailed in which the situation of the bone lesion on which they depended could be easily detected by the X rays but by no other means. The demonstration also included examples of disease of the accessory nasal sinuses, renal calculi, foreign bodies of various kinds, and secondary sarcoma of lung.

Mr. J. H. CHALDECOTT read a paper on the Chloroformisation of Patients Sitting in the Upright Position. He said that there was a belief that the administration of chloroform to patients in any but the recumbent position was dangerous; few anæsthetists preferred to employ the upright position. For six years he had administered chloroform to patients of all types and ages sitting bolt upright, and was convinced that this position was for certain operations the most convenient to the surgeon and anæsthetist and of less risk to the patient. The method was useful in nasal and naso-pharyngeal operations. Its success depended on the following points: 1. The patient must be properly prepared to avoid unnecessarily deep anæsthesia. 2. The chair should be a dining-room or kitchen chair with a low back, the patient's feet being supported on a high stool. An arm-chair, and especially an easy chair, was unsuitable. The anæsthetist stood immediately behind the chair and during induction supported the patient's head on his chest. When ready for operation he passed his left arm round the patient's neck, thus controlling the position of the head and holding the mouth-tube of the Junker in the left hand and being able to feel swallowing movements and variation of pulse in the vessels of the neck. The right hand was free to work the bellows or sponge out the mouth. A dental prop should be inserted between the teeth before anæsthesia. To avoid struggling anæsthesia should be induced rapidly with gas and ether or ethyl chloride and ether. When the patient was flaccid chloroform was given on a mask till quiet anæsthesia was established, a naso-pharyngeal sponge being inserted at this stage if required. The administration was then continued through the mouth-tube of the Junker. Comparing anæsthesia in the recumbent and upright positions the questions were: (1) Which was the safer for the patient? (2) Was there difference in the after-effects? (3) Which was the most convenient for the operator? 1. In his opinion for nose and throat operations under chloroform the upright position was the safer. In 1400 administrations he had found the patients were of a better colour, respiration was quieter, and grave symptoms were rare. The alleged danger of syncope did not occur even in subjects of chronic asthma or of cardiac dilatation or goitre because breathing was easier when sitting up than when lying down; mucus, &c., did not pass into the larynx. Tongue forceps were rarely needed. A sponge in the naso-pharynx obviated the risk of blood getting into the larynx. 2. There was less vomiting when this position was used. 3. In the sitting position the surgeon directly faced his work and operated in the position in which he was accustomed to examine the part operated on. Operations could be performed in about half the time required in the recumbent position from the greater ease and the absence of interruptions from coughing. The method was suitable for all nasal and naso-pharyngeal operations requiring continuous anæsthesia, for protracted dental work, and for endoscopy.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—The Value of Pneumococcal Vaccine in the Treatment of Acute Lobar Pneumonia.

A MEETING of this society was held on Dec. 7th, Dr. T. R. BRADSHAW, the President, being in the chair.

The first part of the evening was devoted to the exhibition of clinical cases.

Dr. R. J. M. BUCHANAN showed several cases of Acute Rheumatic Fever, with Polyarthrits, Endo- and Pericarditis, treated and cured by vaccine. One patient had been in full work as a coal-trimmer for ten months after recovering from severe rheumatism and pericarditis. He also showed a case of Splenomegaly with Dwarfism in a girl aged 19, and a case of Tropho-œdema of the Leg in a girl.

Dr. NATHAN RAW read a paper on the Value of Pneumococcal Vaccine in the Treatment of Acute Lobar Pneumonia and other Pneumococcal Infections. His observations were based on 183 cases. The ordinary treatment was supplemented by the use of vaccines. Dr. Raw said that there was an immediate effect in lowering the temperature and the pulse-rate; this effect was temporary. He thought that the complications were less frequent when treated in this way. Neither the mortality nor the duration of the disease had been reduced.—The PRESIDENT did not consider that the use of vaccines in pneumonia was attended by better results than the ordinary treatment. The mortality in 131 cases treated by him was 6·87, a rate almost identical with that found by Dr. A. T. H. Waters some years ago.—Dr. HUBERT ARMSTRONG said that he had found better results in chronic cases than in acute when children were the patients. One case he had treated with doses of 5 and 10 millions every other day; this child developed an empyema and was discharged cured in three months. Ten days later the child returned with pneumonia of the other lung.

The following cases were shown:—

Mr. HUGH E. JONES: 1. A case of Blennorrhœa of both Lacrymal Sacs, Myopia, and Immature Cataract, in which both cataracts had been extracted after preliminary extirpation of both lacrymal sacs, with resulting vision 6/6 and 6/9 respectively. 2. A case of Rodent Ulcer, involving the frontal sinus, ethmoidal cells, and antrum. Attempted radical operation was followed by recurrence in the deep part of the cavity. Carbon-dioxide snow had proved of very little use. 3. A case of Glioma of both Eyeballs. The parents had refused to allow removal of the eyeballs for 18 months and then consented. Four months after enucleation recurrence occurred in one socket, and extensive growths in the neck.

Dr. EDGAR STEVENSON showed a boy, aged 10, from whose Right Orbit he had removed a piece of wood 3 inches long, the pointed end of a home-made arrow. The foreign body had passed through the sphenoidal fissure, and its point must have just crossed the inner end of the petrous bone. The total ophthalmoplegia was passing away, but the eye was blind from optic atrophy.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 8th, Dr. A. Freeland Fergus, the President, being in the chair.—Mr. W. Ernest Miles (London), in opening a discussion on the Treatment of Carcinoma of the Rectum, said that carcinomatous growths of the rectum differed widely in malignancy, the somewhat rare papilliferous forms seldom recurring, the typical adenoma-carcinoma recurring in 90 per cent. of the cases, and the colloid cancer always recurring. The spread of a cancerous tumour of the rectum was both intramural and extramural; also visible and invisible. The visible intramural spread could be recognised as a direct permeation of the coats of the bowel in the vicinity of the oldest portion of the growth, appearing in some instances as a pearly white infiltration of the submucous coats. The invisible intramural spread could in most cases be demonstrated by the muci-carmine test to extend for several inches in the submucous tissue both above and below the growth. The extramural spread, both visible and invisible, took place in three distinct lymphatic areas—viz., the zone of downward spread, including the peri-anal skin, ischio-rectal fat, and external sphincter muscle; the zone of lateral spread, including the levatores ani muscles, base of bladder, prostate gland or posterior vaginal wall, cervix uteri and base of broad ligament, and associated lymph nodes; and the zone of upward spread, including peritoneum of pelvic floor, pelvic meso-colon, and para-colic and other lymph-nodes. Cases were cited in which spread had taken place extensively within these areas though the growth in the rectum was small and freely moveable. Operations carried out from the perineum, such as Kraske's, Bardenheuer's, and Hochenegg's, could eradicate the tissues composing the zones of lateral and downward spread, but were quite inadequate to reach the tissues of the zone of upward spread. This was illustrated by Mr. Miles's statistics of recurrences in 55 out of 58 cases in which he had performed perineal operations. Resection of the diseased segment with end-to-end anastomosis, whether performed from the perineum or from the abdomen, had failed to prevent recurrence, as had also the so-called abdomino-anal operation, in which the proximal end of the divided colon was brought down to the anus. A radical abdomino-perineal operation, as described by Mr. Miles,[1] was therefore necessary, and should not be reserved for advanced cases, but should be done in as early cases as possible. Mr. Miles's statistics of this operation, performed in 42 cases, showed an operation mortality of 40 per cent, which was markedly influenced by the age of the patients; for while all the 8 cases over the age of 60 died, only 9 of the 34 cases below that age died—a mortality of 26 per cent. Among the 25 patients who survived the operation 4 had suffered from recurrences. Of the remaining 21 cases, 2 had died from other causes, and 19 were alive at date of writing, without having manifested any signs of recurrence, 6 of these having lived for over three years after the operation, 4 over two years, and 9 for periods under two years.—The discussion was continued by Dr. A. Leitch, Dr. T. K. Dalziel, Mr. A. E. Maylard, Mr. R. H. Parry, Dr. J. Crawford Renton, and Dr. J. Grant Andrew.

HUNTERIAN SOCIETY.—A pathological meeting of this society was held on Dec. 6th, Dr. Hingston Fox, the President, being in the chair.—Mr. W. Girling Ball showed the following pathological specimens: 1. Sarcoma of Testicle from a man aged 21, with a history of sudden swelling of that organ three weeks before admission to the hospital. On section, it was found that there was a large hæmorrhage into the centre of the growth accounting for this sudden swelling, which was the first sign of the disease. 2. Hypernephroma of the Kidney, a small encapsuled tumour of the size of a walnut, with hæmorrhage into it. It was situated just underneath the capsule in the renal cortex, and had not invaded the pelvis. It was found quite accidentally in the post-mortem room, not having given rise to any symptoms during life. The patient died at the age of 77, with a fractured base of the skull. There were no other growths found in the body. 3. A small "Traction" Diverticulum of the Œsophagus of the size of a small marble, situated in the anterior wall of the œsophagus, just below the bifurcation of the trachea. It had a distinct neck and was in no way attached to the surrounding tissues. The lymphatic glands in the region were healthy and showed no evidence of old or recent inflammation. 4. A Mediastinal Tumour with a large Secondary Growth in the Kidney. The specimen was shown chiefly to illustrate the extent to which the wall of the heart may be involved without obvious interference with its action. The whole of the anterior wall and the large vessels of the heart were embedded in growth. The posterior wall, however, was free. The growth had been diagnosed as an aneurysm by the radiographer.—Dr. W. H. Kelson showed a series of microscopic slides illustrating the more common affections and pathological conditions found in the throat, nose, and ear, such as polypus, tubercular and malignant disease, syphilis, diphtheria, &c.—Dr. Theodore Thompson showed sections of cords illustrating Subacute Combined Degeneration.—Dr. A. C. Jordan showed skiagrams of chests and lungs illustrating "Peribronchial Phthisis," a condition that will be more fully explained by him in a forthcoming paper.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held on Nov. 30th, Mr. F. L. Angior, the President, being in the chair.—Dr. J. Thomson Shirlaw read a paper on cases of Perforated Duodenal Ulcer in which Mistaken Diagnoses of Lead Poisoning were made. He first read notes of a case occurring in his own practice, a painter who had undoubted symptoms of lead poisoning and who died rather suddenly after a very brief illness, mainly of an abdominal nature, emphasising the fact that on several occasions the colicky pain was relieved by pressure on the abdomen. At a post-mortem examination conducted by himself and Dr. A. Matheson a large posterior duodenal ulcer was found which had perforated into the lesser peritoneal cavity. There were also marked changes in the kidneys, one of which was enlarged and the other contracted. He subsequently read notes of seven or eight other cases where from the symptoms present, the occupation, &c., a diagnosis of plumbism had been made, in all of which were found post mortem one or more perforated ulcers in the duodenum. Next Dr. Shirlaw recalled the classic symptoms of perforated ulcer of the duodenum, compared these with the symptoms in his own case and the others mentioned, and drew attention to the great difficulty of arriving at a correct diagnosis, not only as between duodenal ulcer and lead poisoning, but of duodenal ulcer itself. He then described the post-mortem appearance of the alimentary tract in chronic lead poisoning and in lead poisoning experimentally produced in rabbits, and finally propounded the question, "Does lead poisoning predispose to, or cause, duodenal ulcer?"—Ten of the members present took part in the discussion which followed. Of these, Dr. R. Prosser White, certifying factory surgeon for the district, discussed the modern pathology of plumbism, and pointed out that Dr. Shirlaw had broken new ground by suggesting a causal relation between chronic lead poisoning and duodenal ulcer.—Dr. F. E. Wynne, who was present as a guest, gave a short account of an outbreak of lead poisoning at Leigh, and mentioned that in the only case in which a post-mortem examination was made a perforated duodenal ulcer was discovered.—Dr. Shirlaw, in replying, read a number of letters which he had received from medical men of note to whom he had written on the subject, mostly depreciating any idea of a causal relation between the two diseases.—A short paper was afterwards contributed by Dr. R. Buchanan on a Medical Library, and the discussion was adjourned to a future meeting.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 6th, Dr. A. Emrys Jones, the President, being in the chair.—Dr. J. B. Burt (Buxton) read a paper on the Nomenclature of the Chronic Arthritic Diseases. The great chronicity of this group of diseases was one of the important causes of the bewildering terminology and classification. By the time the cases came to be examined post mortem secondary changes had occurred; thus diseases with an entirely different beginning might show identical anatomical changes. Those secondary changes chiefly responsible for obscuring the clinical and pathological picture were due to wear and tear. Mr. Lane had already proved that the excessive use of a healthy joint led to the formation of osteophytes, bony outgrowths, and destruction of cartilage. Slides were shown illustrating these formations in the cobbler's thumb, the miner's right hip, and

[1] Brit. Med. Jour., Oct. 1st, 1910.

in the left knee of a man with a right hemiplegia. There was also a demonstration of the bones of horses suffering from bony spavin, ring bone and side bone to prove that bony formations might be produced by concussion alone. It was suggested that similar changes in diseased joints were due to wear and tear. Various facts proving this were quoted, and it was shown that the chronic diseases where movements were encouraged, such as chronic gout and senile arthritis, were the diseases in which bone formations were most often found, whereas those diseases where there was great infiltration of the ligaments, severe destruction of bone, or great pain on movement, very rarely showed osteophytes. But if this latter group improved sufficiently for the joints to be moved and thus exposed to wear and tear, then, and then only, did they find osteophytes and bony additions. The clinical and X ray features of the named types of arthritis were compared and it was shown that absence of bony change, atrophied and hypertrophic bony changes might occur as a different phase of the same disease. Hence a nomenclature based on X ray findings was valueless. Up to the present time the terminology had depended on the clinical and pathological findings. The present confusion proved it a failure. This reduced them to a classification founded on etiology. Infective, neuropathic, degenerative, and metabolic were suggested as the four main group names in the classification of chronic arthritic diseases.

Reviews and Notices of Books.

The Disorders of Post-Natal Growth and Development. By HASTINGS GILFORD, F.R.C.S. Eng. With 65 illustrations. London: Adlard and Son. 1911. Pp. 727. Price 15*s.* net.

THE author begins by introducing us to Sir Jonathan Hutchinson and "his marvellous clinical insight" in connexion with a case of premature old age engrafted upon or running side by side with a condition of immaturity or infantilism. The study of this case led Mr. Gilford to the discovery of another form of infantilism—obviously not common infantilism—distinguished by delay of development. These two morbid conditions, spontaneous and premature senile decay, or "progeria," and spontaneous persistent immaturity, or "ateleiosis," furnished him with matter for cogitation and led to a consideration of the larger question of differences between growth and development and between the growth and development which go on in the whole man, in his individual organs and in his individual cells. After dwelling on the marked artificiality in the classification of disease the author proceeds to define his subject. Human development does not end at birth; indeed, it may be said only to begin at that epoch, so that the prenatal period is no more than a genealogical introduction to the forthcoming chapters of development. The author's contention is that most of the diseases to which we are subject are diseases of growth or of development, and that by far the larger number of these do not begin until after birth. Parts of this work have appeared in various journals, and the first skeleton of the subject appeared in THE LANCET in 1900. Though the original articles have been much modified they may be said to constitute the framework of this book.

Part I., extending to about 130 pages, deals with "general considerations." That the author's outlook is both wide and philosophical we may gather from the fact that he claims that we must look upon not only the clinicians and the laboratory pathologists as our leaders but also on such men as Darwin, Galton, Mendel, and Bateson, and must regard them as being as truly pioneers of medical science as Sydenham, Trousseau, or Laennec. He incidentally remarks that one of the most neglected departments of medicine is historical medicine, and that biology must be our guide as we thread our way through the intricacies of the diseases with which he deals. The first part is divided into 11 sections, and is devoted to an explanation of the terms "growth" and "development," and to a definition of those diseases or disorders which are essentially natural processes, dislocated from their proper setting, and either falling short of their proper degree or carried to an unhealthy excess. The facts are marshalled in orderly sequence. Growth and nutrition, though intimately related, are distinct processes, and they, with development, constitute a trinity which the author likens to the three primary colours of the spectrum. Each has an individual existence, but under natural circumstances is so blended with the other two as to lose its identity. The author then proceeds to discuss the relations of normal development to: (1) the cell; (2) the organs; and (3) the complex animal.

Development, according to the author, is a qualitative process of two kinds, ontogenetic and phylogenetic, while growth is a quantitative process. Moreover, development is coterminous with life, and is either progressive or retrogressive. Development and degeneration are often spoken of as if they were two distinct processes, whereas they are merely different phases of the same process. This leads to an interesting study of the structural changes in senile decay, whence it appears that the tissue changes of old age are to be known quite as much by the re-appearance of embryonic characters as by actual decay; while senile degeneration and retrogressive development are identical. These two propositions furnish the keystone to the whole subject of perversions of development. Defective control is the main distinguishing feature of the tissue changes alike in second childhood and in first childhood.

Development itself is the outcome of two opposing tendencies—one, heredity, conservative in nature; the other, variation, which is changeable. It is either reactionary or progressive. The author is careful to define and illustrate the separation of the disorders of growth and of development from other diseases, such as those of extrinsic origin due to external agents, the most important of which are the toxins.

Amongst the diseases of intrinsic origin, the most important are pre-natal malformations and tumours. An elaborate account is given of the causes of tumour growth, amongst the chief causes discussed being lead, alcohol, and the toxins of tubercle and syphilis. The innocent tumours are cryptogenous, sporadic, sometimes hereditary, progressive, and incurable by drugs, while cancers—the term is used in a wide sense to include sarcomata and is taken as synonymous with "malignant disease"—in addition are rhythmic or intermittent in their course, and malignant or lethal. The innocent tumours are growths, the malignant degenerations. There are also diseases of mixed intrinsic and extrinsic origin, such as chronic Bright's disease, cirrhosis of the liver, goitre, leukæmia, &c. Degeneration, infantilism, and senilism are then defined and illustrated.

Part II. (pp. 141–211) deals with post-natal growth and development of *cells*, including innocent tumours, defective development or infantilism of cells, premature degeneration or senilism of cells—e.g., cancers, including their clinical characters, the relation of the cancer process to allied conditions, the structure and pathology of cancer, multiple cancers, and the relation of cancer to old age. One point may be noted, that 80 per cent. of all cancers in males are of the alimentary tract, whereas in 80 per cent. of all females they affect the organs of generation and lactation. Before the age of 35 cancer is more common in women than in men. As to the use of arsenic in this disease, the author states that "one can only say that there is apparently more evidence in its favour than there is for any other drug, and that it ought to be given in every case of cancer, whether operated

on or not" (p. 179). Cancers are not due to a generalised infection; they are local disturbances.

Part III. (pp. 215–466) relates to *organs*, and is particularly interesting. It is divided so as to deal with (1) external organs in the following order: the extremities, the cavity of the nose, muscle, and the breast; (2) the fibrous or parenchymatous group, including the liver and its cirrhoses, the kidney and primary Bright's disease, the nervous system, the gastrc-intestinal tract, the arterial system, and the uterus; (3) the cellular or parenchymatous group—e.g., blood, which is considered as a true tissue, thymus, spleen, and lymph glands; and (4) the skeletal group, such as overgrowth of the skeleton, including rickets as a minor variation, defective development or infantilism, osteomalacia, osteitis deformans, and arthritis deformans.

Part IV. (pp. 471–686) treats of the disorders of general growth and development as they affect that combination of cells and organs which constitutes the *man*. First, the abnormal defect of growth known as dwarfism is considered, including phylogenetic or racial dwarfs, and ontogenetic or individual dwarfs. Then gigantism, or excess of growth, abnormal immaturity or infantilism, and premature senility, senilism, precocity, centenarianism, and such general disorders or anomalies of sex as under-development or over-development characterised as feminism and masculinism. There are interesting chapters on obesity, myxœdema, acromegaly, idiocy, and cretinism, while a particularly full account is given of the rare diseases known as ateleiosis and progeria, both of which subjects are illustrated by several striking portraits. Most of the illustrations have reference to Part IV. In regard to the subject of gigantism we would ask the author to glance at the work of Launois and P. Roy, "Études Biologiques sur les Giants." In Part V. the author gives a general summary, and states his conclusions with becoming modesty.

This is, indeed, a most thoughtful and valuable volume, full of interesting details and suggestive analogies, obviously the outcome of much critical examination and study of disease in some of its less-known aspects. We have given throughout this notice the author's views, largely without comment. He remarks that his book is still far from complete, and that some day he may deal with what has been omitted. He seeks to establish his conceptions on a biological basis and to show that a common principle runs through the manifestations alike of the phenomena which constitute health and of those that are grouped as disease. We think that the physician, the pathologist, and the biologist will agree with the author that he has succeeded "in showing that that which constitutes disease at one time or from one aspect is normal at another time or from another aspect—that the same process may be either biological or pathological, according to the view from which we regard it."

Clinical Surgery. (Oxford Medical Publications.) By C. B. LOCKWOOD, Surgeon to St. Bartholomew's Hospital. Second edition. London: Henry Frowde, and Hodder and Stoughton. Pp. 389. Price 5*s.* net.

THE value of clinical lectures depends chiefly on the fact that in them the student obtains a view of the subject from a different point of view than that afforded him in lectures on principles or in systematic text-books. The true clinical lecture deals mainly with the clinical aspect of the cases, and it should be illustrated by the relation of cases to enforce the main points. Mr. Lockwood has done well to reprint these lectures, and we are glad to see that they have attained to a second edition. They are written as they were spoken, and though when read they cannot have all the force of spoken words, yet they are wonderfully alive, and rivet the attention by their earnestness and by the recognition that they are based on a thorough knowledge of the subject with which the author is dealing.

Let the reader open the book where he may, he will find something to interest him, some point of importance to which his attention is directed. In this edition there has been added a lecture on fracture of the patella and one on the amputations at the hip and shoulder.

Immune Sera: a Concise Exposition of the Main Facts and Theories of Infection and Immunity. By Dr. CHARLES FREDERICK BOLDUAN, Bacteriologist, Research Laboratory, Department of Health, City of New York. Fourth edition. London: Chapman and Hall. New York: John Wiley and Sons. 1911. Pp. xi. and 226. Price $1.50.

THE fourth edition of Dr. Bolduan's book has undergone extensive revision and enlargement, and now constitutes a very complete and readable summary of the main facts and theories in the field of immunity. Starting with an account of antitoxins, including the nature of toxins and the allied substances known as toxons and toxoids, the author deals consecutively with agglutinins, bacteriolysins and hæmolysins, precipitins, cytotoxins, and opsonins. A section is next devoted to snake venoms and their antiserums. A brief account of the phenomena of anaphylaxis is followed by a section on infection and immunity, considered in the light of the preceding sections and of other recent researches. A few pages are devoted to the subject of bacterial vaccines, and the last chapter deals with the principles underlying the treatment of syphilis with salvarsan. In a series of appendices a brief account is given of the Wassermann test for syphilis and of Noguchi's modification of this, of the method recommended for examination of the blood preparatory to transfusion, and of various less-known tests, such as the meiostagmin reaction, the cobra-venom test, and so forth. In each section the matter is first dealt with historically—a method which cannot be too highly recommended. The accounts given of modern research are clear and impartial, the author not hesitating to point out difficulties in such matters as Ehrlich's side-chain theory, and criticising some practical methods, such as Wright's control of vaccine injections by estimation of the opsonic index. We should have been glad if he had carried this procedure somewhat further and set out a little more definitely the conclusions he has himself arrived at in questions in which there is conflict of opinion. But we realise that in the obscure field of immunity no approach to certainty has yet been reached, and that consequently dogmatism is unjustifiable. The book has been much improved since its first appearance, and we cordially commend it in its present form.

Du Rôle de la Cholésterine dans le Développement de l'Artério-sclérose et de l'Athéroma, Étude Clinique et Thérapeutique. Par M. le Dr. G. LEMOINE, Professeur de Clinique Médicale à la Faculté de Médecine de Lille. Paris: Vigot Frères. 1911. Pp. 62. Price 1.50 francs.

IN this small book Professor Lemoine records some ingenious speculations as to the part played by cholesterin in the animal economy. He affirms that this substance is by no means excrementitious in nature, but that it and its compounds in the body act as antitoxins, enabling the organism to fight against infections and toxins, more especially against tuberculosis. He finds that there is a deficiency of these substances in the tissues of patients suffering from tuberculosis, and he treats them by means of cholesterin and of lipoids extracted from the liver. On the other hand, he believes that in other individuals of gouty

or arthritic habit the antitoxic function of the liver is developed in excess and leads to an excessive formation of cholesterin bodies, constituting a condition of cholesterinæmia. He has found experimentally that cholesterin is capable of raising blood pressure, and he believes that the excess of this substance in the blood is the cause of hypertension and leads further to the deposit of cholesterin in the walls of the vessels, constituting the essential lesion in arterio-sclerosis and atheroma, the calcareous and other changes being regarded as secondary. He maintains that stout people, even of gouty type, usually escape high tension and arterial changes, which he explains by supposing that their superabundance of fats serves to dissolve any excess of cholesterin which they may form. On these suppositions he has evolved a treatment for arterio-sclerosis which consists in the administration of a "sclerolytic" solution prepared from ethereal extracts of liver from which the cholesterin bodies have been removed and to which certain salts, such as sodium phosphate and sodium glycerophosphate, have been added. Although some experimental and clinical evidence is adduced to support these views, Professor Lemoine's contentions appear to us highly speculative.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New Series, No. 46. *Malaria in the Punjab.* By Major S. R. CHRISTOPHERS, M.B. Vict., I.M.S., Assistant to the Director, Central Research Institute, Kasauli. Calcutta: Superintendent of Government Printing, India. 1911. Pp. 135. Price 2 rupees, or 3*s.*

THIS volume of the Scientific Memoirs constitutes a very complete exposition of its subject. In the introduction the author gives an account of the physical features, the population, and the rainfall of the province of which it treats. This is followed by a chapter on the autumnal epidemic malaria of the Punjab; although the latter has so dry a soil, yet the recorded death-rate from fevers is higher than that for most parts of India, whilst a very marked feature of the disease is its seasonal character.

In Part II. the autumnal epidemic fulminant malaria is considered, and the epidemic of 1908 and its distribution are described; it affected to greater or less extent almost the whole of the Central and Eastern Punjab. Notice is taken of the previous epidemics in the Punjab. The conditions at Amritsar and other towns are described, as also those in rural areas. Other points noted in this section are the conditions in non-epidemic areas and in epidemic areas in non-epidemic times. The part concludes with some observations concerning epidemic and endemic malaria. In Part III. are considered the determining causes of fulminant malaria with respect to the anopheles in the Punjab, the rainfall and temperature, the physical features of the country, and the human factor. There seems very little doubt that the two factors, rainfall and scarcity, are the determining causes of the epidemic malaria of the province. Part IV. contains a most interesting account of the experimental work performed concerning the mechanism of fulminant malaria, the nature of intense malaria, and the spleen-rate and parasite-rate, and the relations of these two rates to epidemic conditions are fully set forth. Finally, this section concludes with the account of experiments upon the quantitative factor in the transmission of proteosoma to sparrows by the bites of culex.

Major Christophers, as the result of the foregoing research, comes, amongst other matters, to the following conclusions: That in the Punjab malaria is manifested in two ways—viz., as "endemic malaria" and as "autumnal epidemic" or "fulminant malaria," of which the latter is by far the most important considered in an economical sense; that past epidemics have affected all parts of the submontane tracts, but have shown a special frequency over certain areas; that epidemic malaria attacks most severely those communities already showing a high degree of endemic malaria; that excessive mortality and its conspicuously infantile character especially characterise the epidemic conditions; and that the determining causes of epidemics are excessive rainfall and scarcity. The Memoir concludes with the subject of the prophylaxis of malaria in the Punjab, the first step of which must be the removal or prevention of flood water, and until drainage can be instituted satisfactorily the use of quinine must be pushed to the utmost.

Rose and Carless's Manual of Surgery for Students and Practitioners. Eighth edition, revised by ALBERT CARLESS, M.B., M.S. Lond., F.R.C.S. Eng., Professor of Surgery in, and Surgeon to, King's College Hospital. London: Baillière, Tindall, and Cox. 1911. Pp. 1406. Price 21*s.* net.

THIS is the first appearance of this work since the death of Mr. Rose, and though it retains, and for many years will retain, its old title, it represents the views of its editor, Mr. Carless. Almost from the moment of its first issue it took the place of the most widely read work on surgery in this country, and this position it has held ever since. As time passes it has grown in bulk, until now it can hardly be looked upon as one of the smaller manuals on the subject, for the volume contains more than 1400 pages of by no means large print. This increase in size has been mainly due to the ever-extending bounds of surgery; and we can hardly wish that the work were any smaller than it is, for it is all so well written, so clear, and so well fitted for the mind of the student. It is surely needless to say more than that it has been brought by its editor thoroughly up to date, that it contains all that the student will be required to know at his examinations, and that anyone, be he student or in practice, will be able to find here a full description of any surgical disease or operation about which he may wish to obtain information. The book is wonderfully free from errors, but we would point out that on p. 333, in the description of Fig. 106, a certain structure is spoken of as the "internal jugular artery."

La Poliomyélite Epidémique (Maladie de Heine-Medin): Étude d'Ensemble Suivie d'une Contribution à l'Étude des Méningomyélites et des Méningites à Médullo-virus de Landsteiner et Popper. Par le Docteur GEORGES SCHREIBER. Paris: J. Steinheil. 1911. Pp. 365. Price 10 francs.

RECENT researches, both epidemiological and pathological, have considerably increased our knowledge of the disease variously known as poliomyelitis, infantile paralysis, and Heine-Medin's disease, while the occurrence of epidemics in several countries has brought it into prominent notice. The researches upon the causal agent by Landsteiner and Popper, Flexner and Lewis, and Levaditi have demonstrated that this is an ultra-microscopic agent, which is capable of conveying the infection to chimpanzees and monkeys. In this book Dr. Schreiber presents an interesting and full account of this disease from the clinical, pathological, and epidemiological points of view. The bibliography at the end of the book extends to 38 pages and is well arranged. The subject matter is exhaustive and is illustrated by figures, tables, and brief records of cases selected from some of the original papers, so that it forms a most convenient and valuable addition to the literature of the subject, and it appears at an opportune time. Dr. Schreiber recognises the following clinical varieties of the disease: spinal, bulbar, cerebral, meningeal, ascending, descending, ataxic, painful, and abortive types. He describes the various experiments that have been carried out with the supposed causal agent, which he refers to as the medullo-virus of Landsteiner and Popper, and gives in detail the pathological appearances found in fatal

cases of the disease in the human subject, as well as in the experimental disease in the monkey. He describes the clinical features of the different forms and discusses their diagnosis. He brings forward reasons for supposing that some cases of Landry's paralysis are due to the medullo-virus, constituting the ascending form of poliomyelitis, to which he draws attention.

The second part of Dr. Schreiber's book is devoted to a consideration of the meningeal symptoms that may accompany the disease. These may precede the paralytic stage, in which case he describes the condition as a meningo-myelitis; or they may be the only symptoms, in which event he classes the cases as meningitis due to the medullo-virus. The latter condition constitutes one of the abortive forms of the disease. Instances of both these varieties are described as occurring in the epidemics in various countries. A number of illustrative cases are briefly described.

LIBRARY TABLE.

Transactions of the Glasgow Obstetrical and Gynæcological Society. Vol. VII. Sessions 1908-1909, 1909-1910. Glasgow: Alexander Macdougall. 1911. Pp. 20 and 207.—As these Transactions are records of the papers and specimens shown before the society for the sessions 1908-1909 and 1909-1910, a good deal of the information contained in them is already ancient history when the volume is published in 1911. For example, the first paper relates to a lantern and microscopic demonstration of an early human ovum (the Teacher-Bryce ovum) about which a book has already been published and noticed in THE LANCET of Oct. 3rd, 1908; while another important communication to the society—namely, a paper by Professor Schauta on the Treatment of Labour in Contracted Pelves, was also noticed in THE LANCET of Dec. 25th, 1909, in the Annus Medicus. Some of the more important papers contained in the Transactions are those on Pyelitis Complicating Pregnancy and the Puerperium, by Dr. W. D. Macfarlane, Jun.; Ovarian Tumour Complicating Pregnancy, Labour, and the Puerperium, by Dr. G. Balfour Marshall; an interesting address by Dr. J. Munro Kerr on Advances in Gynæcology in Recent Years; the Management of the Ureters in Abdominal Pelvic Operations, by Dr. R. Cochrane Buist; the Ureter in Cancer of the Cervix Uteri, by Dr. Archibald Leitch; and Modern Views of the Treatment of Fibroids of the Uterus from their Pathological and Clinical Standpoints, by Dr. J. Nigel Stark. The volume also contains very interesting reports on the work of the Glasgow Maternity and Women's Hospital for 1909, by Dr. David Shannon, as well as a report on 156 consecutive laparotomies performed in the gynæcological clinic of the Glasgow Royal Infirmary during the year 1909, with notes on the technique adopted, by Dr. G. Balfour Marshall.

Pharmaceutical Formulas; being the "Chemist and Druggist's" Book of Useful Remedies for the Drug Trade, Collated Chiefly from the "Chemist and Druggist" and the "Chemists' and Druggists' Diaries." By PETER MACEWAN, Phar. Chem., F.C.S., Editor of the *Chemist and Druggist*. Eighth edition, with a Supplementary Chapter containing the more Recent Formulas and Appendices comprising Matters relating to the Compounding and Sale of Pharmaceutical Products. London: *The Chemist and Druggist*. 1911. Pp. 1040. Price 10*s.* net; by post 10*s.* 6*d.*—The eighth edition of this useful work, of which the first edition was published in 1898, has undergone a thorough revision, with the result that there are 450 alterations and annotations in the text, while the new formulas number more than 400. Some idea of the wide scope of the book may be gained from the chapter headings: Toilet Preparations and Specialities; Preparations for the Hair; Dental Preparations; Perfumes; Beverages; Culinary and Household Requisites; Horticultural and Agricultural Preparations; Writing Materials; Varnishes, Polishes, and Stains; Lozenges; Miscellaneous Preparations; Photographic Chemicals and Preparations; Galenical and Medicinal Preparations; Bacteriological and Microscopic Work Preparations; a supplementary chapter on "Skin Creams"; and an Appendix of Weights and Measures, Medicine Stamp Duties, Use of Methylated Spirit, the Rideal-Walker Test for Disinfectants, Food and Drug Standards of Australia and the United States, Proprietary Medicines in Canada, Garden Pests, and Board of Agriculture Leaflets. There is a very full index. Many of the subjects are introduced by a brief descriptive essay. The synoptical reference list, prepared for the seventh edition, now having lost its interest and utility, has been omitted so as to make room for the hundred or more pages of new formulas that have been added. It will be seen that the book embraces a wide range of information that will be found useful, not only to druggists, but to medical men, dentists, physiologists, photographers, veterinary surgeons, farmers, gardeners, housewives, and, in fact, to almost everyone.

Zoo Folk Interviewed. By W. J. ROBERTS, F.Z.S. London: T. Werner Laurie. 1911. Pp. 215. Price 3*s.* 6*d.* net.—This book is a charming description of the dwellers in the grounds of the Zoological Society in Regent's Park. Mr. Roberts has a keen sense of the humorous side of animal life as well as an intimate knowledge of the habits of the creatures he describes, and he has anecdotes to tell and interesting information to impart which will be appreciated by everyone. Lions, tigers, elephants, bears, camels, giraffes—all the obvious animals—are described in a manner at once interesting and instructive; while the chief points of the animals whose appearance does not immediately attract the attention of the visitor are detailed in a way that will stimulate the desire for a better acquaintance with them. Incidentally the curious will learn also how it is that the squirrel has made the trees of Regent's Park its home, and will be enlightened as to the relation between the camel-hair brush and the animal whose name it apparently bears. The author has stories to tell, new and old. The story of the observer who, wishing to see whether the chameleon could change to two or three colours at the same time, placed the poor creature on a piece of tartan, with the result that it "bust 'is little self" in the attempt is old; but the story of the servant who, when asked by her mistress to bring the tortoise out of the coal-cellar, where it had been placed for protection during the winter, exclaimed, "What, that bit of stone alive? Why, that's what I've been breaking the coal with!"—is new to us. Another side of the author's treatment of his subject is indicated by a reference to the Girardinus pœciloides—interesting fish which are reared by the society and dispatched to malaria-infested countries, where they are turned into the rivers. These lively little fish, otherwise known as "millions," have a great fondness for the mosquito larvæ, and it is stated that they are instrumental in keeping the Barbados free from malaria. There are 25 black-and-white illustrations in the book and a coloured frontispiece of George the Mandril, "the fiercest beast in the Zoo," and the author might perhaps have added the ugliest.

Two Hundred Opera Plots. By GLADYS DAVIDSON, author of "Stories from the Operas," "The Old Testament Story," &c. 2 vols. Illustrated. London: T. Werner Laurie. 1911. Pp. 219 and 451. Price 3*s.* 6*d.* net each vol.—All lovers of opera, and many others who merely desire to avoid betraying ignorance, will be glad to have these two volumes, telling in a few plain words the plots of 200 of the best-known operas, from Gluck's *Orpheus and Eurydice*, produced in Vienna in 1762, to Leoncavallo's *Maia*, produced in Berlin last March. The composers represented number 84, and

include, besides all the classical ones, many whose names are but little known to the public at large. Each plot is preceded by a description of its musical character, the names of the composer and of the author of the libretto, the place and date of its first production, and the names of the principal characters. The two volumes contain 15 portraits of composers. There is a table of contents containing the operas under the names of the composers in alphabetical order, and an alphabetical index to the operas themselves. The date when the respective composers lived would have been a useful addition to their names, either in the contents or at the head of the articles, as in Bartlett's "Dictionary of Quotations."

The Physiology of the Human Labyrinth.—The Arris and Gale Lecture, delivered before the Royal College of Surgeons of England on March 18th, 1910, by SYDNEY SCOTT, M.S., M.B. Lond., F.R.C.S. Eng. Cambridge: W. Heffer and Sons, Limited. 1911. Pp. 24. Price 2*s.* net.—This lecture was published in THE LANCET of June 11th, 1910. Those especially interested in the subject will be glad to know that a reprint in stiff covers can now be obtained.

JOURNALS AND MAGAZINES.

Edinburgh Medical Journal.—In a valedictory address to the Edinburgh Obstetrical Society published in the December issue of this journal Dr. F. W. N. Haultain gives some reminiscences of Sir James Y. Simpson's association with that society. Dr. John McGibbon, in the same magazine, discusses repeated Cæsarean section, and records a case in which the operation was thrice performed on the same patient; he believes that there is little or no increase of danger in the second and following operations.

The Dublin Journal of Medical Science.—The need of medical inspection of school children in Ireland is enforced by Dr. O. St. J. Gogarty in a paper published in the December number of this journal. He notes that "every civilised country but our own (Ireland) has its school children medically inspected." Mr. Bertran C. A. Leeper records a fatal case of illness occurring in a woman, aged 20, and resembling Henoch's purpura. No post-mortem examination could be obtained, so that the exact nature of the malady remains obscure. Sir John Moore contributes notes of three interesting clinical cases, one of cirrhosis of the liver and perihepatitis, with jaundice, hæmatemesis, and purpuric symptoms; a second, of pneumonia and empyema, in which recovery followed thoracentesis and injection of antistreptococcal serum; and a third, of mediastinal lymphosarcoma involving the œsophagus, stomach, and liver, and compressing the trachea, loss of voice and extreme dyspnœa being the striking symptoms.

The Medical Chronicle.—The original matter in the November number of this magazine consists of Dr. F. W. Mott's address to the Manchester Medical Society on the subject of "Hereditary Transmission of Disease, especially in Relation to Anticipation." An interesting account is given of the tendency of hereditary diseases to appear at earlier ages in the members of each succeeding generation.

Jahreskurse für Aerztliche Fortbildung. Munich: Lehmann. Price M.16 yearly.—The September number of this Annual Post-Graduate Medical Course deals with affections of the locomotive organs and joints. Professor Lange contributes an article on Chronic Rheumatic Diseases. He divides these into: 1. Mono-arthritis, generally caused by local trauma or strain, with primary affections of cartilage and bony ends. The details of this affection are described in the hip, knee, and foot joints. 2. Chronic Polyarthritis. This is a primary affection of the joint capsule affecting many joints simultaneously, generally those of the fingers and hands. The latter cases are again divided into the afebrile varieties and those accompanied by fever. The tendency in all these synovial affections is to end in ankylosis. In their treatment the use of baths, radium, diet, purgatives, and orthopædic measures is considered. Professor Ludloff writes a most valuable article about the Treatment of Tuberculous Hip-joints. He distinguishes three main types of disease—viz., hydrops, diffuse disease of the synovia, and suppuration. The first variety is very rare. Resection of the joint is to be reserved as a last resource for cases of suppuration or necrosis. The method of extension in the correction of deformities is one which has some danger, but this can generally be avoided by special precautions. The application of a plaster case is regarded by the writer as the method of greatest use. An anæsthetic is administered to abolish muscular spasm, and at the same time any abscess is aspirated. Then the plaster is applied in a position of ease—that is, without any attempt to strain the limb into any special position. Both hip- and knee-joints are enveloped in the plaster, and a walking patten is incorporated in its lower end. It is allowed to remain for as long as possible, certainly for several months at a time. Professor Ludloff speaks from an experience of 1000 cases, and the care with which he describes the details necessary for the treatment makes his article of great value.

The October number deals with infectious diseases. Professor von Pirquet reviews recent work in Measles. The possibility of artificial inoculation has been demonstrated both in the cases of human beings and apes. The remarkable immunity enjoyed by very young infants—i.e., below six months—is discussed at some length, and the conclusion arrived at that they receive this from the mother's milk, the mother having suffered from the disease herself. The significance of Koplik's spots is referred to. The blood changes consist chiefly in a leucopenia proportional to the gravity of the disease, and usually preceded by transient leucocytosis. Perhaps the most important aspect of measles is the increased liability which its victims show to suffer from subsequent tuberculosis, diphtheria, pemphigus, noma, and pneumonia. The nature and significance of this liability are considered. Professor Nocht writes about Beri-beri. After a careful account of its symptoms and etiology, he discusses the question as to its infectious nature or its dependence on some error of nutrition, and finds it undoubtedly associated with rice-eating. Professor Fraenkel writes on certain aspects of Tuberculosis. He says this disease accounts for more deaths than diphtheria, whooping-cough, measles, scarlet fever, typhoid fever, puerperal fever, diarrhœa, and syphilis together. Every third death between the ages of 16 and 60 is due to tuberculosis. He describes in some detail the advantages of some of the newer methods of detection of the bacillus, laying stress upon the "antiformin" method of segregation. The principal facts relating to the sterilisation of milk and the relationship of human and bovine tuberculosis are shortly discussed. A clear account is given of the various types of tuberculin tests and their control by the opsonic index, and the treatment of the disease with the different forms of tuberculin. The writer takes a very optimistic view of the results of sanatorium treatment, maintaining that in men 55 per cent., and in women 61 per cent., exhibit recovery lasting for three years. Some very interesting figures are given relating to the geographical distribution of the disease and its progress in different countries. In some countries, such as England, Scotland, Wales, and Massachusetts, the disease appears to be steadily decreasing, whereas in others, such as Norway and Japan, it is increasing.

ERRATUM.—In THE LANCET of Dec. 9th we published a review of "Experimentelle Bakteriologie," by Kolle and Hetsch, in which, unfortunately, the price was wrongly stated. The price is not M.30 for each volume but for the complete work.

THE LANCET.

LONDON: SATURDAY, DECEMBER 23, 1911.

The National Insurance Act.

WE publish this week accounts of three important meetings of the medical profession which have been held since the last issue of THE LANCET in Manchester, Birmingham, and London respectively. Our readers were many of them present at one or other meeting, while the lay press has done full justice to them, so that it has not been necessary in our report to set out more than the salient matters; but from these it at once appears that the feeling of the medical profession as a whole is not represented exactly by any of the resolutions which have been passed at the meetings. The resolutions, though similar in character, have not been similar in detail. At the Manchester meeting two resolutions were passed almost unanimously. The first pledged the medical profession to refuse to form a panel under the Act, or to undertake any duties in connexion with it; and by the second a National Medical Union was created to strengthen the hands of the British Medical Association and other societies and committees working in medical interests. At the Birmingham meeting three resolutions were passed, and with some evidence of a diversity of opinion. The first declared that the Act did not satisfy the demands of the medical profession as defined in the "six cardinal points"; the second declared the public interest to be jeopardised equally with the medical; and by the third resolution medical men came into line with the first Manchester resolution, after refusing to accept an amendment designed to allow participation in Local Insurance Committees. In London the first resolution declared that the "six cardinal points" were not guaranteed by the Act, and this was passed almost unanimously. The second resolution differed, however, from the resolution common to Manchester and Birmingham in that it declared, after affirming the fundamental importance of the demands of the medical profession, that medical men should refuse to accept any office for giving medical attendance and treatment under the Act until these demands have been definitely conceded. This was passed with practical unanimity, indeed with the same enthusiasm that marked the reception of the more complete cutting off of future negotiations implied in the Manchester and Birmingham resolution.

It was well known before the meeting in London that some of the supporters of the "six cardinal points" have not been absolutely convinced of the sacrosanct character of these points; that is to say, that a good many medical men have undoubtedly voted in favour of resolutions stating that the "six cardinal points" originally formulated by the British Medical Association are of paramount importance, while meaning that some of these points are of great importance to themselves, and some of them, no doubt, of great importance to other people, especially to the public dependent upon an efficient medical service. At the meeting in London the stand of the profession was transferred to some extent from the "six cardinal points" to a more general demand for just treatment. The meeting clearly elicited the view that the Council of the British Medical Association, however manful its efforts, had not obtained the inclusion in the Act of the "six cardinal points," or of conditions guaranteeing stability to the medical profession. The tone of the speeches was not of a much less intransigent character than those which were made with success in Manchester and Birmingham, and a limited and unwilling hearing was accorded to the supporters of the Council of the British Medical Association. The determination to leave unmentioned as far as possible the matter of the behaviour of the Council in sanctioning Mr. SMITH WHITAKER'S appointment as Deputy Chairman of the Commissioners broke down on several occasions. These personal matters, which are of the first importance to the British Medical Association but not of similar significance to the medical profession or the public, have somewhat overshadowed the constructive resistance that should be properly offered to the Act. The "six cardinal points," which the Council of the British Medical Association consider to be substantially secured by provisions in the Act, and which others cannot find therein with the same ease and clearness, are no longer the only basis of medical opposition to the Act. It is generally felt that by the Act it is proposed to buy the profession of medicine outright and at the lowest possible price.

The importance of the London meeting has been that by it there has been formed a continuous line of policy for the great English centres. Sir W. WATSON CHEYNE, in the quiet weighty words with which he opened the proceedings, sufficiently showed that the leaders of the profession are as alive to the possible evils underlying the Act as the general practitioner whose services it is proposed to commandeer upon vague and unsatisfactory terms. Sir ALFRED PEARCE GOULD criticised the Act upon broader lines than is signified by adherence only to the "six cardinal points," and proved that effective common action can ofttime be taken by those who do not see eye to eye with each other in details. We regret that a patient hearing was not given to Sir VICTOR HORSLEY and Dr. J. H. KEAY, for those who feel deeply that the Council of the British Medical Association is placed in a position that requires explanation ought, we think, to be willing to hear that explanation. There is force in the view that the Council owes such explanation rather to the members of its constituency than to a general meeting of medical men, but in the course of the speeches at the meeting the conduct of the Council was impugned, and the defence offered should have been heard.

Housing in Rural Districts.

IT is very generally admitted that a vast amount of the unwholesome and insanitary conditions existing in various parts of the country is capable of being remedied through the provisions of the various Public Health Acts which have been passed by the Legislature during the past 40 years. If those Acts were adequately enforced an immense improvement would be effected in the surroundings of a large number of people, particularly in the small towns and rural districts. The machinery for carrying out that improvement already exists, but unless it is put in motion it might as well be non-existent. As regards the housing of the working classes it is notorious that sanitary authorities have been particularly inactive. The Housing of the Working Classes Act, 1890, placed upon local sanitary authorities the obligation of making an inspection of their districts for the purpose of ascertaining the existence of uninhabitable dwellings. but a Committee of the House of Commons reported in 1906 that in rural districts especially the authorities had deplorably failed to fulfil their obligations in this respect. The Local Government Board has endeavoured through its medical inspectors, by persuasive communications and in other ways, to bring about improved conditions, but with only very partial success.

However, indications at last show that the authorities are awakening to a sense of their responsibilities. Hitherto the principal channel of communication as to the housing conditions of a district open to the Local Government Board has been the annual report of the medical officer of health. That official was directed to give in his report an account as to the adequacy and fitness for habitation of the house accommodation of the working classes residing in his district, as to the sufficiency of open-air space about houses and the cleanliness of their surroundings, and as to the supervision over the erection of new houses. Obviously his observations might be, and as a rule were, of a very vague and general character. With the coming into force of the Housing, Town Planning, &c., Act, 1909, and the Regulations of the Local Government Board as to the inspection of houses which have been made under the provisions of that Act, the Board will now be able to ascertain much more accurately and particularly which authorities are neglecting their duties and which are actively carrying them out. But under the Housing (Inspection of District) Regulations, 1910, a medical officer of health is required to state in his annual report the number of dwelling houses found on inspection to be unfit for human habitation, the number of representations he has made with a view to the making of closing orders, the number of closing orders that have been made, the number of houses made habitable both before and after closing orders have been made, and the general character of the defects found to exist. As the regulations have been in force for a complete year the reports of medical officers of health which will be issued during the next few months should show to what extent the latest Housing Act has proved successful in improving the dwellings of the working classes. If, as is almost certain, in some districts it is found that the authorities have continued their policy of inaction and have failed to exercise their powers there should be no hesitancy on the part of the Local Government Board in putting into force the compulsory powers contained in the Housing Act of 1909.

Annotations.

"Ne quid nimis."

ACUTE POLIOMYELITIS AND CEREBRO-SPINAL FEVER.

IN an annotation published in last week's issue of THE LANCET under the above heading we referred to a memorandum issued by the Permanent Secretary of the Local Government Board urging the desirability of making both these diseases notifiable. In this memorandum it was pointed out that at the commencement of some of the outbreaks of acute poliomyelitis some difficulty was experienced in diagnosis, owing to the similarity of the symptoms to those of cerebro-spinal fever. We have received a copy of a note by Dr. J. T. C. Nash, county medical officer of health for Norfolk, dealing with certain aspects of these two diseases, and with the prophylactic measures to be adopted against their spread. He has investigated certain cases of these diseases occurring in his own county. In the first of these he found a child of five years suffering from symptoms of cerebro-spinal fever, a sister having succumbed shortly before from acute poliomyelitis. The cerebro-spinal fluid was investigated by Dr. G. P. C. Claridge, who obtained a Gram-negative coccus indistinguishable from the diplococcus intracellularis meningitidis. It was found that both these children had been visiting a short time before in the neighbourhood of Stowmarket, where an epidemic of poliomyelitis had occurred. The most extensive outbreak in Norfolk of which Dr. Nash has been able to obtain particulars took place in the Downham rural district, following upon an epidemic in an adjoining neighbourhood in the county of the Isle of Ely. The cases in the Downham epidemic were undoubtedly cases of poliomyelitis with distinct paralyses, and some contact or other, direct or indirect, could be traced between several of them. Dr. Nash points out that although among the cases occurring in Norfolk two or three were diagnosed as cerebro-spinal fever, and in one of these, as already mentioned, the meningococcus or diplococcus intracellularis was obtained, it is generally held that poliomyelitis and cerebro-spinal fever are distinct affections caused by different infective agents. At the same time, he sees no inherent difficulty in supposing that the meningococcus may be capable of giving rise to the symptoms of both affections, and remarks that it would be curious if an inflammation of the spinal cord were not sometimes accompanied by symptoms of inflammation of the membranes and *vice-versa*. In this connexion it may be of interest to refer to a review published on p. 1778 of this week's issue of THE LANCET. Dr. Georges Schreiber, in an interesting monograph upon Epidemic Poliomyelitis, discusses in detail the meningeal symptoms occurring in that disease, and suggests that some of the abortive forms present meningeal symptoms only. In the note to which we have referred Dr. Nash insists that contagion in cerebro-spinal fever appears to be effected by means of the mouth and nose of sufferers or of carriers, and states that investigations have shown that in an epidemic of this disease, the percentage of carriers may be as high as 50 per cent. among members of families in which cases have occurred. He believes that a similar condition applies to poliomyelitis, although bacteriological proof is wanting, and he advises the same procedures for contacts of cases of poliomyelitis as are generally recommended for cerebro-spinal

fever. Every person (including the medical practitioner) who comes in contact with a case of either disease should take certain precautions by using antiseptic gargles and by antiseptic spraying or douching of the nose. Pocket handkerchiefs should be boiled, and other measures of disinfection applicable to notifiable infectious diseases carried out. Dr. Nash welcomes the increasing attention now being paid to the human factor in infection—viz., the mucous membranes of sufferers and contacts—and thinks that too much importance may be placed upon so-called disinfection of rooms and articles, which he regards as of secondary value in prophylaxis in comparison with the human factor.

THE WEEK-END IN THE OFFICE.

THE busy arena of commercial life known as "the office" has too often few attractions from the point of view of health. It is very often a badly lit and badly ventilated space, and while in London and old business centres many offices are underground and the personal accommodation is rarely as generous as it might be, in newer centres the provision for the growth of business premises has been unworthy. At the end of the working day some attempt is made to cleanse the office—the duster and broom are brought into requisition. Some dust is removed, some is scattered, and then, as a rule, the office is closed tightly in every direction. There is no pretence to "airing" it, and often enough the shutters are drawn. In the morning there is the same neglect to freshen the air before the day's tasks begin, and the clerk comes back to work in a stale, frowsy air. The condition after a week-end is worse where no pains are taken and no thought given. By carefully shutting all doors and windows, and excluding the light by pulling down the blinds or shutters, the air is allowed to stagnate over Saturday night, Sunday, and Sunday night, and the purifying influences of sunlight and fresh air are refused. It follows that any infective materials are left infective, and the dose must accumulate day by day, week by week. Under the conditions described, in fact, the office may become a breeding ground of disease—there are no light and air admitted to destroy the vitality of disease organisms. We are certain that an immense advantage to the health of those occupied in offices would accrue if steps were taken over the week-end to "air" and freshen the offices in our great cities, and to admit the light freely during the weekly vacation. That it is not done now may be witnessed by anybody walking through the streets of the City of London, or through the commercial parts of any great centre, on a Sunday. In the majority of cases the banks, insurance offices, and warehouses are locked up tight, door and window. The hygienic condition of these places would be vastly improved if the opportunity were taken of admitting air and light freely through them during the time the workers are taking their rest and recuperating.

THE EXPECTATION OF LIFE IN CONSUMPTION.

IN his annual report for 1910 Professor Saugman, of Vejlefjord Sanatorium, deals, among other matters, with the fate of the 1359 patients who were treated at the sanatorium in the period 1900 to 1908. He succeeded in tracing all but 28; but the task of writing to former patients for particulars, involving in some cases the despatch of three letters to each patient before an answer was obtained, has cost so much time and money that he proposes following for the future only the fate of patients in the two earliest and the two latest years of treatment. 51 per cent. of all the patients were fit for work at the end of 1910, while only 3·5 per cent. were still invalided by consumption, 40·5 per cent. had died from this disease, and 2 per cent. had died from other diseases. As 63 per cent. of the patients were in the third stage of the disease at the commencement of treatment, the above results are unusually good. With regard to capacity for work, 89·1 per cent. of patients treated in the first stage of the disease fulfilled this condition, while only 3·2 per cent. had died from tuberculosis; 2·6 per cent. had died from other diseases, and 3·7 per cent. were not traced. Of the patients treated in the second stage of the disease, 75·2 per cent. were still fit for work, and 16·3 per cent. had died from tuberculosis. Of the patients treated in the third stage of the disease, 32·6 per cent. were still fit for work, while 53·8 per cent. had died from tuberculosis. Professor Saugman concludes that with suitable sanatorium treatment 90, 60, and 22 per cent. of consumptives in the three stages of the disease respectively may expect to be fit for work eight to ten years after treatment. Attention is drawn to the improvement in the sanatorium results during the latter years, especially with regard to patients in the third stage of the disease. This is accounted for by the increasing number of patients in this stage who have been treated by the induction of an artificial pneumothorax, as many as 22 being thus treated in one year. This treatment has now been adopted for several years at Vejlefjord.

DAMAGED TOMATOES AND TOMATO SAUCE.

Mr. B. J. Howard[1] has spent much time in the field and factory studying the moulds and bacterial contents of tomatoes and tomato pulp as it goes through the process of manufacturing sauce or ketchup. From his records it appears that in the United States home-made sauce is practically free from moulds, while that made in factories is frequently contaminated with moulds. Low-grade sauces are frequently made from refuse and rejected tomatoes. One cubic centimetre of the resulting sauce may contain as high as 300,000,000 organisms, with a minimum of 10,000,000. Considerable light has recently been thrown on the changes that take place during the spoiling of tomatoes by Mr. Raymond F. Bacon and Mr. P. B. Danbar.[2] Tomatoes contain on the average about 6·4 per cent. total solids, of which 3·5 per cent. is invert sugar, 0·5 per cent. citric acid, 0·6 per cent. ash, 0·9 per cent. protein, 0·85 per cent. crude fibre, and about 0·05 per cent. fat. When tomatoes spoil as a result of the life-processes of bacteria, yeasts, and moulds the sugars are rapidly used up, being changed principally into acetic and lactic acids, alcohol, and carbon dioxide. In most cases the citric acid also is rapidly decomposed, so that the amount present serves as a valuable indication of the extent of decomposition. It is very easy to detect spoilage in tomato pulp or canned tomatoes, as such products, when perfectly sound, contain no volatile acids and a considerable percentage of citric acid and invert sugar, whereas, when spoiled, quite large amounts of volatile acids are present with little or no invert sugar or citric acid. But in sauces and other manufactured products of the tomato the legitimate addition of sugar and acetic acid in varying proportions renders ordinary analytical data of less value in deciding as to the soundness of the tomatoes from which these products were made. It has been found, however, that the nature and quantity of the acids present and certain analytical ratios seem to give some information on this point. A good tomato sauce is characterised by a high citric acid content and very little lactic acid, whereas spoiled tomatoes will have a low citric acid content and a high content of lactic acid. It appears that in tomato canneries it is customary to set aside the small and defective fruit, together with the skins, cores, and pieces of tomatoes that have been canned and

[1] Bureau of Chemistry, United States Department of Agriculture, Circular No. 58.
[2] Bureau of Chemistry, United States Department of Agriculture, Circular No. 78.

cook these to prepare a tomato pulp for the subsequent manufacture of sauce or ketchup during the dull season that follows the busy canning period. This pulp is thus stored for a considerable time in barrels which are not tight enough to prevent contamination with organisms and consequent fermentation during storage. The decomposition might be avoided by rejecting decayed tomatoes, sterilising the material, and storing it in lacquered tin cans. Manufacturers make use of two other processes. In one, the gravity process, the pulped tomatoes stand until the tomatoes rise as a result of fermentation; the clear liquid is then run off. In the other process, the tomatoes are mixed with a large amount of salt and allowed to ferment until the sugars, citric acid, and other changeable substances have disappeared; the product is then filled into cans without any sterilisation. The original papers, to which reference has been made, contain much experimental data, which will doubtless lead to the adoption of more careful methods of manufacture in the future. It would seem to be desirable to avoid all unnecessary decomposition, preserving the acids and sugars in the same condition in which they are present in fresh and ripe tomatoes. This fruit is so abundant, appetising, and wholesome that a plentiful supply, in the canned form, is of great value as a food in the winter months. The substitution of a decayed and fermented mush for the sound fruit is a crime against the public health, whether caused by cupidity, neglect, or ignorance.

THE TREATMENT OF AMŒBIC DYSENTERY WITH HEROIC DOSES OF BISMUTH SUBNITRATE.

IN India amœbic dysentery has been very successfully treated and the supervention of hepatic abscess largely prevented by the administration of ipecacuanha, a method of treatment which has recently been urged in emphatic terms, among others, by Major Leonard Rogers, I.M.S., professor of pathology in the Medical College, Calcutta. In the tropical parts of America the use of this drug in cases of amœbic dysentery does not appear to be so greatly appreciated, more reliance being placed upon the employment of bismuth subnitrate. At the eighth annual meeting of the American Society of Tropical Medicine held at New Orleans in May last a paper was read by Dr. W. E. Deeks and Dr. W. F. Shaw, respectively chief of the medical clinic and physician to the Ancon Hospital in the Panama Canal Zone. The authors explain that the treatment of amœbic dysentery (or, as they prefer to call it, amœbic colitis) by ipecacuanha has never appealed to their "physiological common-sense," and for that reason they had never even given it a trial. Moreover, the practice they have for some years followed has proved so satisfactory that they had no reason to resort to any other. Their method comprises complete rest in bed, a generous milk diet, irrigation of the lower bowel by saline or plain water, and the administration of heroic doses of bismuth subnitrate, a heaped-up teaspoonful, equivalent to about 180 grains by weight, being given suspended in almost a tumblerful of plain or effervescent water every three hours, day and night in severe cases, lessening the amount only when improvement is maintained. This treatment is named by the authors the "bismuth-milk-saline method." It has been pointed out that symptoms of poisoning might occur when such large doses of the subnitrate are given, but to this Dr. Deeks and Dr. Shaw reply that they have only met with four such instances among the many cases treated by them in the Ancon Hospital. The chief symptom which caused alarm in the four exceptional instances mentioned was cyanosis, which, however, soon passed off after the administration of magnesium sulphate. This untoward symptom was probably due to the liberation of nitrous oxide or similar gas in the blood through the decomposition of the bismuth salt. It is worthy of note that in all of the above-mentioned cases there existed some serious disease in addition to the dysentery, two of the patients having diffuse nephritis, one cancer, and one pernicious malaria. The medicinal preparations of bismuth are alleged to be "actively antiseptic" and to have a local sedative and astringent action on the mucous membrane of the intestines. The subnitrate does not act upon the specific protozoal organism of the disease, the entamœba histolytica, but upon the associated putrefactive symbiotic bacteria, the presence of which is essential for its growth. During its passage through the large bowel the bismuth subnitrate becomes converted into a sulphide. The nascent sulphur with which it unites is a derivative of the proteids through the action of the putrefactive bacteria; when the latter are destroyed and no further sulphur is liberated the subnitrate passes through the lower bowel white and unchanged. This usually occurs from 10 to 21 days after the commencement of the treatment. The authors contend that the lower bowel can in this way be rendered "antiseptic" as far as putrefactive bacteria are concerned. The convalescence of the patient is shown by the clean tongue, the restored appetite, and the normal temperature, and also by the disappearance of tenderness over the bowel and by the gain in weight. Unfortunately, some persons cannot continue the absolute milk diet which is so essential, but as soon as improvement commences they insist upon returning to solid food, and in many such instances relapses follow. According to Dr. Deeks and Dr. Shaw, the "bismuth-milk-saline method" of treatment of amœbic dysentery gives in almost all cases "a perfect result" if the lines laid down by them are properly followed; they also maintain that it gives "a maximum of cures with a minimum of recurrences and metastatic development, the most frequent of which is liver abscess." They recognise that in some occasional cases surgical interference in the form of cæcostomy may be indicated. From the statistics the authors supply, the method of treatment which they advocate has apparently proved very successful in the Panama Canal Zone.

ACETONE IN INOPERABLE CANCER OF THE UTERUS.

IN the *Maryland Medical Journal* for December Dr. A. Samuels has recommended the application of acetone to check hæmorrhage and lessen discharge and fœtor in inoperable cancer of the uterus. It is easily applied and is harmless, and thus has an advantage over caustics, which are painful and may penetrate so deeply as to injure healthy parts. This treatment was introduced by Dr. G. Gelhorn, of the St. Louis Skin and Cancer Hospital, whose method is as follows. Under anæsthesia the cancerous cavity is thoroughly curetted to remove as much dead tissue as possible. The curetted surface is dried with cotton wool. A Fergusson's speculum is introduced to protect the vagina, the hips are elevated, and through the speculum about half to one ounce of pure acetone is poured into the cavity. The anæsthesia may then be stopped and the patient left in position for from 15 to 30 minutes. The acetone is allowed to run out through the speculum by lowering the table and the cavity is packed with a strip of gauze soaked in acetone. The speculum is removed gradually and the excess of acetone which may have come in contact with the vaginal mucosa is wiped off with wet gauze swabs. The surface is then dried and a cotton tampon is inserted into the vagina to absorb any excess of acetone. The next application of acetone should be made after five or six days. Subsequent applications may be made twice or thrice weekly, according to the symptoms. If the practitioner is without an assistant

the patient may hold the speculum in position. Care must be taken not to allow the acetone to run over the vulva. As a precaution to prevent irritation it is well to coat the vulva and vagina with a layer of petrolatum. After the acetone is allowed to run out the vagina should be swabbed and a large cotton tampon coated with vaseline introduced into the vagina before the speculum is completely withdrawn. The tampon should be removed by the patient in four or five hours. The immediate effect of the application of acetone is a slight oozing, which soon ceases. The surface of the cavity becomes covered with a thin whitish film. A slight discolouration may be seen in some parts. This is due to the action of the acetone upon small bleeding points. The normal vagina is not appreciably irritated. Slight irritation of the skin may result if it has not been previously protected with petrolatum, and an intense burning sensation if the acetone is carelessly allowed to run over the skin, but this soon subsides. The remote result of the application of acetone is marked reduction of the fœtor. The discharge, which at first is profuse and watery, gradually disappears. Hæmorrhage becomes less frequent and less profuse. After three or four weeks the cavity becomes considerably diminished and its walls become smooth and firm. In one case they were so firm that a finger could not remove any friable tissue. With the checking of the hæmorrhages and discharge the general health for a time improves and the pain diminishes. But if the cancer has extended to neighbouring organs the pain may not be relieved, although the discharge and hæmorrhage cease. The use of acetone is contra-indicated when the disease is so advanced that an opening has formed into the rectum, peritoneal cavity, or bladder. Otherwise it may be used without fear, as it is not absorbed.

LEGALISED SUBSTITUTION.

THE art of substitution has reached such a high level nowadays that the necessity for definitions arises. During the last decade high courts, police courts, scientific tribunals, and so forth have had much of their time occupied in considering when it is that certain novel commodities are entitled to a time-honoured name, and so questions like the following have been discussed: What is marmalade? What is beer? What is leather? What is silk? What is champagne, brandy, whisky, port or rum? Many other articles might be mentioned, widely diverse in nature and composition, but having this in common, that they are capable of being handicapped in competition by the introduction of substitutes generally declared to be "just as good." To such interrogatories we may seasonably add, What is plum pudding? The obvious answer would appear to be pudding made in part, at any rate, of plums; yet what is generally called a plum pudding—the Christmas pudding—never contains plums, if we accept the definition of a plum that it is the edible drupaceous fruit of any one of various trees of the genus prunus. As everyone knows, the fruits used in Christmas pudding are generally raisins and currants, both of which are dried grapes. There are several puddings in the cookery books containing raisins which are called by various fancy names, but never "plum pudding"; there is also a pudding (reminiscent of school-days) containing currants, which is called a currant pudding or by offensive terms according to the temper of the speaker. We should not expect these puddings to be called plum puddings, and they never are; but when the currants and raisins appear in the Christmas pudding the product is called a plum pudding. With no logic it is agreed to accept the word plum as applicable to raisins or currants when they happen to be in Christmas pudding. If plum jam were asked for and a grape conserve were wilfully substituted we should expect such a bargain to be regarded as a misdemeanour within the meaning of the Food and Drugs Acts, but whether that should be the case when plum pudding is asked for and a pudding without plums (strictly speaking) is tendered is not so clear. It would no doubt be argued, in case anyone should attempt to interfere with the sale of Christmas puddings, that the customer was supplied with exactly what he expected to get—that is, a plum pudding without any plums.

FATALITIES FOLLOWING THE INTRAVENOUS INJECTION OF SALVARSAN

THE earlier fatalities which followed the use of salvarsan were attributed by Ehrlich to the presence of advanced disease of the nervous or cardio-vascular systems, which he stated were contra-indications to its administration. He claimed that with due care salvarsan was perfectly safe. Unfortunately, several fatalities have been recently recorded, and show that its administration, even in young and robust patients, is by no means devoid of risk. In an annotation [1] we described two American cases in which acute nephritis was produced in young men by an intravenous injection of 0·6 gramme. In one case fatal anuria supervened. The patient at the time of the injection had a characteristic secondary rash, and his urine contained a trace of albumin but no casts. Previously to acquiring syphilis he enjoyed uninterrupted health. In the other case the urine was perfectly normal, but after the injection presented all the signs of acute nephritis. In another annotation [2] we referred to the case of a robust man, aged 35 years, reported to the Académie de Médecine of Paris by M. Hallopeau. For a relapsing palmar and plantar syphilide the patient was given by a practitioner an intravenous injection of 0·3 gramme of salvarsan, which was well borne, and on the sixth day an injection of 0·4 gramme. Congestion of the face, vomiting, and epileptiform convulsions followed, and he died comatose. In the discussion which ensued Professor Gaucher declared that several deaths had followed the use of salvarsan at the Saint-Louis Hospital, and that almost all the patients died in the same manner, with epileptiform convulsions. In the *Medical Review* for December five cases of this kind are collected from German sources. Four proved fatal, and the necropsy showed the same condition in all—hæmorrhagic encephalitis. One recorded by Professor B. Fischer may be taken as an example. A healthy physician, aged 40 years, in the course of his professional work contracted a chancre on the septum nasi. There was a maculo-papular eruption. On March 28th, 1911, 0·4 gramme of salvarsan was injected intravenously. A slight rigor and several attacks of vomiting followed. In a few days the eruption faded and the primary sore rapidly healed. As a prophylactic against relapses he underwent a course of mercurial inunctions. Five days after its completion (on May 6th) 0·4 gramme of salvarsan was given intravenously. This was at first well borne, and after a day's rest in bed the physician saw his patients, but during the night he became ill, and on the following morning was found by Professor Fischer partially conscious. When roused he tried to answer questions, but with little success. There was constant movement of the upper part of the body. In the afternoon, after a fit of excitement, coma and Cheyne-Stokes respiration supervened, and in the evening there was opisthotonos. The temperature rose to 104° F., and death occurred at 5.15 A.M. on the following morning. The necropsy showed general parenchymatous degeneration of the organs and a fatty liver. The brain was diffluent and there was slight chronic leptomeningitis of the parietal and frontal regions. The pial vessels were distended. Microscopically, numerous punctiform hæmorrhages were seen around the minute vessels

[1] THE LANCET, Oct. 14th, 1911, p. 1085.
[2] THE LANCET, Nov. 4th, 1911, p. 1283.

of the basal ganglia and polynuclear leucocytes distending the perivascular spaces (hæmorrhagic encephalitis). A German case of fatal jaundice after the administration of salvarsan is also reported. Jaundice has been noted in several cases of the administration of the drug. At a meeting of the Royal Academy of Medicine in Ireland on Nov. 3rd Mr. H. Moore reported a case in which 0·5 gramme of salvarsan was injected intravenously in an early case of general paralysis in a man aged 25 years.[3] A severe reaction with rise of temperature to 103° followed. Six weeks later the injection was repeated and still severer reaction and death with paralytic symptoms followed. It is curious that most of the deaths have followed a second injection. This has led Professor Fischer to suggest that anaphylaxis may play a part. The point is important in connexion with the recent claim of some of the advocates of salvarsan that two injections are necessary to cure syphilis.

THE EXPLOSION AT AN OIL-CAKE MANUFACTORY.

THE inquest held at Liverpool upon the bodies of those killed in the explosion at Messrs. Bibby's oil-cake manufactory did not reveal any definitely ascertained cause for a disaster which caused the loss of 30 lives. The verdict of the jury was one of "Accidental death caused by dust explosion, the origin of which has not been clearly demonstrated." And they added to this, "Whilst we do not suggest that there is any blame to be attached to the management, we think that as the inquiry has demonstrated new dangers in dust special care should be taken with arrangements for ventilation and for the removal out of the danger zone of fine dust from the machinery." The evidence showed that in the making of feeding cakes for cattle at Messrs. Bibby's mills cereals and other ingredients were used which produced in the process of grinding a considerable quantity of dust, and also that it was recognised by those responsible that such dust was of a highly inflammable nature. In the preparation of rape seed for use benzine was employed in considerable quantities, but this process was not carried out in the part of the building where the fatal explosions originated. A disintegrator, known to the workmen as a "devil," working in a part of the building called by them the "devil's cellar," was used for pounding or breaking up materials for the cake, and explosions due to the ignition of the dust so caused were known to have taken place, but they had not before had any serious results. Machinery for the purpose of drawing away and collecting the dust was in use, but it was known that in spite of it some dust escaped into the air of the building. There was no mechanical ventilation, but large doors were kept open as freely as possible, and the windows were without glass. The first ignition of dust apparently took place in the "devil's cellar" and spread immediately to the other floors of the same building. To account for the ignition suggestions or conjectures were put forward, but no evidence of fact bearing directly upon the point was obtainable. According to the evidence of the firm's engineer, recent experiment showed that a flame such as that of a lighted match could have produced it, and the danger of this had been acknowledged by a rule forbidding workmen to smoke or to carry matches in the building. Only electric light was used, and every reasonable precaution was enforced. The engineer in his evidence, however, spoke of having found an unignited match on the day before the accident between a pair of electro-magnets, and he suggested that it might have been placed there by a lad in order that he might use it for smoking, but not have it on his person if searched. The same witness had suggestions to make as to how the explosion was actually caused. He described how he had found in the "devil's cellar" a large driving belt broken and an electric fuse gone. His suggestion as to this was that the breaking of the belt might have stirred up and driven into the air dust deposited upon beams and other resting places in its neighbourhood, and that the fusing of the electric wire, whether due to the breaking of the belt or not, had occurred at the same moment and ignited the dust. This, he explained, would account for the presence of a dangerous amount of dust in the air which should have been unusually free from it, because the explosion took place immediately after the dinner hour. Among other evidence given was that of Professor W. Collingwood Williams, who had found slight traces of naphtha in some of the cereals used by the firm, the presence of which might to some extent have contributed to the danger, and of Mr. Thomas Davies, consulting engineer, who spoke to the steps which might be taken to increase ventilation and reduce the amount of dust floating in the air. The verdict of the jury appears to be that which the evidence justified, and if it leaves the immediate cause of a very tragic disaster unaccounted for it should tend to prevent similar occurrences taking place in future by multiplying precautions the necessity for which has been so strikingly demonstrated. The dangerous character of dry, dusty, coal mines is well known and a method is in use which keeps the mine moist.

[3] THE LANCET, Dec. 2nd, 1911, p. 1556.

NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

THIS association (honorary secretary, Dr. J. J. Perkins, 20, Hanover-square, London, W.) is actively engaged in forming a library and bureau for the collection of all matters relating to pulmonary tuberculosis from every point of view, and in all countries. It is intended that such information shall be available not only to members of the medical profession but to the public at large. We are asked to state that valuable assistance would be rendered if medical officers of health, school medical officers, and medical superintendents or secretaries of hospitals, sanatoria, tuberculosis dispensaries, and open-air schools would kindly place the association on their distribution list in respect of annual reports or other documents bearing on the question of consumption. Books, pamphlets, and reprints of articles from physicians and social workers in general would also be gladly received.

CHINESE GREEN TEA.

A CORRESPONDENT in China has sent us the following note: "For many years past, owing to the demand of the foreign public for green tea, it has been the practice of some growers in China to colour the leaf artificially. After the leaves are roasted, which is done immediately on being gathered, they are rolled, coloured, and quickly dried. Formerly Prussian blue with gypsum was used, then indigo, and latterly aniline dyes have been employed. The Chinese themselves do not drink coloured teas, though they are fond of adding flavouring agents, such as jasmine and rose petals. The main demand for green teas came from America, and much consternation has arisen at the news just received in China that any tea containing artificial colouring matter will be refused admittance through the American Custom Houses. This year's crop, consisting of several million pounds, will therefore be thrown back on the Chinese exporters' hands, though an outlet may perhaps be found for it in Russia. Two millions pounds which were sent to San Francisco in a single shipment have already been refused entrance. The percentage of colouring matter is so slight and so innocuous that the objection is more of an academic one than a real

danger to the public health. The rejection is a result of the active steps which are at present being taken in America, mainly by Dr. Wiley, the State chemist, to enforce the observance of pure food laws in every detail. It is a pity, however, that longer notice had not been given by the United States Government of its intention, as the injunction coming at this time will involve many Chinese growers in loss. The various tea guilds here are quite ready to prepare their teas in future without colouring matter. The demand for 'country green' tea in America originated in the liking for a certain kind of leaf with a soft greenish-tinted down on its back which was thought to be an evidence of the freshness of the tea."

A POWERFUL appeal has been issued by the Lord Mayor of London, Sir Thomas Boor Crosby, on behalf of the Building Fund of the Royal Society of Medicine.

THE library of the Royal Society of Medicine will be closed from Saturday, Dec. 23rd, to Wednesday, Dec. 27th, both days inclusive.

THE HEALTH OF THE ARMY IN 1910.

THE report on the health of the army that has just been issued shows that the improvement which has been so marked a feature in these statistics during recent years is steadily continuing, and that the changes in medical administration, costly though they have been, have conduced to efficiency in greater proportion than the mere expenditure in money would lead one to expect.

Improved Health of the Army.

In the Director-General's introductory letter, summarising the chief points of interest, and in Abstract XXIX., it is seen that the admissions to hospital, the number of men constantly sick, and the deaths are the lowest on record; only in the number of men invalided is there a slight increase as compared with the previous year. The figures are ratios per 1000.

	Admissions.	Constantly sick.	Deaths.	Invalids.
1889–1898 ...	997·3 ...	59·85 ...	9·03 ...	15·36
1905–1909 ...	563·8 ...	33·11 ...	5·04 ...	11·61
1909	504·8 ...	28·86 ...	4·10 ..	8·65
1910	443·1 ...	25·38 ...	3·44 ...	9·11

The figures for the year under review, when compared with those of the preceding quinquennium, and still more with the decennial ratios before the South African war, show that the improvement is neither slight nor transitory.

It may be of interest to contrast this result with the expenditure on medical services. For the ten years before the war, 1889–1899, the army estimates for total effective services averaged about £16,000,000 or £17,000,000 and the medical vote a little under £300,000; since the war, 1904–1910, the annual army vote has amounted to some £24,000,000 or £25 000,000, and the medical vote has approximated £450,000—that is, the total military expenditure and the expenditure under the medical vote have each in round figures risen about 50 per cent. It may be granted that the medical services have had their share in the increased outlay during the last ten years. What is there to show for this? The admissions to hospital in 1910 are considerably less than half what they were on an average in the decennium before the war (1889–1898); the number of men constantly ineffective by being sick in hospital is somewhat less than half, and the number of deaths not much more than one-third, of the corresponding numbers in the earlier period, while the number lost to the service by invaliding in this last year is not more than 59·4 per cent. of the former wastage. If the medical services have cost half as much again in the recent period as they did before 1900, the result of the expenditure has been more than a doubling of the efficiency, as shown by a halving of the sickness, and a still greater reduction in the mortality in the army.

The total force, amounting to 215,796 warrant and non-commissioned officers and men, may be divided into three groups from a medico-statistical point of view: the troops serving in the United Kingdom, who form about one half of this number (viz., 108,614); the army of India (72,491); and the remainder serving throughout the rest of the empire (34,691).

Ratios per 1000.

	Admissions.	Constantly sick.	Deaths.	Invalids.
	United Kingdom.			
1889–1898 ...	712·5 ...	41·14 ...	4·32 ...	16·98
1905–1909 ...	428·3 ...	24·34 ...	2·84 ...	14·01
1910	346·0 ...	20·42 ...	2·42 ...	11·07
	India.			
1889–1898 ...	1464·7 ...	89·61 ...	16·43 ...	14·78
1905–1909 ...	802·5 ...	47·26 ...	9·08 ...	8·99
1910	576·5 ...	31·93 ...	4·77 ...	6·51
	Colonies.			
1889–1898 ...	869·6 ...	54·37 ...	8·44 ...	11·24
1905–1909 ...	505·8 ...	32·29 ...	4·70 ...	8·56
1910	457·3 ...	27·21 ...	4·21 ...	7·58

This marked and continuous improvement is the result, we conceive, of four factors: improved medical administration; advance in treatment, especially the great increase in operative procedure during recent years; the adoption of more scientific and more vigorous methods of prevention; and the employment of medical officers as medical inspectors of recruits, which has led to greater care in their selection.

Recruiting.

The number of recruits medically examined has been 45,671, a reduction of about 10 per cent. on the number examined in 1909, and no less than 25 per cent. less than those examined in 1908; the reasons suggested in the report as contributing to this diminution are emigration, revival of trade, and the existence of labour exchanges, which frequently obtain employment for men out of work who otherwise would enlist.

The ratio of rejections, 295·42 per 1000, is slightly less than for the previous year, and still lower than the decennial average. This, however, does not indicate any improvement in the physique of the men presenting themselves for enlistment, because, in the first place, the higher standards of height and chest measurement in force during 1909 have been abolished; and, secondly, there has been a slight increase in men discharged as medically unfit within three months' service. The great majority of the recruits were growing lads, many of them out of work and in poor condition; on the whole, however, the quality is considered to have been satisfactory. The lads will fill out in time, but will not be capable of doing the full work of a trained soldier for a year or two after enlistment. The chief causes of rejection have been, as usual, loss and decay of many teeth (56·95 per 1000 recruits examined), defective chest measurement (43·97), and heart disease (40·38). Defective vision (18·15) was practically the same as in the previous year, as was the disability from defective teeth; defective chest measurement was less frequent, also defective height and weight. This was not, however, due to improvement in the lads' physical condition, but to lowering of the standards to the normal recruiting requirements—viz. (for infantry), a height of 5 ft. 3 in., and a chest measurement of 33½ to 35 in., a range of chest expansion of 2 in. being required.

The condition of the teeth of the young adult working-class population is of considerable importance for the national welfare; the medical inspection of school children has now been carried out for some time, and improvement is to be looked for in the adult in the near future—perhaps it is too soon to expect to see any as yet; none is visible, at any rate, in the class of men and lads that present themselves for enlistment. A considerable sum is spent annually on the dental treatment of recruits, and whatever else it does for them, their first term of service, at any rate, ensures their possession of a set of teeth in decent condition.

The rejections for heart disease, 40·38 per 1000, were 7·32 per 1000 more than in the year preceding, and 17·41 per 1000 more than in the previous decennium; in addition, 1·84 per 1000 were rejected as unfit within three months of enlistment. The total number of men, presumably healthy in other respects, found to be unfit for the

not over-exacting work of the soldier was thus 1928 in the course of the year; the report states that any special cause for the increase was not apparent, except on the hypothesis of inferior physique generally, owing to reduction of the chest measurement standards demanded. We think this is a serious matter that needs careful inquiry with regard to the general question of physical degeneration in this country. Defective vision, 18·15 per 1000, caused much fewer rejections than the decennial average (32·09), the reason being that the vision test is now by Snellen's test types instead of by the dots formerly in use.

Of the total number of recruits finally approved during 1910—viz., 31,547—after deducting those under 18 years of age (2885), the average age was 19·6 years, the height was 66·3 in., the minimum and maximum chest measurements (average) were 33·4 in. and 35·8 in., the range of expansion 2·6 in., and the weight 128·8 lb. These figures are, within a very small fraction, all equal to those of the preceding decennium, and must be allowed to be, on the whole, satisfactory.

The system of physical training, introduced in 1906, is reported on favourably, though in some commands more instructors and smaller classes would be advantageous; no recruits have been discharged within three months of enlistment owing to any disability connected with the training system, either directly or indirectly.

Invaliding.

There are five principal causes of invaliding in the Army: diseases of the circulatory system, nervous, tuberculous and digestive diseases, and syphilis: all of these, except the tuberculous group, show a slight rise, and the total figure of 9·11 per 1000 is 0·46 above the ratio for 1909, though well below that for the quinquennium or any single preceding year. Until 1908, circulatory diseases had been in every year, except 1905, the chief cause for invaliding; this is now the third year in succession that they take second place, with a ratio of 1·56 per 1000; before 1905 the ratio had always been above 2·5 per 1000. The reduction appears therefore to be established, and although the report does not allude to this point, it may be suggested that alterations in methods of drill and in details of clothing and equipment have brought about the improvement. The fractional increases in nervous affections, which accounted for 1·63, in digestive diseases with 0·64, and in syphilis with 0·26 per 1000, are not of importance. Tuberculous affections (1·24 per 1000) remain year by year at about the same level. The total invaliding ratio, 9·11 per 1000, though fractionally above the unprecedentedly low figure of 8·65 in 1909, is now, we hope, established permanently at a low level.

HEALTH OF THE TROOPS IN THE UNITED KINGDOM.

Sickness, Deaths and Invaliding.

The admissions to hospital, number of men constantly sick, and the rates for deaths and invaliding have already been given above.

In the London District the admissions were 604 per 1000, the number constantly sick 36·9, and the invaliding 14·8; in the Western Command these ratios were 245, 13·3, and 8·9 respectively. On comparing the different arms of the service we find that the Household Cavalry have the highest admission rate (698 per 1000), and the Foot Guards the highest number constantly sick (34); the infantry of the line, on the other hand, have only 359 admissions per 1000 and 21·7 constantly sick. On comparison with the statistics for the preceding five years all branches of the service show an improvement in the number of admissions to hospital except the Household Cavalry; and all show a lessened inefficiency from sickness, again with the exception of the Household Cavalry, and to a very slight extent of the Royal Engineers. This excessive liability to illness on the part of the Life Guards and Horse Guards, as shown by an admission rate of 698 per 1000, compared with a rate of 482 for cavalry of the line (who have similar duties) and 496 for the Foot Guards (who serve in the same stations), is a matter for which some explanation seems desirable. It is noted that the Foot Guards have greatly improved their position compared with the other branches; their admissions have been 496 and their constantly sick 34 per 1000, as compared with 701 and 48·7, the ratios for the quinquennium.

The most fatal diseases amongst soldiers at home were pneumonia (0·27 death per 1000), tubercle of the lung (0·13), and valvular disease of the heart (0·11). The diseases causing most sickness were gonorrhœa, syphilis, and soft chancre, which together caused a constantly sick ratio of 6·48 out of the total 20·42 per 1000. This, however, is an improvement on the average for 1905–09, which was 7·10. The chief diseases causing invaliding were diseases of the nervous system (1·63), heart disease (1·43), and tubercle (1·40 per 1000); in each case there was a slight improvement on the quinquennial average. Diseases of the heart and circulatory system caused nearly as many deaths (0·34) as the quinquennial average (0·35), but led to less invaliding (1·78 compared with 2·69 per 1000); this indicates that heart-strain is now not a common accompaniment of the physical training of the soldier.

Venereal diseases caused 31·8 per cent. of the total inefficiency through sickness. The greatest proportion of admissions occurred, as always, in the London District, 137 per 1000; in the Western District there were only 44 per 1000. Sore throat and tonsillitis were much less prevalent during 1910 than of late years, the admission ratio having been only 26·3, as compared with a quinquennial average of 44·4 per 1000. Admissions were most numerous in the London District, as usual. None of the specific infectious diseases were prevalent in 1910, except influenza to a slight extent, causing 13·2 admissions per 1000, but it was not of a severe type. This section of the report concludes with the observation that the figures of sickness, mortality, and invaliding are now so low that any very considerable reduction in the future can hardly be anticipated.

Vaccination.

Out of the total 32,179 recruits found on inspection fit for service, 56·8 per 1000 had neither marks of vaccination nor of small-pox. The proportion of unprotected persons is increasing year by year. In the five years, 1891–95, it averaged 27·7, in 1896–1900 it was 34, in 1901–05 it was 39·3; in the last five years the ratios have risen rapidly from 35·9 in 1906 to 50·6 in 1909, and 56·8 in the past year. No danger accrues to the army because every recruit that needs it is either vaccinated or revaccinated; but if these figures are to be taken as generally applicable to the young adult male population they indicate that a large amount of inflammable material is accumulating throughout the country.

Sanitation.

Instruction in sanitation is now being carried out by lectures and demonstrations in all commands; the sanitary officers give lectures at the largest stations, and regimental officers instruct their men in elementary sanitation and personal hygiene; in the Territorial Force also series of lectures and practical demonstrations have been given at many centres. At the Aldershot School of Army Sanitation 858 officers and men passed through during the year, a considerable increase on any previous year's work. At the staff college also lectures are given by a specially appointed medical officer on the rôle of the medical service in war, the gain to efficiency from sanitation and disease-prevention being specially emphasised. There can be no doubt that a general knowledge of sanitary principles and an appreciation of the importance of such matters from a military point of view are becoming diffused throughout the army; in the Southern Command, where the greatest number of troops were collected together in camps, the Principal Medical Officer reported that the spread of knowledge and the combined efforts of all ranks had resulted in the maintenance of a high standard of sanitation in the various camps and barracks. This spread of knowledge and cordial coöperation have been an important factor in the production of a standard of health throughout the army that has never been previously reached.

Experimental work has been carried on at the Army Medical College and the Aldershot School of Sanitation in connexion with the supply of water to troops in the field; a clarifying drum has been under trial, with the use of alum as a preliminary both to the Griffith system of purification by heat, and to the filtration of the regulation water-cart; it has been found that 80 to 90 per cent. of contained micro-organisms can be removed in this way, thereby largely increasing the efficiency of the subsequent process. A new steam disinfector has been designed by the officer in charge of the Aldershot school; while at the Army Medical College a good deal of work has been done in relation to the food

requirements of soldiers, a second experimental march having been carried out during the year under the direction of the professor of hygiene.

Infectious Diseases.

The reduction in the incidence of infectious disease has continued, all the principal headings showing a smaller number of admissions. There have been only 43 cases of enteric fever, and measles, scarlet fever, and influenza have prevailed but slightly; for diphtheria there have been 57 admissions—nearly the same as in 1909. The only deaths in this group have been 4 from enteric fever and 1 from influenza. Under this last-named heading are recorded 1432 admissions. It is perhaps doubtful whether all were due to the specific micro-organism. Enteric fever caused only 43 admissions, giving a ratio of 0·4 per 1000, compared with a ratio of 0·6 for the preceding quinquennium. Most cases were sporadic; 6 occurred in the Belfast district, of which 3 were considered to have been infected at McGilligan Camp, where a possible chronic carrier was detected. Tonsillitis and sore-throat showed a great reduction; there were 26·3 admissions per 1000, compared with 44·4 in the preceding quinquennium. The progressive improvement in venereal sickness continues most satisfactorily; the admissions were 65·5 per 1000, compared with the quinquennial average of 76; and the constant inefficiency was 6·48 instead of 7·10. The reduction does not appear to be very considerable at first sight, but it may be recalled that for the decennium 1891–1900 the admission ratio was 143·7, and for the five years 1886–1890 it was 207·6; therefore the admissions are less than one-third of what they were 20 years ago. This must be considered to be most satisfactory.

Structural Improvements.

Structural improvements are constantly in progress in barracks, quarters, and hospitals, but no work of any magnitude has been completed during the year; the new cavalry barracks at Redford, near Edinburgh, are in progress, and new infantry barracks will shortly be commenced. The new block at Victoria Barracks, Windsor, is practically completed. The old Royal Artillery barracks at Woolwich are to be reconstructed, a work, we should think, already long overdue. Some years ago it was decided to provide pedestal flush down closets for troops instead of the old-fashioned trough latrines; it was feared that these new closets would suffer from rough usage and want of care or intelligence on the part of the men. It is satisfactory to learn that such has not been the case; this indicates a general improvement in the character and intelligence of the private soldier, which is indeed abundantly evident in many other ways, and is a hopeful sign of the times.

The Mediterranean Area.

The stations in the Mediterranean Command are Gibraltar, Malta, Cyprus, and Egypt. No troops appear to have been quartered in Crete during 1910.

At *Gibraltar* the strength of the garrison was 3652, the admissions to hospital were 402·2 per 1000, the number constantly sick 31·45, and the death-rate 3·29; the death-rate was lower, but admissions and constantly sick rather higher than the quinquennial average. The increase in sickness has been due to minor ailments, chiefly venereal disease. There were 12 admissions for enteric fever, which of late has not been much in evidence; the cases occurred sporadically during the hot weather, and no cause could be traced, though unwashed vegetables and fruit and ice-creams were suspected. In eight of the cases pure cultures of B. typhosus were recovered from the blood early in the disease, leading to an early diagnosis and the speedy adoption of preventive measures. Two cases of Mediterranean fever occurred in January, the last of the outbreak due to goats' milk of the year before. The increase in venereal disease over the preceding year, 434 admissions compared with 304, was possibly connected with the presence of foreign warships. A mild outbreak of food poisoning occurred in November, ascribed to tinned salmon. Of 63 men who partook of the salmon made up into rissoles for breakfast, 40 were affected about noon, and of these 23 were admitted to hospital with vomiting, diarrhœa, colic, and slight collapse; these symptoms and the mode of onset point to a toxin rather than a bacterial infection. No tins of salmon of the same kind were found to be at all amiss, and the cooks noted nothing wrong in the tins that had been used. The incident is of interest, because the use of tinned salmon is universal, and the occurrence of illness after eating it in good condition almost unknown. It is probable, therefore, that some damaged condition was overlooked. Improvements have been carried out in barracks by the provision of wash-down "latrines" (? closets) in place of trough latrines, and the Horsfall destructors have worked well.

In *Malta*, where the strength averaged 6769, the troops have had a slightly higher admission rate than in the previous year; but the number of men constantly sick has been almost exactly the same, and the death-rate and invaliding show a marked improvement. When the figures are compared with those for the preceding quinquennium the improvement is seen to be still more satisfactory, the admissions having been 400·1, compared with 489·2; the constantly sick 24·44, compared with 32·36; and the deaths 2·81, compared with 4·26 per 1000. The invalids sent home have numbered only 8·42 per 1000, in marked contrast with 30·26 for 1905–09, the latter high figure depending chiefly on the Mediterranean fever prevalence of 1905 and 1906. In 1909 there was one admission for this disease; in 1910 not a single case occurred, except in the person of a young officer who had just arrived, and who drank milk unboiled, probably that of the goat. *En revanche* there were 47 cases of enteric fever amongst the troops, a much greater prevalence than in any year since 1905. Nearly all these cases occurred in January and February, in the form of a sharp outbreak, amounting in all to 61 attacks, distributed between officers, women, and children, as well as among the troops, and causing six deaths. No information is given as to locality of the epidemic, nor as to its circumstances, except that it was due to the water-supply, which was the same as that supplied to the civil population; as to this it is said that alterations "are under consideration" with a view to its protection. Paratyphoid fever caused seven admissions, all from the same barracks, and said to have been due to eating grapes. Under general diseases in Group C appears a new heading, Sandfly Fever, the fever due to an invisible virus disseminated by Phlebotomus pappatasii; 124 admissions are recorded; for comparison with previous years this entry must be combined with pyrexia of uncertain origin, for which there were 26 admissions; this total of 150 cases, giving a ratio of 22·1 per 1000, is less than half the prevalence in 1909, and little more than a quarter of that for the quinquennium (79·1). Although the affection is not serious, during that period it ranked third in causing inefficiency through sickness. Formaldehyde spray has been found useful in keeping down the sand-flies, a nuisance for which some parts of Malta have been notorious. A case of kala-azar is recorded, the first known to have become infected in Malta. We are glad to learn that the old Valetta Hospital has been converted into a reception station, that a new isolation hospital has been completed on the top of the ramparts at Cottonera, and that the building of a new hospital in a healthy and airy situation at Imtarfa is under consideration; also that new barracks are under construction at Tigne, which will reduce the number of men living in casemates. Last year we ventured to predict that now that "Malta fever" has been abolished in fact and in name, and that sanitation has improved so greatly, the island would regain most of its old popularity as a winter resort. From the health returns of 1910, however, when enteric fever is said to have been caused by pollution of the public drinking water-supply, we fear this opinion was too optimistic. It is to be hoped that the public health authority has already taken steps to safeguard the catchment area.

Egypt.—The average strength was 5592. The admissions were 551·3 per 1000, the constantly sick 36·82, and the death-rate 4·65, all these ratios being lower than for the preceding year except the last, which showed a fractional increase. All ratios, however, were lower than those for the preceding quinquennium. There were 12 cases of enteric fever, all sporadic, and occurring at wide intervals of time. No cause is assigned. There were 115 admissions for sandfly fever. Venereal diseases declined from 168 per 1000 admissions in the quinquennium to 128 per 1000 in 1910. The use of saponified cresol for latrines and urinals has given every satisfaction as a fly deterrent. This is thought to have caused much of the decline in enteric fever.

South Africa.

The force in South Africa, which had been largely reduced in 1909, was still further diminished in 1910 to a strength of 10,871. The health of the troops on the whole has slightly

improved, though the total admission ratio of 386·7 is rather higher than that of the preceding year, on account of an outbreak of scabies, causing 549 admissions. There were 30 admissions for enteric fever, giving a ratio of 2·8 per 1000, and a constantly sick ratio of 0·46, both being great improvements on 9·9 and 1·91, the corresponding quenquennial ratios. The largest number of cases at any one station occurred at Roberts' Heights, Pretoria, where there were 17 cases; but it is mentioned that only 7 could be demonstrated to be due to B. typhosus; 8 were due to atypical forms of the typho-colon group. No source of infection was traced. Admissions for malaria (23·9 per 1000) were double the quinquennial average, due to recurrent cases in units arrived from India; there were no fresh infections. An outbreak of scabies occurred, causing 549 admissions, or a ratio of 50·5 per 1000. Nearly all were from one regiment, transferred from Rangoon, the disease having rapidly spread under the conditions of life on board ship. An occasional outbreak of scabies or scurvy is useful as an antidote to a too optimistic view of ourselves or our environment. "Influenza" caused 126 admissions, a great increase over the previous year; 44 occurred at Potchefstroom, and are reported to have resembled sandfly fever, but "no sandflies exist in the neighbourhood." Most of the men had served in India, and a malarial origin was suspected, but no malarial parasites were found. At Pietermaritzburg most of the cases of influenza showed a scarlet fever rash. No sanitary measures of any great importance were undertaken in the Union, owing to uncertainty as to the future distribution of the troops.

India.

The thoughts of most of us during the last week or two have been turned to our Eastern Empire, and on reading graphic descriptions of oriental splendour and magnificent ceremonial, picturesque crowds, the magnificent appearance of the troops, Indian no less than British, the enthusiasm of everyone while one pageant succeeds another day after day in brilliant sunshine, many of us have been inclined to envy our fellow-countrymen dwelling in that pleasant land, far away from London fogs, where December, so far from being "drear-nighted," as it appeared to John Keats, affords perhaps the most brilliant and perfect climate imaginable. The weather conditions are, of course, not equally delightful all the year round; the sun is too powerful during some months of the year, and when it rains for three days without a break there is monotony as well as excess of moisture in the dwelling. The formerly prevailing idea of the "deadly climate" of such and such a place in the tropics is, however, now pretty well exploded. No climate is deadly; no climate is even unhealthy, if by climate we understand the conditions of weather, temperature, barometric conditions, rainfall, and so on. The diseases that were formerly called "climatic" are now known (in almost every case) to be due to some specific living cause, the development and activity of which may depend on climatic conditions, and therefore be greater in one climate than another; but the specific causes are not necessarily present even in the hottest climate, and even if they are present they can be destroyed by taking appropriate action.

The average strength of the European force serving in India was 72,491, a slight increase over that of the previous year. The health statistics, which in 1909 showed a marked advance on all previous returns, have in this last year again improved most noticeably. The admissions were 576·5, the constantly sick 31·93, and the deaths 4·66 per 1000, the corresponding figures for 1905–09 having been 802·5, 47·26, and 9·08. The invaliding ratio has come down to 7·75 per 1000, that for the preceding quinquennium having been 19·92. The marked improvement to which attention was drawn in the report for the previous year has been more than maintained in 1910. European troops now serving in India can enjoy a degree of good health undreamt of a generation ago.

The cause of the greatest number of admissions to hospital has been malaria (132 per 1000 strength), with which may be coupled sandfly fever (7·1), and pyrexia of uncertain origin (37·7). Venereal diseases caused 58·9, and the group of digestive diseases caused 52·5 admissions per 1000. In each instance the number of cases of illness has been less than the quinquennial average. The greatest inefficiency through sickness was due to the group of venereal diseases, for which 7·79 per 1000 were constantly sick in hospital; for fevers the inefficiency was 5·64, and for digestive diseases 2·56 per 1000. The diseases that were most fatal were enteric fever (causing 0·62 deaths per 1000), inflammation of the liver (0·52), diseases of the heart and aneurysm (0·44), tubercle (0·29), pneumonia (0·25), and dysentery (0·25). In each instance, both of inefficiency through sickness and of mortality ratio, there has been a marked reduction, except in the case of death-rate from tubercle, which remains practically the same as for the five-year average.

There remains to be mentioned enteric fever. In the preceding quinquennium, 1905 to 1909, the admissions averaged 13·7 per 1000, the numbers constantly sick 2·79, and the deaths 2·66; and in the decennium 1895–1904 the admissions averaged 22·3, the constantly sick 3·31, and the deaths 5·62. In the year 1910 the admissions were 4·1 per 1000, the number constantly sick 0·91, and the death-rate 0·62 per 1000. This is a result that ten years ago could hardly have been hoped for, still less expected. The report states that there have been no definite outbreaks of true enteric fever during the year, though isolated cases have occurred, scattered over a large number of stations. The 2nd Worcestershire Regiment at Jhansi had 21 cases, with 6 deaths; this was the largest number of cases in any one unit during the year. At Sialkot the admission ratio for enteric fever was 15·1 per 1000, at Kamptee 14·4, at Fyzabad 14·2, at Jhansi 13·1, and at Kirkee 12·0. No other station had an enteric incidence running into double figures. During 1910 an attempt has been made to differentiate paratyphoid fever from true enteric, though in the statistical returns both are included under the latter designation. Of the total 335 cases returned as enteric, 39 were definitely diagnosed, with undoubted isolation of B. paratyphosus A or B, as paratyphoid fever; 36 of these were cases of infection by the A bacillus; one case was fatal. A noticeable feature of the epidemic history of typhoid fever during the year has been the absence of any direct evidence to show that drinking water, milk, or indeed any article of food had been the cause of the disease. There had been much to suggest dissemination by carriers, especially undetected cases, but, on the other hand, there has been a remarkable freedom from attack amongst attendants on the sick. Inoculation has been carried out extensively during the year. On Dec. 31st, 1910, a census was taken and 81·7 per cent. of British troops were found to have been inoculated. The enteric fever convalescent depôts at Naini Tal and Wellington have done excellent work; 239 men were received at the former, where 6 chronic carriers were detected, and 81 at the latter, with detection of 3 carriers. It is hoped that before long accommodation will be afforded at these depôts for officers, women, and children.

Malaria, with 132 per 1000 admissions, was much less prevalent than in 1909 (when they numbered 202·8). The report does not pronounce definitely what was the cause of the improvement, but inclines to the view that it was the result of a lessened heritage of infection from the previous year, of the vigorous anti-malarial measures that had been taken in cantonments, and of the prophylactic administration of quinine. This last measure has been carried out systematically, but the injection of quinine salts, either subcutaneous or intramuscular, has been abandoned. Unfortunately a death occurred from tetanus following on subcutaneous injection. The use of mosquito nets by the troops is increasing. We share the regret expressed that owing to financial considerations the authorities have not seen their way to provide them at the expense of the State. As the value of this simple measure of fever prevention has been fully demonstrated, we consider that both on general grounds and on grounds of true financial economy the troops should be provided with mosquito nets at malarious stations, and made to use them. Sandfly fever caused 512 admissions, with no deaths; it prevailed at Nowshera, Attock, and Multan. Venereal disease has decreased generally; it still prevails much more extensively at Secunderabad, Poona, and Lucknow, and in Burma than elsewhere.

With regard to sanitary matters, we are glad to learn that a new type of incinerator has been evolved which is much superior in efficiency to any hitherto in use, and that the disposal of urine in absorption pits near urinals is likely to be carried out with success. The establishment of sanitary sections—that is, bodies of sanitary police to carry out water purification, disinfection, &c.—has been sanctioned by Government, and should be a valuable measure of disease prevention.

The report on the Health of British Troops in India, contained in the Blue-book on the Health of the Army in 1910, is indeed an astonishing record of improvement. The betterment in health has taken place all round—there is less malarial fever, less venereal disease, less liver disease. But the most striking feature has been the reduction in enteric fever. In former times we have often noted the occurrence of severe outbreaks of this disease, which in one year (1898) was more fatal than all other causes taken together. It is even now more fatal than any other single disease, but both in its prevalence and in its severity it has been to a great extent robbed of its terrors. It is not now the dread of the young soldier or officer going out to India at the commencement of his military career, as was the case some years ago. This result has been attained by the exercise of much labour and skill on the part of our colleagues in the medical service of the army, supported by an enlightened appreciation by the Indian Government, which has backed up their efforts and accepted their recommendations in regard to sanitary reform. The recent establishment of convalescent depôts for enteric patients, and consequent isolation of possible carrier cases, has no doubt largely influenced the reduction in enteric prevalence. Prevention has been demonstrated to be better and cheaper than cure, and the recognition of this fact by the Government, and the energetic carrying out of the principle all over the country, have reduced the sickness to little more than one-third, and the mortality to even less than one-third, of what it was 15 to 20 years ago.

Smaller Stations.

Bermuda and Jamaica form the Atlantic sub-group. At the former station there has been some increase in sickness as compared with 1909, due apparently to the arrival of a fresh regiment. There has also been an increase in the death-rate over that of the quinquennium. In Jamaica there has been a decided improvement. Malaria was not so prevalent as in the previous year, though many cases again occurred during gun practice in the malarial neighbourhood of Fort Nugent in November; this is stated to have been a necessity. In West Africa the troops had to undergo a "bad fever year." The admissions for malaria were 1032 per 1000, compared with a quinquennial ratio of 628, but no cases were fatal. A death occurred from yellow fever, which is endemic at Freetown. Malaria unfortunately broke out at Tower Hill Barracks, which have hitherto been considered to be free from infection. Tins and bottles had been allowed to be dumped on War Department land in the immediate neighbourhood of the barracks. Many were found to contain mosquito larvæ. These cases of fever were clearly preventable and were not prevented. In Mauritius, where the health of the troops was on the whole satisfactory, 15 cases of enteric fever were admitted, 8 of which appeared to have contracted infection from a cook, whose blood agglutinated with B. typhosus in a 1 in 50 dilution. In South China there was a considerable increase in the admissions for malaria at Hong-Kong, partly owing to the proximity of a nullah teeming with anopheline larvæ, and partly to an infected Chinese village. Both in North China and in the Straits Settlements the health of the troops showed an improvement over the statistics of previous years.

This report is admirably compiled, and contains a large amount of information interesting to all engaged in public health matters, as well as to those members of the profession who are in one way or another connected with the services of the Crown.

BEQUESTS TO BIRMINGHAM CHARITIES.—Several Birmingham institutions benefit under the will of the late Mr. John Roderick, a well-known auctioneer and surveyor—viz., the General Hospital £50,000, the Queen's Hospital £10,000, the Birmingham General Dispensary £1000, and the Skin and Urinary Hospital £1000. After the payment of sundry other legacies amounting to £70,900 the residue of the estate, which is estimated at £362,022, is left, as to half to the General Hospital, as to a quarter to the Queen's Hospital, and as to a quarter to the Birmingham General Dispensary. Mr. Roderick, who was in his eighty-first year, had been for many years a member of the board of management of the General Hospital; three beds in the hospital have been endowed at various times in memory of brothers of Mr. Roderick.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

A MEETING of the Governors and General Council of King Edward's Hospital Fund for London, for the purpose of awarding grants to the hospitals, convalescent homes, and consumption sanatoriums, was held on Dec. 11th at St. James's Palace. The Speaker of the House of Commons, the Right Honourable JAMES LOWTHER, was in the chair, and those present included the Duke of Norfolk, Lord Revelstoke, the President of the Metropolitan Hospital Sunday Fund (the Right Hon. the Lord Mayor), the President of the Hospital Saturday Fund, the Governor of the Bank of England (Mr. A. C. Cole), the President of the Royal College of Surgeons of England (Mr. R. J. Godlee), Sir W. S. Church, Sir Henry Burdett, Sir Horace Marshall, Sir Cooper Perry, Sir John Craggs, Dr. Edwin Freshfield, Sir T. Vezey Strong, Sir Joseph Dimsdale, Mr. Albert G. Sandeman, Mr. John G. Griffiths, and Sir Savile Crossley and Mr. Frederick M. Fry (honorary secretaries of the Fund).

In the absence of Lord Rothschild (honorary treasurer) Lord REVELSTOKE reported that the amount received by the Fund for general purposes to Dec. 8th, after payment of expenses, was £176,745 0*s.* 3*d.*

Sir HENRY BURDETT stated that the League of Mercy hoped this year that their contribution to the Fund and their distribution amongst the hospitals in the home counties would amount together to a sum of £20,000. He could not for the moment say exactly what sum.

The Chairman of the Distribution Committee (Sir WILLIAM CHURCH) read the report of that committee, which showed that the sum of £151,000 was in the hands of the committee with a view to distribution amongst the London hospitals, as against £150,000 in 1910. The committee reported that the number of hospitals applying for grants was 105, as against 106 last year. They add: "Among the institutions which do not appear in this year's list is St. George's Hospital, the governors of the hospital having withdrawn their application as a result of the decision of the Fund on the question of the amounts which could properly be paid to the medical school in respect of work done for the hospital. The grant of £2000 which was reserved last year lapses, the conditions attached to it by the council of the Fund not having been fulfilled." With regard to the applications received during the year from four out of the five throat, nose, and ear hospitals no detailed scheme of amalgamation had yet reached the stage at which a grant from the Fund could be recommended. Under the circumstances the committee advised that the total sums set aside or promised towards a general scheme of amalgamation should be increased to £20,000, and should remain at that figure pending an agreement upon a satisfactory scheme or schemes. The committee recommended that they should be empowered to draw upon this sum, in appropriate proportions, in the event of a general or partial amalgamation being brought to a satisfactory conclusion before the next distribution. The committee reported with satisfaction that the poor district of Kentish Town would shortly be provided with improved hospital accommodation by the rebuilding of the out-patient department of the amalgamated Hampstead and North-West London Hospitals. The sum of £5000 voted towards the removal of King's College Hospital to South London increased the total amount contributed by the Fund to this object to £42,000. The enlargement of the annual statistical report to cover practically all the hospitals applying for grants enabled the committee to extend the practice of drawing the attention of the hospitals concerned to cases where the excess of cost above the average seemed to call either for specific justification or for greater attention to economy.

Sir Savile Crossley then presented the list of awards, premising that the absence of a grant did not imply dissatisfaction with an institution. The following are among the chief awards:—

Belgrave Hospital, £1500 (£1000 to reduce building debt); Bolingbroke Hospital, £1400; Central London Ophthalmic Hospital, £1500 (to rebuilding in accordance with the scheme submitted to the Fund); Charing Cross Hospital, £4000 (£1000 to special appeal for reduction of debt); City of London Hospital for Diseases of the Chest, Victoria Park, £4000; City of London Lying-in Hospital, £1000 (£500 to reduce building debt); Dreadnought Hospital, £450 (£500 to reduce debt, and £500 to underpinning of Docks Branch); East London Hospital for

Children, £2000 (£500 to recent improvements in accordance with the scheme submitted to the Fund); Great Northern Central Hospital, £4000 (£1000 to reduce debt); Guy's Hospital, £6,500; Hampstead General Hospital, £4500 (£1650 on account of maintenance and rent, as agreed upon amalgamation with the North-West London Hospital, and £2750 to rebuilding the out-patient department in Kentish Town in accordance with scheme submitted to the Fund, on condition that the balance is raised by the hospital); Hospital for Consumption, Brompton (including Sanatorium at Frimley), £4000; Hospital for Epilepsy and Paralysis, £1500 (£1000 to extension in accordance with the scheme submitted to the Fund); Hospital for Sick Children, £3500 (£500 to reduce general fund debt); Hospital for Women, Soho-square, £1750 (£500 to reduction of mortgage on No. 4, Frith-street); King's College Hospital, £7000 (£5000 to removal fund); London Hospital, £12,000; London Lock Hospital £4500 (£500 to the Harrow-road Hospital, and £4000 to the rebuilding of Dean-street Hospital in accordance with the scheme submitted to the Fund); London Temperance Hospital, £1500; Metropolitan Hospital, £3500; Middlesex Hospital, £4000; Miller General Hospital for South-East London, £2750 (£2000 to extension in accordance with the scheme submitted to the Fund); Mount Vernon Hospital for Consumption (including Sanatorium at Northwood), £2500; National Hospital for the Paralysed and Epileptic, £1750; New Hospital for Women, £1500 (£750 to structural improvements in accordance with the scheme submitted to the Fund); Paddington Green Children's Hospital, £1250 (£750 to reconstruction of Out patient Department in accordance with the scheme submitted to the Fund); Prince of Wales's General Hospital, £4000 (£1500 to reduce debt; the committee consider that this hospital should receive more support from the public); Queen's Hospital for Children, £3500 (£1500 to reduce debt); Royal Eye Hospital, £1000 (£250 to reduce debt); Royal Free Hospital, £3000; Royal Hospital for Diseases of the Chest, City-road, £1500 (£250 to reduce debt); Royal London Ophthalmic Hospital, £2250; Royal National Orthopædic Hospital, £5000 (£3000 to reduce building debt); Royal Waterloo Hospital for Children and Women, £1750 (£250 to recent improvements); St. Mary's Hospital, £5500 (£1500 to reconstruction of casualty department in accordance with the scheme submitted to the Fund); St. Mary's Hospital for Women and Children, Plaistow, £1000 (£250 to roof garden for patients); Samaritan Free Hospital, £1750 (£750 to new nurses' home in accordance with the scheme submitted to the Fund); South Wimbledon, Merton, and District Cottage Hospital, £1000 (to the rebuilding of the hospital in accordance with the scheme submitted to the Fund); University College Hospital, £4000; Victoria Hospital for Children, £1250 (£250 to recent improvements); West Ham and East London Hospital, £2000; West London Hospital, £5000 (£2000 to reduce debt); Westminster Hospital, £3500.

The report of the Convalescent Homes Committee was read by Dr. FRESHFIELD, in the absence of the chairman, Mr. William Latham, K.C. It announced that the committee had received the sum of £6500 for distribution amongst convalescent homes and consumption sanatoriums. The amount distributed in 1910 was £5000. The committee adhered to their original policy of giving special consideration to the convalescent homes closely connected with London hospitals, and reported with satisfaction that the scheme for placing beds in country consumptive sanatoriums at the disposal of patients in London hospitals had proved satisfactory. The grants recommended for consumption sanatoriums amounted to £3500; those for convalescent homes to £3000. The awards were presented by Mr. Frederick M. Fry (honorary secretary).

The SPEAKER of the House of Commons, before moving the adoption of the reports and awards, read the following communication from the King:—

Emperor's Camp, India, 9th December, 1911, 2.45 P.M.

On the occasion of the Annual Meeting on Monday I wish to congratulate the Governors and Council of the Fund upon the satisfactory results achieved last year. I am glad to think that they can increase the annual distribution by £2500, indicating the continued support of the public and confidence in its efficient administration. I highly appreciate the generous and untiring work given to the Fund by the honorary secretaries and members of the various committees; and I take as ever the deepest interest in its welfare. GEORGE, R.I.

After expressing on behalf of those present deep appreciation of His Majesty's kind message he said the total this year for distribution was £157,500, representing an increase of £2500—£1000 in the amount distributed to hospitals and £1500 in the amount distributed to convalescent homes and comsumption sanatoriums. Among the receipts which had made possible this progress he mentioned first the increased annual subscription of 100 guineas with which Her Majesty the Queen had honoured the Fund. This, following upon the increase last year of His Majesty's subscription from £500 to £1000 and the subscription of £100 from H.R.H. the Prince of Wales, was yet another mark of the interest taken by the Royal Family in the Fund, and their recognition of the needs of the hospitals of London. His Majesty had also allocated to the Fund a share amounting to £2000, in the munificent Coronation gift of His Highness the Maharaja of Gwalior. The receipts again included an anonymous donation of £10,000, and the City Corporation had for the third time in succession voted an annual subscription of £500 for five years. The contribution of the League of Mercy continued to be one of the largest items in the list of receipts. He regretted the withdrawal of St. George's Hospital from the list of applicants, but the Fund was bound by the findings of Sir Edward Fry's Commission on the Financial Relations between Hospitals and Medical Schools. The scheme of the Convalescent Homes Committee for placing beds in consumption sanatoriums at the disposal of London hospitals had been very successful, and the result of the circular issued to the principal hospitals inviting expressions of opinion as to the probable effect of the National Insurance Bill upon their finances and the numbers of their patients had been published in the form of a short summary of opinions.

The Duke of NORFOLK seconded the motion, and the adoption of the reports was carried unanimously.

The CHAIRMAN then announced the intentions of the Governors to re-appoint for the year 1912 the whole of the existing members both of the council and of the committees.

On the motion of Sir HENRY BURDETT, seconded by Sir SAVILE CROSSLEY, a resolution was passed expressing the thanks of the council to Mr. Fry for his services as honorary secretary.

The LORD MAYOR proposed a vote of thanks to the Speaker of the House of Commons for presiding. The resolution was seconded by Mr. COLE and carried unanimously.

The SPEAKER having briefly acknowledged the vote of thanks, the proceedings then terminated.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

III.

WE now proceed to notice the remainder of Dr. Newsholme's report, which deals with the work of the Board's medical department and also with certain special matters that have engaged the attention of the staff in the course of the year.[1]

Medical Inspections.

A considerable portion of the time of the medical staff is occupied in the inspection and regulation of vaccination, at least 13 of their number having been thus engaged during the year. But arrangements are in force for the performance of other preventive functions by the inspectors during their routine visits on vaccination duty. For example, the inspectors have instructions to make inquiries, and where necessary to give advice to local authorities and their officers as to sanitary circumstances generally, and especially as to the condition of dwelling-houses and of existing systems of refuse disposal. They also inform themselves as to local methods of dealing, by hospital isolation or otherwise, with tuberculous phthisis and other infectious diseases, and further as to local arrangements for the control of water- and milk-supplies.

Protection of Food-supply.

The food inspectors regularly supervise the local arrangements for the protection of the food-supply in port sanitary districts, and they occasionally hold inquiries respecting the administration of the Adulteration Acts, with especial reference to the efficiency of the measures locally taken to secure the wholesomeness and purity of food. Since the issue of the Board's regulations in 1907 the general improvement in the condition of the foods arriving at our ports has been maintained, and steps have been taken to inquire locally as to compliance with the Board's instructions relating to foreign meat. As the result of inspectorial visits to Belgium and Holland, it is reported that the measures there adopted by the authorities to comply with our requirements are satisfactory in every respect.

Several outbreaks of food poisoning were reported during the year. Dr. A. W. J. MacFadden, who has charge of this department, gives particulars of such occurrences at St. Helens, Carlisle, Gateshead, and elsewhere. He complains, however, that in the majority of cases the information was not received until so long after the occurrence of the mischief that the opportunity of effectively assisting local preventive measures had passed.

[1] Previous notices of this report appeared in THE LANCET of Nov. 25th, p. 1501, and Dec. 9th, p. 1649.

New Pathological Laboratory.

The Local Government Board is now equipped with a permanent pathological laboratory. The staff includes, in addition to the laboratory assistants, the director, Dr. A. Eastwood and Dr. F. Griffith, both of which officers had been engaged for several years on investigations for the Royal Commission on Tuberculosis. The laboratory was in full working order by the end of December, 1910, but hitherto the investigations undertaken have in the main been limited to tuberculosis. There is every reason to hope that under the direction of Dr. Eastwood and his colleague the newly equipped pathological laboratory will greatly increase the efficiency of the Board's medical department.

Government Lymph Establishment.

In the course of the 12 months ended in March last nearly half a million capillary tubes of glycerinated calf lymph were issued by the vaccine establishment to public vaccinators, and further, 26,000 tubes of lymph were issued to the navy, and 56,000 to the army, during the same period.

Extraneous Duties of Medical Staff.

In the course of the comments already made respecting the public health of 1910 we have alluded to much of the work of the Board's medical department, but the account of that work would be incomplete were omission made of the manifold duties for which the services of individual members of the staff have been requisitioned by other departments of the State. For example, the principal medical officer has served as a member of the General Medical Council, and in that capacity has taken part in revising the regulations for diplomas in public health. He has advised on public health questions referred to him by the Foreign Office and the Colonial Office, affecting this country's colonies and dependencies, and finally he has been consulted from time to time by the Privy Council Office and the Post Office on matters bearing on health questions. Dr. H. Franklin Parsons represented the Board at the meetings of the Committee of Advice on the Geological Survey. For several years past he has been engaged on an inquiry respecting hospital construction, and although he has retired from office arrangements have been made with him for the completion of that work. Dr. R. Bruce Low continued to serve on the Committee of the Advisory Board of the Army Medical Service. Dr. Theodore Thomson continued to act as representative of H.M. Government on the Committee of the International Office of Public Health. He has also continued to serve as a member of the Advisory Medical and Sanitary Committee for Tropical Africa appointed by the Secretary of State for the Colonies. Dr. G. S. Buchanan, assistant medical officer and chief inspector of foods to the Board, has made some inquiries under the Midwives Act, which have been utilised in the section of the present report dealing with puerperal sepsis. Dr. L. W. Darra Mair has acted as chairman of the Departmental Committee on Sanitary Matters, and Dr. R. Farrar has visited China as the representative of H.M. Government on the International Commission of medical experts to investigate the plague in Manchuria.

Tenure of Office by Medical Officers of Health.

Among special subjects dealt with in the report we note that the conditions of appointment (including their tenure of office) of medical officers of health have been in some respects improved by the issue of a new Order of the Local Government Board. Power is now given for the appointment by any sanitary authority of a medical officer of health *without limit of time*. In such cases the officer cannot be dismissed without consent of the central authority. Another section of the Order provides that an officer appointed for a specified time will after the expiration of that time continue to hold office indefinitely, *but he is still subject to three months' notice*, and no further approval by the Local Government Board is necessary. Dr. Newsholme predicts that inasmuch as the practice of annual reappointments will, by virtue of this clause, almost entirely cease, the medical officers will be able to perform their duties without the impending fear that they may not secure a majority of votes of the local council when reappointment becomes due. Whether or not this prediction is well founded future events must determine. We ourselves are strongly averse to the granting of uncontrolled powers of dismissal to a local authority, except in the rare instances in which there is practically no danger of abuse.

County Medical Officers of Health.

A General Order has recently been issued prescribing the duties of county medical officers of health. Briefly put, they include all the duties already devolving upon district medical officers of health, together with some others of a supervisory character. In particular, the county medical officer is required to inform himself of all influences affecting the public health in every part of the county, to consult with the district medical officers, and to present an annual report. This Order, by securing due supervision of local sanitary work by the county medical officer, will give additional guarantee of its accomplishment without fear or favour; and the reports of these officers will, it is hoped, give year by year a fairly complete conspectus of the health and sanitary condition of every administrative county. County medical officers are now generally debarred from private practice, and enjoy a fair measure of independence.

Improvement of Vital Statistics.

As a result of conference between the Board's medical officer and the Registrar-General, certain far-reaching improvements will shortly be made in the collection and presentation of statistics of sickness and mortality by which the returns of the local health officer will be coördinated with those of the General Register Office. New skeleton tables for the use of medical officers of health have already been distributed by the Board and will be used in the compilation of their reports for the year 1911 onwards. Under a new regulation the Board requires from every medical officer of health a weekly statement of the cases of infectious disease notified in his district. In return for this each contributing medical officer receives from the Board a summary of the returns of all the sanitary districts in England and Wales. By the help of these returns medical officers of health everywhere receive prompt and important warning respecting the danger of importation of infection from other districts, whilst the return to the central office enables a closer watch than heretofore to be kept of the prevalence of such diseases and the general health conditions of the country.

Auxiliary Scientific Investigations.

For several years past the Local Government Board has received a Parliamentary grant in aid of scientific investigations, and with the help of this useful work has been accomplished during the year under review. We may refer, as of special importance, to the work on the etiology of epidemic diarrhœa, conducted independently, but on similar lines, by Dr. C. J. Lewis, Dr. Sheila Ross, Dr. R. A. O'Brien, and Dr. J. Orr. An investigation into the possible conveyance of infection by flies has been carried out under the supervision of Dr. Monckton Copeman, in coöperation with Professor G. H. F. Nuttall, of Cambridge, and an account of a laborious investigation into the bacterial contents of the air of sewers and drains has been contributed by Dr. F. W. Andrewes. We have already noticed the special study of Dr. A. C. Inman on secondary infection in tuberculosis, a brief account of which appears in an appendix to the present report.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF COUNCIL.

AN ordinary meeting of the Council was held on Dec. 14th, Mr. RICKMAN J. GODLEE, the President, being in the chair.

A report was read from the Board of Examiners in Anatomy and Physiology for the Fellowship stating that at the examination recently concluded 127 candidates were examined, and that 32 were approved and 95 rejected.

A report was read from the Court of Examiners, and in accordance therewith it was resolved to issue Diplomas of the Fellowship to 30 successful candidates.

In accordance with a report from the Board of Examiners in Dental Surgery, it was resolved to issue Diplomas in Dental Surgery to 44 successful candidates.

The PRESIDENT reported the delivery of the Bradshaw lecture on Some Points in Heredity by Mr. R. Clement Lucas (see p. 1755 of our present issue). The best thanks of the Council were given to Mr. Lucas for his lecture, and he was requested to publish it.

Mr. C. B. Lockwood was elected a member of the Museum Committee in the vacancy occasioned by Mr. Godlee, the President having become an *ex-officio* member of the committee.

Mr. Edmund Owen was re-elected a member of the Court of the University of Liverpool for a period of three years.

A report from the committee on the annual report of the Council was considered, and it was resolved to take no action in reference to the Resolutions 3 and 4 carried at the annual meeting of Fellows and Members in November.

A protest was read against the National Insurance Bill from the wives of over 800 duly registered medical men of Manchester, Liverpool, Oldham, Blackburn, and other towns and places in England and Wales.

In response to a request from Sir William S. Church, chairman of the Brown Sanatory Committee of the University of London, the Council resolved to allow Mr. Twort, the superintendent of the Brown Institution, to give his course of five lectures at the College in January.

A letter was read from Sir James F. Goodhart, offering to present to the College a marble plaque of Mr. Edward Cock, President of the College in 1869. The offer was accepted with thanks.

A letter was read from Sir Henry Morris reporting the proceedings of the General Medical Council at their late session, and the best thanks of the Council were given to Sir Henry Morris for his services as a representative of the College on the General Medical Council.

Public Health.

REPORTS OF SCHOOL MEDICAL OFFICERS.

Borough of Macclesfield.—Mr. J. H. Marsh's report lays stress on those elementary questions which are so insistent in school work. It is noted that "without exception the boys at each age period whose teeth are classed as very bad are the lowest weights of all the boys examined." Cleanliness, too, is dealt with at length. "How can children," the report reads, "coming from a home where the only water-tap is in a yard common to several houses, and where all the hot water needed for bathing has to be got from a pan on the kitchen fire, be kept decently clean?" And the question is asked, "Are not school baths a logical necessity to compulsory school attendance?" Mr. Marsh answers that the installation of a system of shower baths would "immensely improve the general well-being, discipline, and self-respect of the children." And while agreeing that in some cases parental neglect is responsible for the children's filthy condition, he points out that as in most working-class homes in Macclesfield facilities do not exist for a thorough-going hot bath, "the systematic and regular bathing of a family of children by a tired mother with few facilities for obtaining a sufficient supply of hot water is a great tax on human endurance." Treatment of defects found is another question considered, and special arrangements for dental treatment of all children at 7 years are recommended. Vision defects are already dealt with by the prescription of spectacles by the ophthalmic medical inspector. Out of 61 nose and throat cases followed up by the nurses at the end of the year 28 had received some kind of medical attention, but in 33 nothing had been done. Mr. Marsh says that inspection without treatment merely means a waste of money and the accumulation of reports, and urges the establishment of a school clinic to treat nose and throat, dental, ear, and vision cases. It is interesting to notice in connexion with the feeding of school children that this was done in Macclesfield at six schools on the advice of the medical officer, and the children were also selected for feeding by him. A mid-morning lunch was given—bread-and-butter and milk, porridge and treacle and milk, or half milk cocoa and bread-and-dripping or bread-and-margarine and jam. "The children were quite unaccustomed to such good plain food, and appeared to have been brought up either on tea and bread-and-butter or expensive and innutritious delicacies."

Durham County Council.—Dr. T. Eustace Hill's report, while taking a broad sweep and being conceived from a standpoint which completely surveys the ground, yet finds room for all needed precise detail and for three special reports by medical inspectors which are of particular value. Dr. Alice M. Burn's report on "Clothing in Relation to Physique and Physical Exercise" makes some striking statements and some highly practical suggestions which it is much to be hoped will be taken up by the education authority. Dr. Burn states "that 70 per cent. of the girls in our elementary schools are physically victimised to their clothes.....The infant of 5 years just entering school already only too often bears the stigma of the binder in the laterally compressed thorax and the pigeon chest. The small school girl is now encompassed round about by quilted staybands of a semi-rigid type, thin string-like tape supports cut into the little shoulders, the costal margin is gripped by the returning tie tapes which pass from back to front, the whole garment expressive of constraint and compression. Lung expansion and chest movement are chronically restricted, the forward droop of the shoulders with its associated hollow clavicles and prominent abdomen, is initiated and encouraged, while the whole body axis is thrown into the worst possible position for practically all the physiological processes of respiration, digestion, and elimination. .....The real needs of the developing growing body, crying out at every natural movement for space and freedom to expand, are utterly ignored or denied." This is pretty strong condemnation, but every school medical officer must feel that it is justified and will be glad to have some of the deficiencies exactly defined. Most school medical officers also will have "removed or unfastened ten different items [of clothing] before reaching the poor little cramped chest beneath," and Dr. Burn states that she and the school nurse "have constantly remarked the better chest development and the good general physique of many of the so-called neglected cases." This latter observation may apply to country areas, but does not appear applicable to towns. A very practicable suggestion in order to further ideas of rational clothing is that the Durham Coöperative Stores (from which in this county practically every home purchases) should be induced to stock "school children's and infants' garments of a rational and hygienic type." This is merely, according to Dr. Burn, a matter of planning and cutting, and she proposes, if the education committee considers the matter momentous enough, "to submit a set of clothing similar to what I have introduced elsewhere and undertake any preliminary inquiries as to material, cost, output, &c." In illustration of the deficiencies of ordinary clothing, it is mentioned that at one school, where an enthusiastic teacher was conducting physical drill on the admirable new Board of Education syllabus lines, "the movements designed to develop waist and back muscles had all to be cut out, not to mention many of the leg exercises." Dr. Burn concludes her valuable paper by a plea for the introduction of morris-dancing and for instruction for sixth and seventh standard girls in personal hygiene and home management. Dr. J. G. W. Boleyn, in a report on the Effect of Dental Caries and Oral Sepsis upon Children's Health, gives a useful list of foods which cause and foods which prevent caries, and notes the greater relative prevalence of this condition amongst "better-class" children. Two further useful reports are added—on Amelioration, by Dr. Victoria E. M. Bennett, and on Personal Cleanliness, by Dr. Elizabeth N. Niel.

Borough of Newport.—The third annual report of the infantile health centre committee is issued from the health department of the Newport corporation and contains some interesting reading for educationists and school medical officers. An early paragraph states that "the results of the examinations of school children prove that one must search for the causes [of physical defects] at a still earlier age in the majority of cases." The committee which reports has been endeavouring to cope with the causes at an earlier period by providing "schools for mothers," where not only instruction in hygiene is provided but extra nutriment for nursing mothers in the form of milk. Help with rational clothing is given and a maternity club established. But the committee concludes that "a striking circumstance, however, continually presents itself to all who labour for the welfare of the infants of the nation. It is the intimate relation between child mortality and poverty." It is much to be hoped that the sphere of influence of this committee may extend and that many imitators may be found in other places.

VITAL STATISTICS.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1911.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases, it

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1911.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1911.	NOTIFIED CASES OF INFECTIOUS DISEASE.												DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.‡									Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.		
LONDON	4,522,628	—	1416	1052	—	104	2	40	739	6	20	3379	7·8	—	52	19	78	32	20	149	359	0·8	5827	14·1
West Districts.																								
Paddington	142,541	—	30	30	—	5	—	—	17	—	—	82	6·0	—	—	1	3	—	—	4	8	0·6	155	12·1
Kensington	172,296	—	28	21	—	2	—	—	17	—	—	68	4·1	—	—	—	2	—	—	4	6	0·4	169	11·0
Hammersmith	121,837	—	30	11	—	2	—	—	12	—	—	55	4·7	—	—	1	3	—	3	6	13	1·1	176	15·7
Fulham	153,726	—	55	44	—	6	—	3	26	—	—	134	9·1	—	—	—	8	2	2	3	15	1·0	192	13·6
Chelsea	66,218	—	15	13	—	2	—	—	10	—	—	40	6·3	—	—	—	2	2	—	3	7	1·1	86	14·0
City of Westminster	159,709	—	25	34	—	3	—	—	13	—	1	76	5·0	—	1	1	5	—	—	3	10	0·7	192	14·0
North Districts.																								
St. Marylebone	117,844	—	62	18	—	—	—	—	12	—	1	93	8·2	—	—	2	—	—	1	5	8	0·7	159	15·0
Hampstead	85,599	—	30	22	—	2	—	2	11	—	—	67	8·2	—	—	—	4	—	—	1	5	0·6	81	11·2
St. Pancras	218,031	—	55	72	—	6	—	3	31	—	—	167	8·0	—	—	1	3	2	2	6	14	0·7	296	14·8
Islington	327,234	—	111	84	—	12	—	1	54	1	—	263	8·4	—	1	2	5	—	1	7	16	0·5	401	13·3
Stoke Newington	50,669	—	11	13	—	—	—	—	10	—	—	34	7·0	—	—	—	1	—	—	—	1	0·2	63	13·6
Hackney	222,674	—	98	42	—	3	—	4	43	—	2	192	9·0	—	—	—	2	—	—	6	8	0·4	276	13·4
Central Districts.																								
Holborn	49,084	—	8	11	—	3	—	—	5	—	—	27	5·7	—	1	—	1	—	1	1	4	0·8	75	17·1
Finsbury	87,639	—	22	27	—	4	—	—	23	2	—	78	9·3	—	—	3	1	1	—	4	9	1·1	144	17·7
City of London	19,475	—	1	4	—	—	—	1	1	—	—	7	3·7	—	—	—	—	—	—	—	—	—	20	11·8
East Districts.																								
Shoreditch	111,284	—	21	24	—	3	—	—	24	—	3	75	7·0	—	1	2	1	1	1	4	10	0·9	149	14·7
Bethnal Green	128,247	—	22	23	—	4	—	1	38	—	—	88	7·2	—	1	—	2	2	1	7	13	1·1	204	16·8
Stepney	279,560	—	55	59	—	6	—	4	83	1	2	210	7·8	—	1	—	4	2	—	12	19	0·7	376	14·6
Poplar	162,290	—	28	37	—	4	—	1	29	—	2	101	6·5	—	—	2	5	5	2	6	20	1·3	256	17·0
South Districts.																								
Southwark	191,595	—	42	31	—	8	—	5	47	—	1	134	7·3	—	9	—	4	2	—	6	21	1·1	335	19·0
Bermondsey	125,840	—	42	27	—	2	—	1	29	—	—	101	8·4	—	2	—	1	1	—	8	12	1·0	197	16·7
Lambeth	298,032	—	131	57	—	12	—	5	39	1	4	249	8·7	—	1	—	5	3	3	13	25	0·9	420	15·2
Battersea	167,765	—	37	41	—	2	—	1	21	1	2	105	6·5	—	3	—	2	—	—	7	12	0·7	186	12·4
Wandsworth	313,389	—	130	77	—	10	—	4	32	—	—	253	8·4	—	—	2	6	4	2	18	32	1·1	317	11·1
Camberwell	261,407	—	110	39	—	—	—	1	37	—	—	187	7·5	—	7	—	—	2	—	6	15	0·6	337	13·9
Deptford	109,475	—	69	25	—	—	2	—	17	—	—	113	10·8	—	20	1	2	1	—	1	25	2·4	161	16·1
Greenwich	96,982	—	28	62	—	1	—	—	17	—	—	108	11·7	—	4	1	2	1	—	2	10	1·1	120	13·3
Lewisham	161,677	—	55	64	—	2	—	1	26	—	1	149	9·6	—	—	—	4	—	1	5	10	0·6	160	10·7
Woolwich	121,509	—	65	40	—	—	—	2	14	—	1	122	10·5	—	—	—	—	1	—	1	2	0·2	124	11·3
Port of London	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup. † The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard. ‡ Deaths from "typhus fever" and "other continued fevers" are not now distinguished in the Registrar-General's weekly returns; these two columns are therefore omitted from the Table.

appears that the number of persons reported to be suffering from one or other of the ten diseases specified in the table was equal to an annual rate of 7·8 per 1000 of the population, estimated at 4,522,628 persons in the middle of the year. In the three preceding months the rates were 4·4, 6·9, and 8·5 per 1000 respectively. The lowest rates last month were recorded in Paddington, Kensington, Hammersmith, Chelsea, the City of Westminster, Holborn, and the City of London; and the highest rates in Fulham, Hackney, Finsbury, Deptford, Greenwich, Lewisham, and Woolwich. The prevalence of scarlet fever showed a marked decline from that recorded in the previous month; among the several metropolitan boroughs the greatest proportional prevalence of this disease occurred in St. Marylebone, Hackney, Lambeth, Wandsworth, Camberwell, Deptford, and Woolwich. The Metropolitan Asylums Hospitals contained 2103 scarlet fever patients at the end of last month, against 1324, 1656, and 2152 at the end of the three preceding months; the weekly admissions averaged 254, against 261 and 317 in the two preceding months. Diphtheria was slightly more prevalent than it had been in the preceding month; this disease was proportionally most prevalent in Fulham, St. Pancras, Finsbury, Greenwich, Lewisham, and Woolwich. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals, which had been 720, 892, and 1143 at the end of the three preceding months, had risen to 1327 at the end of last month; the weekly admissions averaged 180, against 138 and 168 in the two preceding months. The prevalence of enteric fever showed a considerable decrease from that recorded in either of the two preceding months; the greatest proportional prevalence of this disease occurred in Fulham, Islington, Holborn, Finsbury, and Lambeth. There were 85 enteric fever patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 56, 155, and 160 at the end of the three preceding months; the weekly admissions averaged 9, against 39 and 23 in the two preceding months. Erysipelas was proportionally most prevalent in Stoke Newington, Hackney, Finsbury, Shoreditch, Bethnal Green, Stepney, Southwark, and Bermondsey. The 40 cases of puerperal fever notified during the month included 5 in Southwark, 5 in Lambeth, 4 in Hackney, 4 in Stepney, 4 in Wandsworth, 3 in Fulham, and 3 in St. Pancras. Of the 20 cases of poliomyelitis notified, 4 belonged to Lambeth, 3 to Shoreditch, and 2 each to Hackney, Stepney, Poplar, and Battersea; and 2 of the 6 cases notified as cerebro-spinal meningitis belonged to Finsbury.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the several boroughs in which the deceased persons had previously resided; the death-rates from all causes are further corrected for variations in the sex- and age-constitution of the populations of the several boroughs. During the five weeks ending Dec. 2nd the deaths of 5827 London residents were registered, equal to an annual rate of 14·1 per 1000; in the three preceding months the rates had been 18·9, 16·8, and 15·1 per 1000 respectively. The death-rates last month ranged from 10·7 in Lewisham, 11·0 in Kensington, 11·1 in Wandsworth, 11·2 in Hampstead, 11·3 in Woolwich, and 11·8 in the City of London, to 16·7 in Bermondsey, 16·8 in Bethnal Green, 17·0 in Poplar, 17·1 in Holborn, 17·7 in Finsbury, and 19·0 in Southwark. The 5827 deaths from all causes included 52 from measles, 19 from scarlet fever, 78 from diphtheria, 32 from whooping-cough, 20 from enteric fever, and 149 among children under two years of age from diarrhœa and enteritis. No death from any of these diseases was recorded last month in the City of London; among the metropolitan boroughs they caused the lowest death-rates in Kensington, Islington, Stoke Newington, Hackney, and Woolwich, and the highest rates in Hammersmith, Chelsea, Finsbury, Bethnal Green, Southwark, Wandsworth, Greenwich, Poplar, and Deptford. The 52 deaths from measles were less than one-third of the corrected average number in the corresponding period of the five preceding years; of these 52 deaths, 20 belonged to Deptford, 9 to Southwark, 7 to Camberwell, 4 to Greenwich, 3 to Battersea, and 2 to Bermondsey. The 19 fatal cases of scarlet fever were 28 fewer than the corrected average, and included 3 in Finsbury, 2 in St. Marylebone, 2 in Islington, 2 in Shoreditch, 2 in Poplar, and 2 in Wandsworth. The 78 deaths from diphtheria were slightly below the corrected average; this disease was proportionally most fatal in Fulham, Chelsea, the City of Westminster, Hampstead, and Poplar. The 32 fatal cases of whooping-cough were 26 below the corrected average number, and included 5 in Poplar, 4 in Wandsworth, and 3 in Lambeth. The 20 deaths referred to enteric fever showed a decline of 8 from the corrected average number; of these 20 deaths 3 belonged to Hammersmith, 3 to Lambeth, and 2 each to Fulham, St. Pancras, Poplar, and Wandsworth. The 149 deaths from diarrhœa and enteritis among children under two years of age were less than half the number in the previous month; the greatest proportional mortality from this cause was recorded in Hammersmith, Chelsea, Finsbury, Bethnal Green, Bermondsey, and Wandsworth. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases (excluding diarrhœa) was 47 per cent. below the average.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Order in Council of April 1st, 1881, Fleet-Surgeon Hubert William Austin Burke has been placed on the Retired List at his own request.

The following appointments have been notified:—Fleet-Surgeon: G. T. Bishop to Malta Hospital. Staff-Surgeons: D. V. Lowndes to the *Pembroke*, for R.N. Barracks; and R. R. Horley, L. M. Morris, and G. H. M. Mills to the *Victory*, additional, for disposal. Surgeons: A. D. C. Cummins to the *Victory*, for R.N. Barracks; W. R. Harrison to the *Victory*, additional, for disposal; G. Moir to the *Vivid*, additional, for disposal; and G. T. Verry to Haslar Hospital.

ARMY MEDICAL SERVICE.

Surgeon-General Sir Francis W. Trevor, K.C.S.I., C.B., K.H.S., is retained supernumerary to the establishment, under the provisions of Articles 92 and 472 Royal Warrant for Pay and Promotion, 1909 (dated Dec. 11th, 1911). Colonel Thomas M. Corker to be Surgeon-General, vice Sir F. W. Trevor, K.C.S.I., C.B., K.H.S. (dated Dec. 11th, 1911). Colonel (temporary Surgeon-General) William Babtie, V.C., C.M.G., to be Surgeon-General to complete establishment (dated Dec. 11th, 1911). Lieutenant-Colonel James M. Irwin, from the Royal Army Medical Corps, to be Colonel, vice T. M. Corker (dated Dec. 11th, 1911).

ROYAL ARMY MEDICAL CORPS.

Lieutenant Arthur J. O. Wigmore resigns his commission (dated Dec. 16th, 1911).

Lieutenant-Colonel G. G. Adams, commanding the Military Hospital at Colaba, Bombay, has been selected for the higher rate of pay under Article 317 of the Royal Warrant. Lieutenant-Colonel T. McCulloch has arrived home, tour-expired, from India, and has been appointed in charge of the Medical Divisions of the Royal Victoria Hospital at Netley. Lieutenant-Colonel M. J. Sexton, lately in medical charge of the Military Hospital at Arbor Hill, Dublin, has embarked for a tour of service in South Africa. Lieutenant-Colonel J. Donaldson, in charge of the infectious diseases hospital at Aldershot, has been detailed by the War Office for a tour of service in India, and on arrival will be posted for duty in the Second (Rawal Pindi) Division. Lieutenant-Colonel T. Daly has been selected to hold Medical Charge of the Station Hospital at Peshawar. Lieutenant-Colonel M. P. C. Holt, D.S.O., honorary surgeon to the H.E. the Viceroy of India, has been appointed to command the Station Hospital at Kasauli. H.E. the Commander-in-Chief in India has been pleased to grant an extension of the command of the Station Hospital at Lucknow to Lieutenant-Colonel H. N. Thompson, D.S.O., honorary surgeon to H.E. the Viceroy. Major G. M. Goldsmith has been selected for appointment to command the Station Hospital at Lebong. Major T. H. J. C. Goodwin, D.S.O., on completion of his Indian tour of service, has been appointed to the Southern Command. Major F. Harvey, from Devonport, has taken up duty at Bodmin. Major L. N. Lloyd, D.S.O., on completion of his tenure of appointment as adjutant of the Royal Army Medical Corps School of Instruction at London, has been posted for duty in the

Western Command. Major F. J. C. Heffernan, from the London District, has taken up duty with the Fifth (Mhow) Division in India. Major S. de C. O'Grady has been transferred from the Military Hospital at Khartoum to Cairo. Major H. E. Staddon, from Shorncliffe, has been appointed to the Military Hospital at Dover. Major R. H. Lloyd, lately adjutant of the Royal Army Medical School of Instruction at Exeter, has embarked for a tour of service in India, and on arrival will be posted to the Third (Lahore) Division. Major E. P. Sewell, from Belfast, has taken up duty in Ceylon. Major J. V. Forest, in medical charge of the troops at Kasr-el-Nil, Cairo, has been transferred for duty at the Military Hospital, Khartoum. Major J. D. McCarthy, from Multan, has taken up duty at Rawal Pindi. Captain E. V. Aylen has been transferred from Nowshera to Barian. Captain J. M. H. Conway, from the Royal Infirmary, Phœnix Park, Dublin, has taken up duty as Adjutant of the Royal Army Medical Corps School of Instruction at Leeds in succession to Major H. S. Roch. Captain F. M. Parry, from Maidstone, has embarked for a tour of service in Mauritius. Captain J. W. S. Seccombe has arrived home for duty from Nasirabad. His Honour the Lieutenant-Governor of the United Provinces in India has been pleased to appoint Captain T. Scatchard to hold Civil Medical Charge of Ranikhet in addition to his military duties in succession to Major W. G. Beyts. Captain S. M. W. Meadows has taken over Charge of the Military Families Hospital at Tidworth Park, Salisbury Plain. Captain F. W. W. Dawson, from Dublin, has embarked for a tour of service with the Northern Army in India. Captain T. J. Potter, at present employed in the London District on medical recruiting duty, has been placed under orders for a tour of service in Egypt. Captain H. G. Sherren, from Colaba, and Captain C. F. White, from Jhansi, have been detailed for duty on board the troopship s.s. *Dongola*, leaving Bombay for Southampton on Dec. 28th. Captain A. W. Sampey, on relief by Lieutenant-Colonel F. W. H. Burton, in charge of the Military Hospital at Warley, has been granted six weeks' leave of absence prior to embarkation for a tour of service in India. Captain J. Powell has arrived home on leave of absence from Egypt. Lieutenant H. Gall, from Dagshai, has taken up duty at Simla. Lieutenant A. S. M. Winder, from the Curragh, and Lieutenant M. White, from Bordon, have embarked for a tour of service in India. Lieutenant L. F. K. Way, from Cosham, has been transferred for duty at the Military Hospital, Hilsea. Lieutenant H. F. Joynt, from Hounslow, has embarked for a tour of service in South Africa. Lieutenant G. P. Taylor has been transferred from Irvine to Glasgow for duty at the Military Hospital. Lieutenant S. S. Dykes, on the closing of the Training Camp at Barry, has been posted to Aberdeen. Lieutenant S. W. Kyle, from Jubbulpore, has been appointed to the Station Hospital at Jhansi. Lieutenant A. W. Byrne, from Dalhousie, has taken up duty at Lahore Military Hospital.

INDIAN MEDICAL SERVICE.

The King has approved of the confirmation of the commissions of the following Lieutenants on probation with effect from July 29th, 1911:—Edward Slade Goss and Percival Sandys Connellan.

The King has approved of the retirement of Lieutenant-Colonel D. G. Crawford (dated Dec. 5th, 1911).

H.E. the Viceroy and Governor-General of India has been pleased to appoint Colonel J. Smith, officiating principal medical officer of the Secunderabad Brigade, to be an Honorary Surgeon on His Excellency's personal staff, in succession to Surgeon-General P. H. Benson, retired. Lieutenant-Colonel W. R. Edwards has arrived home on leave of absence from India. Major F. F. Elwes has been appointed Surgeon to H.E. the Governor of Madras. Major A. M. Fleming, civil surgeon at Raipur, has been granted furlough on medical certificate home from India for one year. Major H. J. Walton has been selected for appointment as Civil Surgeon at Saharanpur. The Chief Commissioner of the Central Provinces has appointed Captain M. F. Reaney, civil surgeon at Wardha, to the Executive and Medical Charge of the Wardha District Jail. On relief by Major T. G. N. Stokes, of the office of the Sanitary Commissioner of the Central Provinces, Major W. H. Kenrick has been placed on special duty in connexion with the investigation and prevention of malarial fevers in the Central Provinces. Major J. W. F. Rait, Bengal Presidency, has been permitted by the Right Hon. the Secretary of State for India to extend his leave of absence by four months. Major A. A. Gibbs has been appointed Medical Storekeeper to the Government of India at Lahore, in succession to Lieutenant-Colonel P. W. O'Gorman, who has vacated the appointment. Surgeon-Captain W. A. Murray, in medical charge of the Assam-Bengal Railway Volunteer Rifles, has been granted leave of absence home from India for one year and three months by the General Officer commanding the Assam Brigade. Captain A. W. Overbeck-Wright, officiating superintendent of the Central Prison at Agra, has been appointed to officiate as Superintendent of the Lunatic Asylum at Agra, in succession to Major A. W. R. Cochrane, granted leave of absence. Captain C. F. Marr, medical storekeeper to the Government of India at Bombay, on relief by Major F. E. Swinton, returning from furlough, has been detailed to rejoin his regiment. Captain W. Jeudwine has been appointed to officiate as Civil Surgeon of Simla, West, during the absence on deputation to Delhi of Lieutenant-Colonel C. Duer. Captain J. W. McCay, Bengal Presidency, has been permitted to extend his leave of absence home from India for one month on the recommendation of a medical board. Captain A. W. Howlett, whose services have been placed temporarily at the disposal of the Government of the United Provinces, has been appointed to officiate as Superintendent of the Central Prison at Agra. Captain N. S. Wells, on return from leave, has been appointed Civil Surgeon at Ghazipur. Captain D. Munro has been granted an extension of leave for three months by the Right Hon. the Secretary of State for India. Captain H. C. Keates has relinquished charge of the duties of superintendent of the Jullundur District Jail. Captain E. T. Harris has been granted four months' extension of his leave of absence. Captain G. D. Franklin has taken up duty as Agency Surgeon at Gilgit on return from leave. The services of Captain E. C. C. Maunsell have been placed temporarily at the disposal of the Government of India. Captain J. Cunningham has been selected for appointment to the Bacteriological Department. Captain N. S. Sodhi has taken up duty as Plague Medical Officer in the Gurgaon District.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Captain and Honorary Major William V. Sinclair (Honorary Lieutenant in the Army) resigns his commission, with permission to retain his rank and wear the prescribed uniform (dated Dec. 16th, 1911).

TERRITORIAL FORCE.

Royal Army Medical Corps.

2nd East Lancashire Field Ambulance, Royal Army Medical Corps: Lieutenant William F. Munro to be Captain (dated Sept. 23rd, 1911).

1st Wessex Field Ambulance, Royal Army Medical Corps:—The undermentioned officers to be Captains (dated Nov. 5th, 1911): Lieutenant Thomas Duncan, Lieutenant George P. D. Hawker, Lieutenant John Miller, and Lieutenant Richard Eager.

Supernumerary for Service with the Officers Training Corps.—The undermentioned officers from the Unattached List for the Territorial Force are appointed, with rank and precedence as on the Unattached List, for service with the medical unit of the University of London Contingent, Senior Division, Officers Training Corps (dated Dec. 16th, 1911): Captain Archibald Montague Henry Gray, Lieutenant (Provisional Captain) Robert Davies-Colley, Lieutenant (Provisional Captain) Alfred Edward Johnson, Lieutenant John Charlton Briscoe, Lieutenant Thomas Bramley Layton, Lieutenant Gordon Clunes McKay Mathison, and Lieutenant William Victor Corbett.

THE MILITARY SURGEON.

In the December issue of the *Military Surgeon* Major Paul F. Straub, of the General Staff, U.S. Army, Sanitary Inspector, Manœuvre Division, gives an interesting account of the working of the Medical Department of the division at San Antonio, Texas, under the new field service regulations. The Medical Department was made responsible for the sanitary service of the division, and was given by the commanding general the necessary authority and means for carrying it on. The result was that after the lapse of four months the sick rate of the division is reported as never having exceeded half the average sick rate at the military

posts. General orders defined and prescribed the power and authority of the chief surgeon and the sanitary inspector, and dealt with the water-supply, regimental surgeons, disposal of wastes, the sale of foods and drinks in camps, and the control of sanitary squads. Illustrations are given of a type of garbage incinerator which was finally developed as the result of experiment, and was found very efficient.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—It is desirable that the action of the medical profession with regard to the National Insurance Act should be based on a clear enunciation of just principles, and on a recognition of undeniable facts. The Act is founded on a system of contract medical practice.

Now it cannot be denied that (1) contract practice involves an undertaking by the practitioner to perform what it is certain that he will not always be able to perform; (2) contract practice destroys the relation of mutual confidence between patient and practitioner, and introduces an opposition of interests between them; (3) under contract practice no patient will ever be satisfied with the amount of attention which he receives from his doctor, however conscientious and diligent that doctor may be; (4) under contract practice the medical man is certain to be grossly overworked, to be subject to unreasonable calls (and at unreasonable hours) for the most trifling ailments, and to be constantly liable to dismissal for failing to perform what it will be impossible for him to perform.

If these facts are undeniable, is it not clearly the duty of every member of the profession to refuse to work under the Act *so long as it is administered on a basis of contract?*

I am, Sir, yours faithfully,

Dec. 19th, 1911. DAVID B. LEES, M.D., F.R.C.P.

To the Editor of THE LANCET.

SIR,—The amount of unpaid labour imposed on medical men by the services that they are expected to give on the committees of this Act does not appear to have received the attention that their onerous nature demands. The Insurance (Health) Committees are to consist of from 40 to 80 members, their meetings will necessarily be protracted, frequent in number, and often distant from the residence of the medical men serving on them, so that much time and expense will be involved in attendance.

This, however, would be only a portion of the *corvée* since much more work would be entailed by interviews and correspondence with medical co-workers and attendance at the meetings of the local panel or committee. This work will also involve considerable friction and worry, increased by the knowledge that the work is utterly useless and hopeless, since they will always be in a minority on the Insurance Committees of 1 to 16.

The time occupied in service on a Health Committee could scarcely occupy less than ten working days of eight hours per annum and might easily be more. These committees, allowing for the county subdivisions, will number at least five hundred and the number of medical men employed on them must exceed a thousand. The extent of the medical *corvée* can be easily estimated. The Insurance Committees are, so far as the profession is concerned, a sham. The Friendly societies will dominate them completely and the profession will be handed over without power of resistance to the tender mercies of bodies whose "sweating" proclivities are well known. If the medical profession accepts the *corvée* imposed on it its members will be reduced practically to a state of socialistic serfdom.

I am, Sir, yours faithfully,

Queen Anne-street, W., Dec. 18th, 1911. HENRY RAYNER.

To the Editor of THE LANCET.

SIR,—The Chancellor of the Exchequer has stated that payment per visit is an impossibility under the present Insurance Bill. The logical conclusions to be drawn are: (1) the Government is dependent for the success of the Bill upon the *charity* of the medical profession—which ruins the Bill as a sound financial proposition; (2) the Government is deliberately *sweating* the medical profession—a disgrace to the originators of the Bill and an insult to the profession.

The "six cardinal points" of the British Medical Association *were* loyally accepted even by those of us who were not members, but in view of the way in which the Asssociation has been flouted I feel that the profession should now stand firm and demand *payment for work done*, and nothing less. The attitude of the profession has been hitherto very passive, but the apathy of its leaders is far from creditable. Does the General Medical Council mean to do nothing? Can it without protest allow the profession to be sweated? Is the charity of the profession to be farmed out by the State for profit without some intervention from the General Medical Council, or does it allow the State to do what it forbids to a commercial enterprise? Let us stop the huckstering and bargaining that have gone on and remember the dignity of our profession.

Payment for work done—that and nothing else—should be our watchword. Cannot this matter be taken in hand at once by some influential organisation? I am confident that it would meet with the entire support of the profession.

I am, Sir, yours faithfully,

Carlisle, Dec. 18th, 1911. RICHARD SEDGWICK, M.D. Cantab.

To the Editor of THE LANCET.

SIR,—Can you or any of your readers inform me why the British Medical Association in its six points insists on a wage-limit? Does it cost more to attend a man earning £2 2*s.* a week than a man sitting on the next stool earning only £2? Is there any logical basis for fixing any wage-limit, unless we propose to continue the semi-charitable methods of medical attendance that at present characterise club practice? If the pay fixed is *adequate* I cannot see that a wage-limit is needed.

The British Medical Association would have been better advised if they had faced the question of adequate pay in the first instance. If they had said 8*s.* 6*d.* per annum, to include drugs and dressings (not appliances)—in fact, the terms now paid for Post Office employees—they would have had practically all the medical men engaged in industrial practice behind them, and I honestly think the Government would have yielded to these terms. If any general practitioner agrees with me that an endeavour should now be made to secure these terms from the Commissioners I should be glad if he would send me a postcard.

I am, Sir, yours faithfully,

CHARLES F. SEVILLE, M.B. Lond.

Oulton, Leeds, Dec. 18th, 1911.

To the Editor of THE LANCET.

SIR,—I have seen nothing during this controversy as to the attitude that consultants will take, now that the Bill has passed, towards those members of the profession who may be willing to work under the Act in its present form.

In common with many other practitioners, I should be interested to learn if the consultants will be willing to meet them as usual. Is there any sort of authoritative body to speak for consultants, or will any senior man among them give his opinion?—I am, Sir, yours faithfully,

FRANK G. WALLACE.

Earl's Court-road, London, S.W., Dec. 16th, 1911.

To the Editor of THE LANCET.

SIR,—Dr. Luard, I think, says everything that can be said in favour of retention of our time-honoured system of payment by fee, and has thought of two or three fresh things to say against the system I am advocating—that of payment by premium *per capita*. Several of his points are well thought out and clearly put, and I will essay to meet them later on. He fails, however, to approach my two main standpoints. I will repeat them. 1. In the face of a constantly falling sickness rate, payment by fee inevitably means a declining income. I assert that every income

derived from, say, 1000 private clients to-day is much less than it was ten years ago, and is still declining. (It has required an increase of 200 in that time to keep my own income steady.) How are we, then, going to meet this decline? He proposes no remedy. There is no remedy but the system I advocate, unless we are turned into State medical officers. 2. Payment *per capita* on an adequate premium is more remunerative than payment by fee for work done. A thousand clients paying anything you like *per capita* per annum will yield more income than 1000 private clients of the same wage or salary or income class. I say "anything you like" without hesitation, because where there is a low club premium one may take it there will also prevail a low scale of fees per visit. Payment *per capita* is adaptable to all ranks of the community, and when one has gained a thorough grasp of the elementary principles of insurance one will see that this method is founded on a scientific basis. A considerable number of doctors and most of the public have no clear comprehension of the principles that underlie insurance. In illustration of this charge let me quote Dr. Luard: "What value will he place on services obtained for 4*s*. a year? He will value them just at four shillings' worth." If Dr. Luard goes to a club patient down with pneumonia, with the idea in his head that he is only being paid 4*s*. for his attendance on this patient, he is making a serious mistake. It is a mistaken idea that affects seriously the whole of his conduct of the case. With this idea in his head he naturally feels he is in the position of one who is giving a lot for next to nothing; that he is being exploited, imposed upon, sweated, and cheated; that "he need not give more than value for the money"; that "his sense of honour does not compel him to do more than earn his money." Club patients often imagine this also. Now, that the patient only pays 4*s*. per annum is true, but the service rendered to the individual is paid for by the combined premiums of all the club members.

It is owing to forgetting this fact that club work has been bespattered with every abusive epithet in the language. "Rural Practitioner's" letter last week will enlighten many as to the astonishingly small amount of work there is to do for the 4*s*. or 6*s*. *per capita* per annum. I am not protected as that practitioner is by anonymity, or I could give details that would endanger my very existence as club doctor. Dr. Luard should remember that the sum total of the members' premiums constitute the club salary which pays for all the visits he makes throughout the year to club patients. Many club members never degenerate into patients, but they are "covered" all the time. For 20 years and more I have paid large premiums to our medical sickness society and have not had a day's sick pay, but I have been "covered"! Is it "unethical" for this society to take all this money from me without rendering me any services? Is it wicked or unjust to receive premiums year after year from club members who are foolish enough never to call upon my services? Do I feel aggrieved? Have not I and they been "covered" all the time we have not been ill?

Once it is recognised that we get paid as much for all our year's visits to club patients as we do for our year's visits to private cases, opposition to the system must collapse. With free choice of doctor and under the Act, for instance, Nos. 1, 2, 4, and 5 of Dr. John Dunlop's objections in last week's issue at once fall to the ground; only No. 3 remains standing. Once it is recognised, we should realise that the club patient has hitherto not been treated with justice—he is entitled to all that a private patient expects and gets from his doctor "as measured by our visits and their results." If any one doubts whether his own practice would show results like those recently discovered in mine and related in my previous letters, I beg him to investigate. It is a very simple piece of work and can be done in half an hour. One should ascertain the number of club members and the total amount received from them in a year. Then from the ledger one should count all the names therein and now living, adding names of members of each household, and not forgetting to count in the names of those one knows would come to us if they ever became ill (there are many such in every practice), and add up the total—this will give the number of one's *private clients*. Finally, ascertain one's income from *private patients*. Thus we have: so many club *members* pay so much salary; so many private *clients* yield so much income. Any difference there may be I am confident in believing will be found to be to the advantage of club practice. And it is a difference in its favour that is growing greater every year. In figures I may put it thus: 500 or *x* club members will yield more income than 500 or *x* private clients of the same class.

"Any transaction in which the payment is a known fixed sum and the work an unknown variable quantity stamps itself as a gamble," says Dr. Luard, having in mind, of course, this pernicious payment *per capita*. This statement would be perfectly true, not only of insurance for medical attendance, but also of insurance against burglary, or fire, or broken windows, but for one slight flaw in the premiss. He describes the work as an unknown variable quantity. Let me ask him if it is not true that birth-rates and death-rates and sickness-rates, &c., vary so slightly year by year that actuaries are enabled to base their calculations for premiums for insurance against all sorts of risks, on the recurrence of an average. How could insurance companies do business if they had nothing but a gambling guess to work on? Does he not know that the number of sick days that any club will have to find sick pay for next year can be calculated—I do not say to a certainty—but to a marvellous approach to actuality?

But let us look at the sentence again. "Any transaction in which the payment is a known fixed sum and the work an unknown variable quantity stamps itself as a gamble." In medical practice a confinement which entails "work of an unknown variable quantity" is paid for by a known fixed sum—it may be months ago the lady's inquiry was answered as to fee. Here is gambling, indeed. Work variable? There are no two confinements alike. I may, indeed, say that no two consecutive visits on a morning's round are alike. They are all dissimilar, variable, and unlike. Dr. Luard may "give substantially the same time and care to all cases," but are these the only factors of a visit? What of distance, quantity, period of day or night, professional acumen called forth, &c. Doesn't he discriminate at all? Dr. Luard thinks "that from reasons of expense private clients only call us when they need." And do they always pay us for the call and do we only call when they need us? A friend of mine was once called to see a child with measles at the house of one of his wealthiest patients. He wrote a prescription, gave full directions as to diet, &c., and on leaving was told by the mother that he need not call again unless he was called, and that if he should be needed she would call him. As he was not called he naturally concluded he was not needed, so of course he did not call, but a few weeks afterwards he heard from his chemist that the whole family of eight children had heroically struggled through measles on that prescription and those directions.

There will be "enormously enhanced work," Dr. Luard tells us, if payment is to be on the *per capita* system. Is, then, the nation, on the Act coming into operation, suddenly going to take on fearsome unknown diseases, to pick up germs we have never dreamt of, to hurt itself in quantities we have never known before? Or is the nation going to set about raising its birth-rate? To quote Dr. Luard again, but lastly, "When one considers the quality of work turned out by overworked people I think it will be admitted," &c. This is, of course, a jibe at the sort of work a club doctor does when he is in the thick of influenza. It is, however, quite easy to twist this argument to face the case of the fashionable West-End physicians, who, I gather from my morning's paper, "are exceedingly busy now that winter colds have descended upon us." I trust the quality of the work of our *confrères* of the West-End does not deserve the description Dr. Luard applies "to the work of over-worked people."

I am commiserated for wasting my efforts on "a deservedly lost cause." Is it going too far to say of "payment by fee for work done" so ably defended by my opponent that it was seen to sicken on the day the first medical officer of health was appointed, and that it has been failing visibly ever since, and that the attending physicians have now given up hope of its recovery.—I am, Sir, yours faithfully,

West Mersea, Colchester, Dec. 17th, 1911. B. HALL.

To the Editor of THE LANCET.

SIR,—Black and white do not differ more from each other than do the extreme opinions as to what would be a fair rate of payment for the medical men, by means of whom the Insurance Bill would have to be worked. If one could find some guide as to what has been fixed as a fair rate by the

Government in the past in some like circumstances, it would be possible to form some basis upon which to build. Luckily there is one such arrangement in being, and there has been for many years. The surgeons appointed to attend the coastguards are paid at the rate of half-a-crown an attendance, and a shilling a mile is allowed for mileage. This is modest enough payment to suit the most fastidious of economists. Surely no one would suggest that the visit of a skilled medical man is to be valued at less than half-a-crown, or that for mileage he should be content with less than a livery stable keeper. It will no doubt at once be argued by the promoters of the Bill that the funds to be forthcoming will not allow of anything like such a rate of payment, and that we must take a capitation fee of so much. In plain English this means that the amount per visit statistically worked out from the amount of the proposed capitation fees would come to much less than the half-a-crown together with the amount for mileage, or, in other words, that a great nation means to force medical attendance on its citizens by exploiting the services of its medical men like any East-end employer of sweated labour.

But a Government department has seen fit to institute this very rate of payment for attendance on one of the most healthy classes of man to be found in the country. We should be required to attend the halt, the lame, and the blind; and the whole average of the health would be much lower than that of the coastguards.

If the authorities persist that the money cannot be forthcoming in that amount, what is that to us? We never asked for any interference with our professional relations, nor if we are anything better than idiots born will we take anything less than the Government's own standard. Mayhap the authorities will say that they cannot trust us not to push in unnecessary visits if we are to be paid for work done. Be it so; but neither can we trust the patient not to take advantage of us if a capitation fee be fixed, and as the insulted party we are entitled to the first shot.

If we stand firm for this very modest payment, and if therefrom the Bill become a dead letter, the people who will think much harm will come of that must be very few and far between. Medical men as a class are educated men, and necessarily not likely to be blind worshippers of socialism and bureaucratic forms of government; nor possibly have their experiences of the moral influence of insurance in the past been such as to cause them to regret, from the point of view of the national character, any prevention of its further extension.

If medical men tamely submit to be at the beck and call of the populace, day or night, wet or fine, snow, hail or sunshine, without being paid adequately for work done, they will deserve the life of slavery to which they will undoubtedly condemn themselves. Also let them remember that they hold the position they now do, not only for their own interests but also in trust for the posterity of the profession, possibly for their own sons. One of the "six cardinal points" is that the remuneration shall be according to the will of the profession, and such as is suitable to different areas. Let the fee suitable in each area be at the rate of half-a-crown a visit and a shilling a mile for mileage, and let no single division make agreement for a penny less, and it must inevitably come to pass that in spite of their promise of the "gift" of medical attendance by the process of the outrageous sweating of the medical profession, the promoters of the Bill will find that they have perforce to give way to the interests of the medical fraternity.

I am, Sir, yours faithfully,

R. N. WEEKES, M.R.C.S. Eng., L.R.C.P. Lond.

Modbury, South Devon, Dec. 14th, 1911.

To the Editor of THE LANCET.

SIR,—The above Bill, as last passed by the Commons, provides that doctors acting under this Bill shall *not* dispense, nor supply drugs to "insured persons." This is a very serious thing, and should be amended. Doctors should now know—and if they do not it is their own shameful fault—that Clause 15, line 30, p. 17, provides that the insured person shall "receive adequate medical attendance and treatment." The same clause (5), p. 19, provides that they shall receive "proper and sufficient drugs and medicines and prescribed appliances" if ordered by the insurance doctor. The same clause (ii.), p. 20, provides that no arrangement shall be made by a "Local Insurance Committee with a medical practitioner under which he is bound or agrees to supply drugs or medicine to any insured persons." On p. 21, line 10, the right of the "assistant to any apothecary" (a licence still granted by the Apothecaries' Society, London), "to compound and dispense medicines" is preserved. But as there are not many doctors holding the Apothecaries' Society medical diploma (L.S.A. Lond.), this proviso affects very few doctors. Also, I understand, that Society does not now grant many licences as "assistant apothecaries," most men now taking the chemists' certificate from the Pharmaceutical Society. But even if all doctors could supply drugs to insured persons, it would not pay them as the actuarial reports upon the Insurance Bill are worked out upon a basis of 4*s.* per member per annum to the doctor, and 2*s.* to the chemist per annum per member. No respectable doctor could honestly supply good reliable drugs to insured persons for 2*s.* per annum. This is now especially so, as under the Bill all ages over 16 are eligible to become members, including thus Friendly Societies, Post Office depositors, old-age pensioners, those under the unemployment clauses, and those discharged from the army, navy, and mercantile marine.

Some may fancy—but they have no right to fancy, as this Bill is too serious a proposal—that because Clause 15 (3), p. 19, provides that if insured persons have an income "*exceeding* a limit to be fixed by a committee," and that such insured persons "may make their own arrangements for receiving medical attendance and treatment, including medicines and appliances," that this is applicable to *all* insured. Nothing of the kind. Clause 1 provides that there are two kinds of insured persons, "employed contributors" and "voluntary contributors." No income limit is fixed for the former, while £160 is fixed for the voluntary. But even here the Bill makes no provision as to how we are to find out an insured person's income. The fact is, no such proviso exists, or can exist. Had there been a house rent basis instead of income basis, things would have been easier unravelled.

The fact that by Clause 15, A (1), p. 20, the scale of prices fixed by the committee is binding upon the chemists emphasises my point. It will therefore be seen by those who are not "addled fools" that this Bill proposes to repeal those sections of the Medical Acts which now empower doctors to charge for the supply of drugs. It also proposes to repeal the charters of the Royal Colleges of Surgeons and Physicians, and the two Apothecaries' Societies, and also the Pharmacy Acts. Any sensible person should see that doctors must be empowered to supply, and charge for the supply of drugs in all cases where an anæsthetic is needed, in cases of poisoning, in all emergency cases, and where they are far from a chemist. I therefore suggest that the Bill be amended so as to empower a doctor to either agree or disagree to supply medicines to insured persons; that all be permitted to supply and charge for medicines supplied in all cases of urgency; and that a yearly grant of 5*s.* be granted to each doctor per member per annum, or that the scale of charges for chemists be the scale of charges for doctors who agree to supply medicines to insured persons. Further, I would suggest that it be made by this Bill for any medical practitioner to supply and charge for medicines, except in case of urgency, on and after December, 1954. There is a precedence for this in Section 27 of the Medical Act, 1858, which provides that if *any person* was practising medicine in England before 1815, whether he had or had not a medical qualification, such person was entitled to have his name entered on the Medical Register of the United Kingdom.

May I very seriously urge all Members and Licentiates of the Colleges of Surgeons and Physicians and of the Apothecaries' Societies to bring at once the above facts to the notice of their Colleges and also to the General Medical Council.

I am, Sir, yours faithfully,

Liverpool, Dec. 15th, 1911. ROBERT R. RENTOUL.

To the Editor of THE LANCET.

SIR,—Now that it has been decided not to work the Act unless the six cardinal demands are granted, we are confronted with the necessity for a definite interpretation of the words "adequate remuneration." Everyone but the Chancellor has shied at any attempt to fix a figure, even a

minimum. And the Council seemed glad to pass the responsibility on to the divisions, without a hint of the advantage of an early settlement of the minimum rate.

Most general practitioners are sore that the Council did not from the first emphatically repudiate the 4*s*. 6*d*. limit. At any rate we are now face to face with the question, and it seems to me the first essential is to fix a fighting minimum, below which all discussion with Insurance Committees, whether in town or country, is to be barred. If 4*s*. 6*d*. per head per annum is intolerable and absurd, what is tolerable and reasonable?

Naturally the remuneration should depend on the nature and scope of the treatment expected, and it is of the first importance that this should be clearly defined by the Commissioners in the immediate future. But if the Act implies no more than the medical and minor surgical attendance now given to Friendly Society members, and it will not be less, the ability to decide will not increase by waiting. Only the Council can authoritatively settle the minimum, whether the payment be per head or per item. And the latter, owing to its infinite uncertainties and nauseous clerical work, seems scarcely "practical politics" at present. The Council must, before deciding, know the feelings of the divisions and the rank and file.

Will it not be difficult for the individual practitioner to fix a provisional and personal minimum without an idea of the opinions of his branch in detail, and of the neighbouring and other branches more generally? As referenda seem likely to be the vogue, why not have one on this very point and the collected results distributed to everyone in general practice? With this information opinions could be condensed in divisional meetings for transmission to a meeting of the Representative Body, and the final result to be accepted by all announced by the Council. Afterwards at leisure the local adequacy or not of this minimum could be discussed in the branches, and a working local rate settled with the approval and assistance of headquarters.

May I suggest the Post Office rate as a minimum, the exclusion of medicine being more than compensated by the inclusion of indifferent and bad lives?

I am, Sir, yours faithfully,

Dec. 17th, 1911. A HULL PRACTITIONER.

To the Editor of THE LANCET.

SIR,—I shall be glad if some reader of THE LANCET will explain to me how it is the prices asked for practices advertised in your journal are steadily rising. I quite expected the Insurance Bill would have caused a glut in the market and a rapid fall in value, especially in "cash" practices. But two years' purchase, estimated on the *gross* receipts, seems to be the usual thing for a partnership with introduction, and anything from one year's purchase upwards for a death vacancy. Surely the effects of the proposed Bill cannot be so very terrible after all.

I am, Sir, yours faithfully,

Dec. 16th, 1911. M.D., F.R.C.S.E.

LEISHMANIA AND MOSQUITOES.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Nov. 11th there appeared a commentary by Dr. C. M. Wenyon upon my note published in the previous number of THE LANCET. Above all I thank Dr. Wenyon for the interest shown in my researches, and I am very glad that he has found in his important studies on the oriental sore the presence of different forms of leishmania in the gut of stegomyia fasciata. This confirms what I have shown in respect of the leishmania donovani and the anopheles. Moreover, I have pointed out that not only this but also some varieties of culex can be infected by the cultures of leishmania donovani.[1]

Dr. Wenyon has found, moreover, that the leishmania tropica develops in the intestine of the bed bug. I did not reach this result in my researches on the bed bugs, fleas, and lice which had sucked cultures of the leishmania donovani.[2] Basile was equally unsuccessful in infecting with leishmania humana from cultures either the human and dog fleas or the bed bug.[3] Professor Gabbi in a recent publication[4] concludes that the leishmania donovani does not live at all in the dog and human fleas, either by cultures or by splenic juice. But I cannot agree with Dr. Wenyon when he suggests that the development of the leishmania in mosquitoes cannot be natural, but must be referred probably to the sucked fluid of cultures. In my publication, I think, will be found also the answer to this observation. In this connexion I will now add: 1. If the modifications that the parasite undergoes are to be referred to the nutrient fluid they must be found much more in the pure cultural fluid and not in the gut of the insect, mixed with all the bacterial flora of the gut of the mosquitoes. This does not happen. I have said already that at some time after their introduction a great number of the leishmania lose the flagellates and tend to modify themselves; in the tubes of cultures, on the contrary, the oval oblong forms without flagellates exist only in the very old ones and with little fluid of condensation. 2. In bed-bugs, which also sucked cultures until they swelled, I never found even a trace of the leishmania, although there was in the gut an abundant culture fluid. It must be observed that the experiments on all these insects have been performed with cultures from the same strain. 3. Since it is impossible for the leishmania to develop in a non-sterile substratum it is necessary that the gut of the anopheles out of the cultural fluid be suitable to the development and existence of the leishmania. In the contrary case it would be destroyed in a short time by the gastric juice, by the great number of bacteria and the other forms of parasites so frequent in the intestinal contents of the anopheles.

I have not yet perfect knowledge of the interesting researches made by Dr. Wenyon on the stegomyia fasciata; but if the author has found (by comparing preparations) that the forms which have been found in the insect are in any respect different from those of the sore on which the insect had sucked, how would he interpret these modifications?—I am, Sir, yours faithfully,

Bologna, Nov. 27th, 1911. Professor G. FRANCHINI.

SANATORIUM TREATMENT FOR CHILDREN.

To the Editor of THE LANCET.

SIR,—All of us who are working for the better treatment of surgical tuberculosis in children must welcome the letter from Mr. W. Edmunds in THE LANCET of Dec. 16th.

A circular issued by the Board of Education in March, 1900, states, *inter alia:* "A school authority may also make provision for defective children by means of boarding them out near to special schools or classes or by means of sending them to boarding schools; and for this purpose may either establish boarding schools of its own or utilise on such terms as may be agreed institutions certified for the purpose by the Education Department."

As an example of the good work which can be done on these lines I may cite the residential school maintained by the Manchester Education Committee. This school, founded in 1905, now contains 120 beds, and is able to admit cases of surgical tuberculosis and to treat and educate them for the whole length of time necessary for cure. The work and results of the school may be found in a pamphlet published in 1910. It is only too evident to those who have made any study of the subject that our present means of dealing with cases of surgical tuberculosis in childhood are hopelessly inadequate. Treatment for an indefinite length of time in special institutions is the only possible solution of the problem. By whom is this treatment to be provided?

In spite of the truly admirable work done by a few public-spirited education authorities, I do not think that the real solution of this national question can be expected to lie with the education authority. My reasons for this view are: 1. Very large numbers of cases of surgical tuberculosis occur in the earliest years of childhood. It is especially important to secure treatment for these early cases. They cannot be allowed to wait until they are of age to come within the control of the educational authority. There can be no better comment on the need for treatment of these younger

[1] Rivista Critica di Clinica Medica Anno xii., No. 45, 1911.
[2] Pathologica, No. 68, 1911.
[3] Rendi-conti della R. Accademia dei Lincei, 18 Giugno, 1911
[4] Malaria e Malattie dei Paesi Caldi, Anno ii., No. 10.

cases then the statement of the Registrar-General that of the deaths from this cause nearly half of the victims are under the age of five years. 2. The main object of the education authority must inevitably be to educate the child, and in this way treatment will be made subservient to teaching. Under the present system of grants, quite inadequate as they are to the needs of the work, the local authority cannot afford to maintain any ailing child who is not on the register as an active scholar. 3. Action by local authorities is likely to lead to the building of numerous small scattered institutions probably of unequal efficiency and often of necessity built in climates unsuitable for the treatment of a tuberculous disease. The only efficient means of treatment is by a relatively small number of large institutions situated in the most favoured parts of the country and under the supervision of surgeons who have special experience of this branch of work.

The only authority which can be expected to carry out this work in a sufficiently broad spirit is the State itself. The State proposes to erect sanatoria for the treatment of phthisis. This is well, but the matter cannot rest here. There must be provision made for the treatment of surgical tuberculosis in children before the scheme can be regarded as satisfactory. It is our duty as a profession to show plainly that the provision of sanatoria for consumption is far from offering a complete solution of the problems in the treatment of tuberculosis, and that these children with their special form of the disease cannot be treated in such sanatoria. For this latter reason I think that the use of the word sanatoria is unfortunate when applied to any provision for the better treatment of tuberculous disease of the bones and joints in childhood, and it would conduce to clearness if the word were entirely eliminated from the literature of this special branch of tuberculosis.

I am, Sir, yours faithfully,

Manchester, Dec. 16th, 1911. E. D. TELFORD.

MISS FLORENCE NIGHTINGALE'S LETTERS.

To the Editor of THE LANCET.

SIR,—As executors of the will of the late Miss Florence Nightingale, we shall be glad to receive any letters written by Miss Nightingale, and any other materials relating to her which the owners may be willing to lend us for the purposes of a memoir.

We should respect the wishes of every friend and correspondent of hers who will kindly afford us information, and no letters will be published without the consent of the owners. Papers should be sent by registered post to the executors of the late Miss Florence Nightingale, 31, South End-road, Hampstead, London, N.W., who will be happy to give any further information.

We are, Sir, yours faithfully,

HENRY BONHAM CARTER.
S. SHORE NIGHTINGALE.
L. H. SHORE NIGHTINGALE.
A. H. CLOUGH.

KING EDWARD'S HOSPITAL FUND FOR LONDON AND ST. GEORGE'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—In the report of the meeting of the King Edward's Hospital Fund for London, the following paragraph appeared:—

> Among the institutions which do not appear in this year's list is St. George's Hospital, the Governors having withdrawn their application as the result of the decision of the Fund on the question of the amounts which could properly be paid to the Medical School in respect of the work done for the hospital. The grant of £2000 which was reserved last year lapses, the conditions attached to it by the Council of the Fund not having been fulfilled.

The governors of St. George's Hospital have always endeavoured to work in harmony with the King's Fund, and much regret the difference of opinion upon a matter of principle, which they consider to be of such importance as to justify their refusal to comply with the demands of the Fund. The Governors maintain that no money whatever is paid by the hospital to the Medical School for the purposes of education.

The sum referred to has been expended upon pathological and bacteriological work, done entirely for the patients of the hospital; in other words, the money is spent in giving the patients of St. George's Hospital the benefit of the latest scientific improvements in diagnosis and treatment.

In previous years, when the same money was paid out of a discretionary fund, no objection was made by the King's Fund, but in such a case the accounts of the hospital are fallacious to the extent that the sum paid out of a discretionary fund cannot appear in the final calculation of the cost per bed.

The governors of St. George's Hospital believe that all moneys paid for the benefit of patients should be paid out of the general funds and published in the accounts. Feeling sure that no good can result either to the King's Fund or St. George's Hospital by the public discussion of the questions involved, the whole circumstances of the case are not now entered into, but a statement can be obtained by those who are interested upon application to the secretary.

I am, Sir, yours faithfully,

A. WILLIAM WEST, Chairman and Treasurer.

St. George's Hospital, S.W., Dec. 13th, 1911.

THE VALUE OF THE ALBUMIN REACTION IN TUBERCULOUS SPUTUM.

To the Editor of THE LANCET.

SIR,—With reference to the letter of Mr. H. S. Gettings in THE LANCET of Dec. 9th on the Value of the Albumin Reaction in Sputum, I have made the albumin test on 25 sputa in Dr. Morland's laboratory in Arosa with the following result: positive cases, 21; negative cases, 4. With regard to the 4 negative cases, 1 of these was a case of influenzal pneumonia, the other 3 of pulmonary tuberculosis, long inactive, 2 of which still contained tubercle bacilli in the sputum. Of the 21 positive cases, tubercle bacilli were found in 19, and on a previous occasion in one of the others. The remaining case was also undoubtedly one of pulmonary tuberculosis. These were 25 consecutive specimens of sputum sent in for routine examination. So far, then, a positive reaction has coincided with the presence of active or recently active pulmonary tuberculosis.

One point in the technique deserves notice; where only a trace of albumin is present it is necessary to add a considerable amount of saline to ensure its precipitation on boiling.

I am, Sir, yours faithfully,

M. B. CHRISTOPHERSON.

Arosa, Switzerland, Dec. 14th, 1911.

ONE BELL.

To the Editor of THE LANCET.

SIR,—I note in your otherwise appreciative review of my book, "The Surgeon's Log," in THE LANCET of Dec. 16th, that you cast some polite doubt on the statement that "one bell" is sounded at 11.45 P.M. and 5.45 P.M. The explanation is as follows: "One bell" is sounded a quarter of an hour before every change of "watch." It, therefore, is sounded at a quarter to 12, 4, 8, and in addition at a quarter to 6, this last indicating the approaching advent of the second "dog watch." The object of sounding "one bell" at such times is to remind the quartermaster who is not at the wheel to call the men who have presently to come on duty in the next watch. This warning bell has nothing, therefore, to do with the usual bell signals indicating half hours at sea. There are several other variants from the half-hour rule—as, for instance, the sounding of "seven bells" at 7.20 A.M. and 11.20 A.M.; but as your review does not touch upon these I need not occupy your space in explaining.

I am, Sir, yours faithfully,

Queen's-road, W., Dec. 15th, 1911. J. JOHNSTON ABRAHAM.

DONATIONS AND BEQUESTS.—The Royal Dental Hospital, Leicester-square, has received a donation of £200 from the Worshipful Company of Goldsmiths and 10 guineas from the Worshipful Company of Broderers.—Under the will of the late Mr. William Wright Tasker, of Hull, the testator left £500 each to the Hull Royal Infirmary and the Hull Victoria Hospital for Sick Children.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Policy of the Medical Profession in Scotland.

THE Insurance Act still monopolises the attention of the Scottish medical profession. The Scottish Committee of the British Medical Association met in Glasgow last week and resolved to recommend an effort to work the Act in accordance with the policy of the Association, the Scottish Commissioners to be told that service would not be taken unless the "six cardinal points" were conceded. The important correspondence that continues to find its way into the lay press shows the general feeling of the profession. In a letter to the *Scotsman* of Dec. 13th the Master of Elibank, Mr. Alexander Murray, replies to that paper's leading article on the subject of the Bill. The burden of his complaint is that, with regard to the *Scotsman's* assertion that the provision in the Bill for the free choice of doctor "is rendered of doubtful value" by the proviso in Clause 16, the British Medical Association agreed that the profession could not reasonably complain of arrangements that were inevitable "to meet particular local disputes possibly leading to deadlock." He denies that the Government's arrangement in regard to removal from Friendly Societies' control is "delusive." In regard to the swamping of the doctors on the Local Insurance Committees, he replies that the representation previously given to the doctors on those committees has been increased, and they have been given "the great collateral advantage that a purely medical committee, representative of the profession, must be heard in each area as to the proposed terms of any arrangement." As to the defining of the method and amount of remuneration in the Bill itself, he says that these points could not be settled at present, for "the necessarily experimental data are not available, and conditions of work must vary very considerably in different areas. Dr. Alexander Veitch, in reply to a letter from Mr. Handel Booth, M.P., points out that "payment is not everything. By serving under the Bill we part with our liberty and enter a domain of service ignorant of what will be expected of us, and not knowing what every common workman insists upon knowing—viz., the rate of pay and hours of service." He, in common with other correspondents, points out that a gibe at medical men who fear a loss of income under the Bill comes ill from those whose fellow Members recently voted one another £400 per annum out of the public purse. Dr. William Haig supports the acceptance by Mr. Smith Whitaker of the post of medical Insurance Commissioner on the ground that it is not a post of working under the Bill, but that since there is to be a medical Commissioner it is better to have a friend in such a position than one who might be indifferent or even inimical to the interests of the profession. In the *Scotsman* of Dec. 15th Dr. Ewen J. Maclean, chairman of representative meetings, and Dr. J. A. Macdonald, chairman of Council, of the British Medical Association, reply at length to the letters of Dr. Wm. Craig and Dr. J. Stuart Ross, referred to in my last communication. They state that "all the statements made by Mr. Whitaker which have been criticised were made strictly in accordance with the instructions he had previously received." That the figures as to the number of signatories to the undertaking not to work under the Bill until all the six points were included were not given at the meeting was done by explicit instruction of the committee. They repeat the warning to the profession not to overestimate their strength, and, in regard to Dr. Craig's strictures, publish a letter received by Mr. Smith Whitaker from him a few days after the November Representative meeting in London, in which Dr. Craig states that he spoke then under a misapprehension and in ignorance of the fact that the six points of the Association were still to be enforced with all powers of the Association when and where necessary. They ask what has occurred since Dr. Craig wrote that letter to cause him to revert to his former position. To this Dr. Craig replies on the following day: "It was the acceptance by Mr. Whitaker of the deputy chairmanship of the Insurance Commissioners that caused all my former doubts to recur." He points out that Dr. Maclean, in an oration to the Representatives, said in effect that if any such appointment were offered to him he would spurn it, and his decision would be irrevocable, and yet he (Dr. Maclean) was the first person to recommend Mr. Smith Whitaker to accept. He further accuses Mr. Smith Whitaker of having failed to fulfil a pledge given to him to supply him, in common with other branch secretaries, with a fuller statement and explanation as to the number of signatories to the undertaking which was withheld from the meeting, and asks what, in the light of this and other happenings, one must think. Dr. A. M. Easterbrook, in the same issue, says that in the Lothians at the present moment the undertaking not to accept service under any other conditions than those laid down in the six points is solidly signed, that nearly almost every non-member of the Association is coming in, and that the guarantee fund is now considerable, and he urges continued silent working. Dr. Allan Gray shows that after deducting practically 8*s.* for administration expenses and 6*s.* for druggist, only 25*s.* remains to pay the total average annual sickness cost per man. He shows how hopelessly inadequate the funds will be for any reasonable pay to the doctor in proportion to the amount of work entailed.

Old Royal Infirmary, Glasgow.

An interesting relic of the old Glasgow Royal Infirmary was unearthed last week, when the contractors erecting the new buildings of the institution encountered the foundation-stone of the old structure. There was a company of interested onlookers when the cavity was exposed. The contents included two glass jars, one containing a sample of muslin, which was the commodity principally manufactured in the city in 1794, the date of the laying of the stone. In the other jar were newspapers published in Glasgow at that date, also two copper coins and two silver coins, which were in an excellent state of preservation. The cavity of the stone was covered by a tin plate, which bore the inscription that the stone had been laid by James McDowall, Provost of the city of Glasgow. The first building had accommodation for 152 beds, and the citizens were extremely proud of what they called that "magnificent establishment."

Aberdeen Dispensary and Maternity Hospital.

The adjourned annual meeting of the Aberdeen Dispensary, Maternity Hospital, and Vaccine Institution was held on Dec. 14th. The report of the special committee at its first meeting after appointment on March 7th last was submitted, which recommended that the dispensary should in the future be disjoined from the maternity hospital, that in the working of the dispensary "proprietary and patent medicines should be discontinued, and that every person receiving medicine should be asked to subscribe 2*d.* for each time medicine is supplied to them." In this way the committee is satisfied that with the subscriptions and donations continued as formerly the income of the dispensary would be so much improved as to wipe out any annual deficiency. With reference to the carrying on of the maternity hospital the committee finds that an annual sum of about £900 is required, and towards providing the same the sum of £470 could be obtained from rents, grants, nurses' fees, &c., leaving a deficiency of from £400 to £450, which to keep the hospital going, and failing a subsidy from the University, must be provided from annual grants from bodies, such as the town council, and charitable trusts, and further by largely increased donations from the charitable public. With reference to the debt affecting the institutions, amounting to £4500 without interest, the committee has promises from different sources of sums of £950, £375, and £750, leaving still to be provided a sum of £2400. Lord Provost Maitland, in moving the adoption of the report, said that the position of the maternity hospital was most difficult. Under conditions specified in the report the dispensary could be worked without an annual deficit, but it seemed doubtful whether the former institution could be carried on any longer in its present condition. The special committee had approached the University Court with a request that the Court should in some way assist the maternity hospital funds. It was of importance that the institution should be continued from the point of view of the dispensary and the training of students. They felt that it was right that the University should have an opportunity of considering the position and of deciding whether, rather than have it closed, they should in some way

come to the rescue with a donation or subsidy towards a substantial part of the annual deficiency. If that could be done a special effort towards increased subscriptions could be made, but failing that it was impossible that the maternity hospital should be continued on its present lines. Other developments for the utilisation of its buildings and continuing its work on a somewhat altered basis might be possible; but he did not think that it was possible that it could be carried on on its present charitable basis. With regard to the debt, there were certain sources to which they were looking hopefully towards a further reduction, and perhaps extinction, of the sum, in which case the dispensary, which was the parent, and in some ways the most important part of the work, could be carried on, with the modifications suggested, and the committee of management could very seriously consider the position with regard to the maternity hospital. Some objection was taken to the proposed fee of 2*d.* for medicines, but ultimately the motion was unanimously agreed to. The Lord Provost said it would be well to emphasise that the motion was not inimical towards the maternity hospital.

Diphtheria in Laurencekirk.

At a meeting of the Laurencekirk district committee of the Kincardineshire county council, held in Laurencekirk on Dec. 11th, Dr. W. A. Macnaughton, medical officer of health of the county, reported that since the last meeting there had been 16 notifications of diphtheria, with four deaths, 11 occurring in the parish of Marykirk, three in Fettercairn, and two in Fordoun. It has been agreed to repaint the Marykirk school and to make a new well a little further removed from the centre of infection.

Chalmers Hospital, Banff, and Parish Councils.

On Dec. 17th there was held at Buckie a conference of the nine Banffshire parish councils to take action towards enforcing the Order of the Local Government Board granting them representation on the board of management of the Chalmers Hospital, Banff. It was decided, failing affirmative action by the trustees, to take legal action to enforce the Order.

New Hospital for Buckie.

A new hospital was opened at Buckie on Dec. 14th. The parish of Rathven is one of the most thickly populated in the North of Scotland, consisting largely of a series of fishing villages, and contains nearly a fourth of the total population of the county of Banff. Formerly cases not nursed at home were sent to Aberdeen Infirmary. It has been pointed out that, outside Glasgow, Rathven has been the first parish council to erect a hospital for the treatment of the sick poor. Provision has been made in the hospital for phthisical cases.

Epidemics in Aberdeen.

The virulence of the measles and scarlet fever epidemics remains unabated in Aberdeen. The returns for the week show 58 cases of scarlet fever, 295 of measles, and 106 of whooping-cough. Dr. Matthew Hay, medical officer of health, has published an appeal to the parents of young families and others, in which he enforces the danger of measles to infants and young children, the need of protecting such from infection, and of having medical advice and proper care when the first symptoms appear. During the present epidemic there have been 80 deaths from measles, most of them in children under two to three years. Dr. Hay notes that during the 20 years of compulsory notification of measles there were 13,451 cases among children under three years of age. Of these, about 1 in every 12 died. During the same period there were 26,923 cases above three years of age, with a death-rate of 1 in 120. Thus measles is ten times as fatal among children under three years as among children beyond that age. Dr. Hay states that one of the large pavilions in the City Hospital had been made available for measles patients. This will make possible the reception of measles on a more liberal scale than had hitherto been possible owing to the large number of other kinds of cases under treatment. The pavilion accommodates from 50 to 60 patients, and preference is being given to children under three years of age from the poorer houses. Dr. Hay concludes by an appeal on behalf of the public health committee, primarily to parents of young families, but also to every member of the community, to assist by action and advice in reducing this daily carnage of children. Had we, he says, week by week one-fourth as many deaths among adults from, say, typhus or typhoid, a sense of panic would already be stealing over the town, but being only children their deaths pass almost unnoticed outside the home. The present epidemic of measles is not of a more deadly variety than usual, but the cases are more numerous than they have been for many years, partly owing, no doubt, to the fewness of cases during the last four years.

Dec. 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Insurance Act.

A MEETING of the medical profession was held in the Medical Institute, Belfast, on Dec. 13th, when Mr. J. G. Cooke, of Londonderry, occupied the chair, and there was a large attendance of members of the British Medical Association and others from Belfast and the North of Ireland. Mr. R. J. Johnston, secretary of the branch and of the subcommittee appointed by the branch to look after the Insurance Bill, having given a clear and full statement as to the present position of matters, a discussion followed, in which disapproval was strongly expressed by some of the action of the Central Council in sanctioning Mr. Smith Whitaker's appointment. Others took the view that it was an error of judgment and that the Council should have first consulted the General Representative body before committing themselves to an action of which so many members of the profession were bound to disapprove. After a long discussion it was decided in a series of three resolutions (1) that measures should be taken to insure the unanimity of the profession, which (2) it was thought could be best attained by supporting the British Medical Association, by inducing those who were not members to join it, to sign the Association pledge and to subscribe to the guarantee fund; and (3) to appoint an organising committee for Ulster. Strong disapproval was expressed of the exclusion of Ireland from medical benefits, many fearing that this was expressly done with a view to beating down the fees of the medical men through the numerous new approved societies that are sure to spring up. The cost of the administration of the Insurance Act in Ireland for 1913 is estimated by the actuaries' report as £184,100 (when the machinery of the Act will be in full working order), while the total benefit for Ireland for all contributors will be £590,800; in other words, the cost of administration will be over 30 per cent. of the total benefit; while in Scotland, with nearly the same population, the total benefit in the same year would be £1,323,000, and the total cost of administration there, as well as in Wales and England, will be only 20 per cent. of the benefits.

The Typhoid Fever at Omagh Asylum.

At the monthly meeting of the committee of management of this institution, held on Dec. 13th, the results of the experts' examination into the drainage system were communicated. They showed that the asylum was in a very bad state and in a condition dangerous to health. In the laundry row, where most of the officials who worked or slept were attacked, the drains failed to stand the tests and the whole system was defective. The water-supply from the well was found to be polluted, and the heating and the ventilating systems were in many respects deficient. At present the water-supply of Omagh is being used, but it appears that, as this cannot go on for an indefinite period, the Omagh urban council has requested the asylums authorities to come to terms for the supply of water. It was decided to have all the defective drains relaid, including those around the asylum well which had been contaminated, and also to confer with the urban council as to the terms on which a water-supply could be obtained for the asylum until its own supply should be restored. It must be confessed that the cause of the epidemic of typhoid fever at Omagh Asylum remains still unsolved, and this is the third outbreak. Here we have a colony of people, with their own milk- and water-supply, and all we know is that the drains are defective and that they communicate with and contaminate the water-supply, which comes from a well. No mention is made of the milk, but it is understood that it has not been proved to be affected. In other words, we have the vehicle

for the spread of the disease (defective drains and polluted water), but how did the poison get into them, or is it really in them, or is it mere sewage pollution? What is wanted in the problem is to clear up the question of the presence of typhoid carriers in the asylum, and until this is done the inquiry into the real cause of the continued presence of typhoid fever therein must remain incomplete.

Ulster Medical Society.

A very interesting discussion on acute poliomyelitis at the first clinical meeting of the Ulster Medical Society, held on Dec. 14th in the Medical Institute, Belfast, was introduced by Dr. John McCaw, who dwelt on the symptoms, epidemiology, and treatment of the disease. Professor W. St. Clair Symmers gave an acconnt of the pathological conditions, and of Flexner's work, showing how the disease had been transmitted experimentally from one monkey to another. Dr. B. O'Brien, Local Government Board inspector, mentioned that during his inspections he had heard of cases at Larne, Bangor, Donaghadee, Holywood, Portaferry, Westport, and Lisburn. Dr. John Garman, of Bangor, related the history of three cases in one family at Bangor, and Dr. W. D. Donnan, of Holywood, and others gave their experience of cases. It is a curious fact that so many of the cases occurred at sea-side places and at a time when children were wading more than usual, during a dry season, in the tide.

Medical Inspection of School Children.

A subcommittee of the Ulster Children's Aid Society has published a report on the question of the medical inspection of schools which it has been considering during the past year. In the past summer, with the consent of the National Board and of half a dozen managers of Belfast schools, the committee examined 367 children taken from four different schools, and as a result over 50 per cent. were found to have defective teeth; 17 children had signs of external eye disease; in one school, 18 out of 50 boys had more or less defective vision; in another, 11 children out of 156; 35 per cent. had unclean heads, and 21 per cent. unclean bodies. In one school, out of 156 children only 45 were completely free from defects of nose or throat. Taking the children as a whole, about 35 per cent. had enlarged tonsils. One of the best features revealed by the inspection was that the percentage of healthy children was much higher among those of tender age. The proportion of defective children increases as age increases. Thus, in one school out of 102 children—49 girls and 53 boys—there were examined 11 children between 3 and 5 years, and 5 were completely normal in all respects; of 25 children between 5 and 7 years, 8 were normal; of 43 between 7 and 9 years, 10 were normal; of 23 over 9 years of age, only 3 were normal. So far as can be seen, the teeth begin to deteriorate from fair to bad about the ages 9 to 11, though several children were found with bad teeth at an earlier age. The committee urges the establishment of a dental clinic to be established by private subscription, and it advises the task of providing medical inspection of schools to be undertaken by the National Board for Ireland as a whole, working, so far as possible, with local committees, such as school attendance and children's care committees. It is to be feared that unless school boards are formed with the same popular control of the schools as in England little progress will be made, for at present the denomination question overpowers everything else in primary education in Ireland.

Entertainment by the President of the Ulster Medical Society.

On Tuesday, Dec. 12th, the President of the Ulster Medical Society and Mrs. McKisack gave an entertainment at the Medical Institute, Belfast, to the members of the society and their friends. About 250 were present, and an extremely pleasant evening was spent.

Inspection of Dairies in Rural Districts.

The Hillsborough rural council has unanimously adopted the following resolution:—

> That we protest in the most emphatic manner against the proposal of the Public Health Committee of the Belfast corporation to secure a right, by order from the Local Government Board, for their officials to visit and inspect cowsheds, dairies, &c., in the surrounding rural district.

In other words, if an outbreak of typhoid fever or diphtheria is traced to the milk-supply of a dairy outside the area of Belfast the health authorities of that city are to have no power to verify their suspicions and to trace the origin of the epidemic. It is to be hoped that the Local Government Board will stand firm over this opposition to public health reform.

Dec. 18th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Death of Dr. J. F. W. Ross.

Dr. James F. W. Ross, of Toronto, died on Nov. 18th, two days after an automobile accident. Dr. Ross, driving his own car, was hurrying to a patient outside the city when the accident occurred. He was immediately taken to the residence of Dr. R. L. Langstaff, Richmond Hill, 20 miles north of the city, but in spite of the fact that several leading physicians and surgeons of Toronto were called to attend him death ensued. Dr. Ross was one of the most distinguished surgeons of Canada. He was a past President of the Ontario Medical Association, of the American Association of Obstetricians and Gynecologists, and of the Academy of Medicine, Toronto, in the foundation of which latter institution he took a prominent part. At the time of his death he was professor of gynæcology in the medical department of the University of Toronto and chief of the gynæcological service of the Toronto General Hospital, besides holding several appointments at other hospitals in the city. Prominently identified with all the leading medical associations of the Dominion as well as of the United States, he was a frequent contributor of papers and addresses as well as an ardent participator in the discussions. Thus he enriched Canadian medical literature, and papers from his pen frequently added to the worth of many American medical publications. Of late years Dr. Ross had been largely interested in financial matters, particularly in life insurance, being one of the directors, as well as a large shareholder and medical referee of the Manufacturers' Life Insurance Company. He was born on August 16th, 1857, graduated at the Toronto School of Medicine in 1886, and after studying under Lawson Tait, and at Zürich, began the practice of gynæcology in Toronto in 1891. He was a son of the late Dr. James Ross, of Toronto, a prominent general practitioner and obstetrician in his day.

McGill University: A Successful Financial Campaign.

Realising the necessity of immediate financial aid if McGill University would continue to keep all its departments running, the governors of the institution recently waited on the Provincial Government in Quebec to ask that the annual grant from the province be increased from the petty sum of $3000 to one of $100,000. Although the Government seemed to be in sympathy with the request, it was felt by strong friends of the institution that it would be unwise, if not disastrous, to wait for the proverbially slow movement of governments in such matters, and that it would be much better to rely upon the immediate generosity of the citizens of Montreal and the friends of McGill. So a campaign was inaugurated at once, and during the week ending Nov. 25th committees were set to work to raise a fund of $1,000,000. How splendidly the committees worked and how hearty was the response to their appeals on the part of the citizens is seen in the fact that over $1,500,000 have been subscribed. All good friends of this famous institution will rejoice that the citizens of Montreal so fully realise their responsibility in the matter, and that they have contributed so handsomely. McGill University is a strong asset not only to Montreal but to the Province of Quebec, and indeed to all Canada, and it is earnestly hoped that the Government will further the cause of the institution by early granting the $100,000 subsidy annually needed to put McGill in a splendid financial position. It must be very cheering news to the two munificent benefactors of McGill, Lord Strathcona and Sir William Macdonald, neither of whom was approached in this financial campaign for subscriptions, that there are now many other friends of the institution who can be counted upon, should the need ever arise again, for tangible financial assistance to the University.

McGill University and Work in British Columbia.

The McGill University College of British Columbia was established in that province for the object of setting an

educational standard, and not for the purpose of competing with local colleges for the home students. There seems to be a good deal of misunderstanding in connexion with the prosecution of the work of this College, some asserting that it was a bold undertaking designed to be a feeding ground for the parent institution in Montreal. As a matter of fact McGill University did not force itself into British Columbia; it was invited there. The British Columbia institution is self-sustaining; consequently the charge that its cost of maintenance tended to cripple the home institution financially has no foundation in fact. The McGill interest in education on the Pacific coast of the Dominion began in 1889. At that time the Legislature of British Columbia passed an Act whereby the Vancouver High School became Vancouver College and began to give first-year classes in arts in affiliation with McGill. In 1902 affiliation was extended to second-year work. Desiring something more substantial than mere affiliation, the British Columbian people secured legislation in 1906 establishing the McGill University College of British Columbia, with the same standards as at McGill University in Montreal. It was at this time that the McGill authorities took over the arts work, and then added the first two years in applied science and later the third year in arts. The examinations are conducted by the authorities of McGill. The college is entirely undenominational, its finances are entirely separate from those of McGill University, and so it is no expense to the home institution in any way. There is a branch in Victoria. No doubt this nucleus will ultimately become the starting point for another Canadian university on the Pacific Coast.

Infantile Paralysis in Canada.

Dr. Chas. A. Hodgetts, medical adviser to the Canadian Conservation Commission, read at the last annual meeting of the Canadian Medical Association a paper upon this subject, which is published in the November issue of the *Canadian Medical Association Journal*. Prior to November, 1909, no statistics upon this disease had been collected in Canada —that is, so far as the Dominion generally speaking was concerned. At that time the Conservation Commission sent out 8000 letters to medical practitioners throughout the Dominion, to which replies were received from 316 practitioners. In this manner the histories of 658 cases were reported as occurring between Nov. 1st, 1909, and Oct. 31st, 1910. By provinces these 658 cases were divided as follows: Ontario, 354; Quebec, 187; British Columbia, 48; Alberta, 27; Manitoba, 17; New Brunswick, 12; Saskatchewan, 6; Nova Scotia, 6; Prince Edward Island, 1. In those cases (528) in which the sex was stated 293 were males and 235 females. In 554 cases where age was stated 23 were under the age of 1 year. In the first year of life there were 69; in the second, 105; the third, 66; the fourth, 62; the fifth, 39; the sixth, 34; the seventh, 12; the eighth, 24; the ninth, 10; the tenth, 12: the eleventh, 10; and the twelfth, 10. Two cases occurred at 60 years of age and one at 65. Between the ages of 1 and 5 years, 341, or 64 per cent., were noted. The month of maximum frequency was August, 76 per cent. of the cases occurring in August, September, and October. Under dry and dusty conditions 279 cases occurred. The disease assumed epidemic form in Hamilton, Ont., and North Hatley, Quebec. There were 46 deaths, or 7 per cent., in the 658 cases reported.

The Insane in Ontario.

There are now in the Province of Ontario 6803 insane persons, or about 1 in every 367 of the population. The *Bulletin of the Ontario Hospitals for the Insane* states that most of these might have remained sane and lived useful and happy lives if they had known certain facts and acted accordingly, or if they had received proper guidance in youth. This opens up a wide field for preventive work. The number of insane in the province has increase 61 per cent. since 1890, when those having institutional care numbered 4210. The increase is due to the fact that a larger proportion of the insane are now sent to the provincial hospitals. These institutions in the province are no longer asylums or houses of detention but well-equipped modern hospitals. The cost of caring for these unfortunates last year amounted to $1,043,145.57, while for the past ten years the total cost has amounted to $9,351,094.07. There are at present 648 persons in these institutions who have been patients continuonsly for the past 20 years.

Notes.

In the new Canadian House of Commons there are 19 medical men in a total membership of 221—1 in 12. One, Dr. T. S. Sproule, has been elected Speaker.—Quebec city is to have a hospital for consumptives. The provincial government has recommended a legislative grant of $3500 per annum for maintenance of the institution, which is to cost $60,000. It will be administered under the medical control of Laval University of that city.—Dr. J. E. Dube, Montreal, president of the Medical Board of Bruchesi Institute, has been awarded a gold medal by the International Society against Tuberculosis for his active work campaigning against the "white plague."—The British Columbia Medical Association at its recent annual meeting elected the following officers for the ensuing year: President, Dr. J. D. Helmcken, Victoria; Treasurer, Dr. C. J. Doherty, New Westminster; Secretary, Dr. A. S. Monro, Vancouver.—The Montreal Maternity Hospital treated during the last hospital year 802 patients. The total expenditure for the year was $28,057.

Toronto, Dec. 8th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Popular Distrust of the Medical Profession.

IN an address at the New York Academy of Medicine recently Professor James Ewing dealt with the increasing distrust of the medical profession shown by the general public. He said that grave defects in the standard of medical education had been disclosed. They were freely admitted, but the public had been mystified and a serious suspicion had been aroused in regard to the general competency of medical practitioners. Prevailing public sentiment was out of touch with the medical profession. This was seen in the crude and halting manner in which medical topics were handled by distinguished writers, clergymen, lawyers, statesmen, and public officials. It was also evidenced by the wide extension of Christian Science and the wavering defence which legislatures afforded to the public health against the depredations of irregular and incompetent practitioners. Dr. Ewing thought that the present public distrust rested to a large extent on an inherent defect in the public mind itself. Whether from mental deficiency, superstition, the narrowing influence of the Church, or the educational system of the last centuries, with its incongruous schooling in rigid mathematics and speculative philosophy, the modern mind was unfitted to grasp the delicate and infinite variety of biological processes. He suggested that in the circumstances it might be good policy for the more enlightened public of to-day to analyse the grounds for its disaffection and to make sure that it was not merely repeating the suspicions of the Middle Ages. Dr. Ewing pointed out that most American communities were particularly delinquent in the adoption of measures demonstrated by medical science to be necessary for the protection of the public health. There was, according to the speaker, a general failure in America to appreciate the importance of a high development of sanitary science to a well-ordered community. He also referred to the difficulties under which the prosecution of medical research laboured. He cited the opinion of a university president that the ranks of medical science had to be largely recruited from those who could get along without earning a decent income. This was the tacit policy of all American medical schools. The results were that the material resources for medical science in America were greatly inferior to those available in Germany and France.

New Regulations for Medical Practice in Canal Zone.

President Taft has given an order recently requiring all persons, other than United States Government medical officers, who desire to practise medicine on the Isthmus of Panama to obtain a licence from the Board of Health of the Canal Zone.

Proposed New Medical Buildings for Columbia University.

In the annual report of the President of Columbia University just issued Dr. Butler asks for $6,000,000 (£1,200,000) to build and equip a new medical building for the College of Physicians and Surgeons of New York,

the medical department of Columbia University. By an agreement between the Presbyterian Hospital, New York, and the College of Physicians and Surgeons, the latter has obtained the right to use that hospital for teaching and research. In return Columbia University is to pay the cost of the scientific and educational side of the work, of all equipment for the laboratories, and of maintaining those parts of the hospital plant that are used chiefly for scientific and educational work.

Further Factory Legislation Needed.

Mr. Louis B. Schram, President of the New York Civic Federation, has been pointing out the need for better laws in New York State to regulate the safety of factories. Giving evidence before the Factory Investigation Commission, Dr. Woods Hutchinson said that his visits to several factories during the strike of the shirt-waist makers had convinced him that the factories were conducive to ill-health. Bad air, poor light, over-crowded work-rooms, and inadequate exits were found in every factory visited. Alcoholism as a factor in causing accidents to workmen was also referred to. It was decided by the commission that the director of the Museum of Safety should prepare statistics and engage lecturers on this subject.

Bad Condition of Bakeries in New York.

Dr. E. J. Lederle, commissioner of health for New York City, in giving evidence before the Factory Investigation Commission recently, said that he had investigated many bakeries in New York City, and had found conditions very bad. Drastic remedies were called for to better conditions.

Campaign against Infantile Paralysis.

The New York Board of Health has taken steps to endeavour to abate the prevalence of acute poliomyelitis by assigning medical inspectors to all orthopædic hospitals to insure complete reports of cases therein treated. Isolation of all cases has been suggested, and the keeping other children of affected families from school. Circulars will be issued to every family in which a case occurs, giving information as to the disease and its treatment, and a minimum quarantine period will be established. Bedding will be disinfected, and houses in which a case occurs will be either renovated or fumigated. A circular calling attention to these requirements will be sent to all medical men in New York, and in future they will be required to report promptly to the health board all cases they are called on to treat.

Schools in Chicago to Teach "Little Mothers."

In future one room in each public school building in Chicago is to be set apart for the instruction of girls in the care of infants. The Chicago Board of Health will supervise the work and will furnish the equipment.

Dec. 11th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

A Curious Government Commission.

THE patent laws of the Union evidently require revision—at any rate, they should be administered in a sensible manner by the Minister of Justice. In Cape Colony patents can be granted for a period of 14 years, and can be renewed if it is proved to the satisfaction of the Governor General in Council that the patentee has not received sufficient remuneration for his invention. There are a number of conditions to be complied with before a patent can be granted. Besides purely formal conditions it is necessary that an article, in connexion with which application for patent rights is made, should be described in the specification in a sufficiently clear and distinct manner to enable it to be reproduced from the description alone by anyone trained in the particular business, trade, or calling; also that it should be original and have necessitated some ingenuity, skill, and industry for its production; and that if granted so long as the patent right lasts it should not vary in any essential detail from the specification. Patents for quack medicines and alleged remedies have been granted indiscriminately throughout South Africa in the past. It would seem that the patenting of a quack remedy materially assists in its sale, possibly because it is regarded by the public as an article which has received the approval of the Government. At any rate, a patentee whose patent was about to expire, has endeavoured to induce the Government to sanction its renewal. The Government not refusing to consider the application, the patentee briefed a barrister to appear on his behalf in connexion with a commission. The members of the Commission consisted of two judges of the Supreme Court, a King's Councillor, a medical man, and an analytical chemist, and these gentlemen, with the exception of one of the judges, who was unable to attend, had to occupy a day in hearing the application, at no small expense to the taxpayer. The articles covered by the patent consist, according to the specification, of one for "outward cancer" and one for "inward cancer," the former being applied externally and the latter being administered by the mouth. The ingredients of the remedies are specified in each case under two headings, "principal" and "secondary," the latter being added "according to circumstances." The "principal" ingredients to the alleged remedy for "outward cancer" are specified as consisting of alum, borax, lime, lard, and vaseline; the "secondary" ones as zinc sulphate, potassium permanganate, raw linseed oil, sugar candy, sulphur, and "plumbi-lion" ointment. In the "inward cancer" cure there are given as the "principal" ingredients white arsenic, borax, and conium, and as the "secondary" ingredients zinc sulphate, potassium permanganate, sugar candy, hypericum perforatum, and "anti-cancerosa." The Cape Province Medical Council, represented by its legal adviser, opposed the application on the grounds that no particular ability or industry was disclosed, that no benefit had been conferred on the public, and that the invention was of no practical utility, but, on the contrary, might be hurtful. The applicant gave evidence in support of the application and was somewhat severely handled by the opposing barrister and by members of the Commission. He admitted that he was in the habit of rubbing in the ointment in cases of "internal" cancer and of giving the mixture when it was "external"; also that no specific quantities of the different drugs were adhered to in manufacturing the preparations. He was unable to say what "plumbi-lion ointment" or "anti-cancerosa" consisted of, or what preparation of conium or hypericum perforatum he used. He, however, pleaded that he had cured animals and human beings, that it was of much benefit to the country, that most of his patients were treated gratuitously, and that he had never made more than £100 per annum out of the patent. Mr. Justice Hopley remarked that he did not seem to have been selling a patent at all, but appeared to have been prescribing for individual cases, and that he was at a loss to understand how the original patent was ever granted. The applicant's evidence was remarkable in several respects. Thus, he at first denied he had ever been convicted for contravening the Medical and Pharmacy Acts, but subsequently admitted having been fined, though, so he stated, he did not know what for, as the proceedings of the court had been held in English, and he was not conversant with that language. The decision of the Governor-General in Council will depend upon the report made by the Commission.

That such a commission should have been appointed at any rate inaugurates a new policy, and shows that the Government does not intend granting patents for quack remedies as readily as has been the case in the past, without at least an inquiry. It is doubtful whether in any country patent and proprietary medicines are granted such facilities as in South Africa. The trade in such articles is practically unhampered by legislation and is carried on under no supervision whatsoever. The public would, I think, be surprised if an analysis of some of these remedies was made, and the results published. Many of the remedies are so-called "Dutch medicines," of which the principal ingredient in some cases is some form of alcohol; and these are freely used in many of the back-country districts, particularly for infantile ailments. It is very necessary that legislation should be introduced to prohibit the sale of at least such remedies as are pronounced by competent authorities to be harmful or injurious to health, but there does not seem much prospect of this in the present state of public indifference.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Sanitary Congress at Bombay.

AN official Sanitary Congress at Bombay was opened on Nov. 14th last by the Hon. Mr. S. H. Butler, at which 28 delegates attended. Mr. Butler welcomed the delegates on behalf of the Indian Government, and thanked the local administrators for the presence of the delegates. The conference, he said, gave an opportunity for zealous workers in different parts of India for comparing experience, exchanging ideas, and above all, setting up that energising friction of mind with mind, the want of which most men toiling in isolation feel at times as a burden well-nigh intolerable. He hoped this would be the first of a series of such conferences. After referring to the various topics on the agenda of the conference, the Honourable Member for Education and Sanitation said the basis of all sanitary achievement in India must be a knowledge of the people and the conditions under which they live, their prejudices, their habits, surroundings, and financial means. This was emphasised in the memoradum placed on the table of the Legislative Council at its last meeting by Surgeon-General C. P. Lukis, to whose ability Mr. Butler paid a tribute. Ardent spirits, he said, who may think that sanitary measures possible and effective in the West must be possible and effective in India, will flap their wings in vain, and set back the cause which claims their laudable enthusiasm. (It is only fair for your correspondent to add here to this remark that such a statement does not apply to the various sanitary commissioners and health officers in India, whose special qualifications and experience of Indian conditions are sufficient guides to them in their various recommendations. Mr. Butler believed in the slow and sure results of education being the forerunner of sanitation. To-day the forefront of a sanitary programme must be (1) a reasoned account of the conditions and circumstances which affect mortality and the increase and decrease of populations; and (2) a study of the relative effects of various diseases, of personal environment, and of the social and economic conditions in the different parts of the Indian Empire. "We have (he said) to work out our own sanitary salvation. We have to study the epidemiology and endemiology of our communicable diseases, the so-called 'tropical diseases'—plague, malaria, cholera, and dysentery—in order that, having ascertained the actual sources and modes of conveyance, we may determine scientifically the particular methods requisite for their avoidance, prevention, and suppression, and that we may apply with precision those methods which it is possible and politic to adopt, and we cannot do this without the assistance and coöperation of Indians themselves. In this harnessing of the science of the West to the varying conditions and circumstances of India, we must keep our standards high." For many years the Government has built up a body of investigators and specialists who are second to none in Europe, and of these he instanced Sir Ronald Ross and Sir David Semple. He referred to tuberculosis, which Dr. J. A. Turner, health officer of Bombay, had shown to cause a mortality considerably higher in Calcutta and Bombay than in cities like Glasgow and Birmingham. The question of the milk-supply was therefore of urgent importance, and he was glad to see a special paper was to be read on this subject. Two officers of the Indian Medical Service, Major E. D. W. Greig and Captain F. P. Mackie, had been deputed to study sleeping sickness, and a monograph by the latter officer was now under publication. To prevent the introduction of yellow fever into India Major S. P. James, I.M.S., had to visit various endemic areas to study methods of prevention. Great results are expected from the recently constituted Indian Research Fund, the first meeting of the governing body of the fund being held on Nov. 15th. The nucleus of the fund is 5 lakhs of rupees, granted by the Government of India, to which contributions are expected from the public. The Government of India last year assisted provincial revenues by a crore of rupees, of which 50 lakhs went to the aid of the Bombay Improvement Trust. He specially brought to the notice of the delegates the good results obtained in Frasertown (Bangalore), which still continues plague proof, and he asked, Is it an impracticable dream to construct a model town or quarter of the town in each province, with good water-supply, efficient drainage, rat-proof and mosquito-proof houses, and an adequate sanitary staff as a measure of demonstration and education? Though the difficulties were many, and ignorance and hostility of the masses were still fundamental obstacles, yet, he said, a thousand difficulties need not make a single doubt. The more enlightened minds of India have awakened to the importance of sanitation, and he had no doubt the delegates would go forward with intrepid confidence in the ability of science to create an environment in which man's higher aspirations can be fulfilled.

A resolution was passed expressing regret at the death of Colonel J. T. W. Leslie, I.M.S., late Sanitary Commissioner with the Government of India. Schemes of urban sanitation were then discussed. The subject of opening up congested areas followed. The action taken in Madras of experimenting with construction of model houses was explained by Mr. Hutton. Mr. Orr and Mr. Turner dealt with the plans under consideration in Bombay. Major W. W. Clemesha, I.M.S., read a paper on Septic Tanks, and advocated their introduction. Mr. Hutton read a paper on Water-supply and Drainage in Madras. Captain W. A. Justice, I.M.S., read a paper on Rural Sanitation and Major E. Wilkinson, I.M.S., a paper on Milk-supply and Vital Statistics. The subject of a Food and Drugs Act was also discussed.

Lahore.

Sanitation in Lahore is making great progress. A special subcommittee was recently appointed by the municipality to consider the sanitation of the city. Of 14 recommendations by the health officer 10 were agreed to. The Government of India is likely to give a grant to the sewerage scheme, and in connexion with this Surgeon-General C. P. Lukis, I.M.S., and Major E. Wilkinson, I.M.S., went round the city and various parts of the civil station with the health officer (Dr. A. G. Newell), with whom was the new municipal engineer (Mr. Longdin). The scheme is on the Shone system and will cost 15 lakhs, but is likely to be somewhat modified. A tuberculin dispensary has been advocated by the health officer. Small-pox has broken out.

Calcutta.

The Municipal Act is to be altered. A tuberculin dispensary, advocated by the health officer (Dr. T. F. Pearse), has been deferred for a year. Cholera has again appeared.

Cawnpore.

The municipality is going to purify its water-supply on the Peuch-Chabal system.

Delhi.

Unfortunately small-pox has broken out and is now counting 20 deaths a day. A special staff has been engaged. The sanitary arrangements in connexion with the Durbar are lavish.

Rawal Pindi.

A sewerage scheme is likely to be aided by a grant from the Government of India.

Nov. 20th.

Obituary.

EDMOND FAURIEL TREVELYAN, M.D. LOND., F.R.C.P. LOND.

WE have already recorded, with great regret, the death of Dr. E. F. Trevelyan, of Leeds, which took place in that city on Dec. 11th.

Dr. Trevelyan, who was the son of a former vicar of St. Paul's, Warwick, was born in that city in 1859. He received his medical education at St. Bartholomew's Hospital, and in 1885 took his B.Sc. at London University, becoming a Member of the Royal College of Surgeons of England in the same year. In 1886 he took the M.B. of London with honours at both the Intermediate and Degree Examinations, and in 1887 proceeded to the degree of M.D. He spent some time after graduation in study at Vienna and Berlin. Having held the post of house physician at the Seamen's Hospital, Greenwich, in 1887 he settled in practice at Leeds, where the whole of his subsequent professional life was passed. He became a Member of the Royal College of Physicians in 1893 and a Fellow in 1901. He was appointed in 1894 professor of pathology at the Leeds Medical School, at that time a department of the Yorkshire College, then affiliated to

Victoria University, but at the present time the medical department of the University of Leeds. The energy he put into his work when occupying this chair was remarkable. Under his guidance that department developed into one of great importance, and it was a constant source of wonder how he managed to perform the duties with such zeal and energy, burdened as he was with a multitude of other activities. When he finally became unable to cope with the duties he retired in favour of a whole-time professor, but he did not therefore rest, for he became professor of therapeutics at the University of Leeds, a post which he resigned only about two years ago.

Early in his career Dr. Trevelyan joined the honorary staff of the Leeds Public Dispensary, and at the time of his death he was its senior honorary physician. In 1894 he was elected assistant physician to the Leeds General Infirmary, and full physician in 1904, retaining the latter post also until the time of his death. Among other appointments he held those of physician to out-patients and honorary pathologist at the Leeds General Infirmary, and senior physician to the Leeds Sanatorium for Consumption.

It might be thought that an extensive consulting practice, conjoined with university teaching posts and hospital appointments, would yield a sufficient scope for the activities of any man. Dr. Trevelyan, however, was not content to limit his horizon to strictly professional affairs, and he interested himself greatly in educational, philanthropic, civic, and military matters. He was an earnest and active supporter of the Leeds Institute of Science, Art, and Literature, of which he was a vice-president as well as chairman of its committee. He had been closely identified with the educational work of the institute previously to the taking over of its schools and classes by the Leeds Education Committee.

In 1903 Dr. Trevelyan delivered the Bradshaw lecture at the Royal College of Physicians of London, taking for his subject Some Observations on Tuberculosis of the Nervous System. He was the author of the article on Acromegaly in Allbutt and Rolleston's "System," and at one time contributed considerably to medical literature, among others THE LANCET, *Brain*, and *International Clinics*.

When in 1899 Colonel Harding, then Lord Mayor of Leeds, called a meeting to organise the local fight against tuberculosis, Dr. Trevelyan became one of the most ardent supporters of the movement. The Leeds Association for the Prevention and Cure of Tuberculosis was the outcome of this meeting, and Dr. Trevelyan added to his other numerous duties that of honorary physician, and later honorary secretary, of the association. Of that movement he was the life and soul, and the city of Leeds owes to him on that account a deep debt of gratitude. He was, moreover, a city magistrate, and on the day of his death a touching tribute was paid from the bench at the city police court by his colleague, Sir George Cockburn, who presided.

On the inauguration of the Territorial movement Dr. Trevelyan was persuaded to take the command of the 2nd Northern General Hospital (Royal Army Medical Corps). It was during his service at the hospital camp at Aldershot, in August last, that the early symptoms of his illness first made their appearance. He was removed to his home at Leeds, but was never able to resume practice. About seven weeks ago he underwent an operation, and another some five weeks ago. Notwithstanding the success of the operations, however, he succumbed to an attack of heart failure on Dec. 11th at the comparatively early age of 52. His funeral took place on Dec. 13th in the Lawnswood cemetery, Leeds, and was attended by deputations from the Leeds Association for the Prevention and Cure of Tuberculosis, the General Infirmary, the Leeds Public Dispensary, the Leeds Institute of Science, Art, and Literature, the 2nd Great Northern General Hospital (R.A.M.C.), the West Riding of Yorkshire Territorial Association, and the West Riding Field Ambulance.

Dr. Trevelyan was not married, his nearest surviving relatives being his sisters, Miss Trevelyan and Mrs. Hicks (wife of the Bishop of Lincoln), and a niece and nephew.

A correspondent writes: "Dr. Edmond F. Trevelyan was a man who will be missed by many and sorely missed by a few. It may have been said of him that he had not the genius for making friends, but this does not put the matter correctly. He made friends slowly, but once made they were good ones, and the friendships lasted. The explanation of this lay in his temperament. He was by no means optimistic; indeed, he took life very seriously, and only to his intimate friends was the nod of recognition brightened by a smile which seemed at once to alter the apparent nature of the man and give a glimpse of a genial and kindly soul which the majority of his acquaintances never suspected him to possess. The keynotes of his character were industry, earnestness, persistency, and a readiness to accept additional responsibilities without counting the cost. Trevelyan had so many irons in the fire that he should have been very methodical in his arrangements. But this was not the case, and the naturally ensuing difficulties were a source sometimes of vexation, but more often of amusement, to those who were associated intimately with him in work. There was one fact in his career which he felt keenly. Notwithstanding his length of service in charge of out-patients at the infirmary he never obtained the ward appointment. This was the main reason why after ten years' service an assistant physician at the Leeds General Infirmary is now elected physican to the infirmary in charge of out-patients. This hardship, however, had an indirect effect upon Trevelyan's outlook and aspirations, gradually leading him to regard the study of tuberculosis as his chief life-work and not as subsidiary to his work at the infirmary. Trevelyan's persistency was very noticeable in controversy. There was no compromise about him. Only when he saw himself hopelessly beaten would he agree to accept what would probably not have been conceded but for his dogged opposition. His attitude in controversial matters, however, was never suffered to interrupt or cloud his relations with his colleagues; and after the fight was over he was ever ready to smoke the 'pipe of peace.' Trevelyan's manner of speaking was dogmatic and very impressive, and he had the just reputation of being a sound and lucid teacher of general medicine. He was, as I have tried to indicate, a man of marked character and of very definite peculiarities. The latter struck the observer first, while the character was capable of being appreciated only when the man was thoroughly known. That he was honourable in every thought and action and always perfectly straight his colleagues knew, and on the development of his final illness, without exception, they were greatly concerned at the sufferings of one who had earned their respect by his sterling qualities and their goodwill by his kindliness of heart."

GEORGE HUBERT MAPLETON, M.B., C.M. EDIN.

Dr. George Hubert Mapleton died at his residence, "Goldwell," Goudhurst, Kent, on Sunday, Dec. 10th, aged 53 years, from septic laryngitis after a very short illness. He went to bed on Friday and died on Sunday. Tracheotomy was performed very early on the morning of that day. This gave him considerable relief, but he passed away in his sleep in the afternoon. He will be greatly regretted by many friends and patients, and not the least amongst the poor. He was attended during his last illness by his neighbour, Dr. D'Arcy Harvey, in consultation with Dr. E. L. Adeney and Dr. T. C. Guthrie, of Tunbridge Wells.

Dr. Mapleton was born in 1858 at Saxby, Leicestershire, from which place his father, the Rev. Reginald John Mapleton, became the incumbent of St. Columba's, Kilmartin, Argyllshire, afterwards being appointed Dean of Argyll and The Isles. Dean Mapleton was a man of great literary ability and a noted archæologist, and was locally known as "The Bishop." Dr. Mapleton, after studying at "Glenalmond," proceeded to the University of Edinburgh, where he graduated M.B. and C.M. in 1880, afterwards proceeding to Vienna for special medical study. He held the position of house physician at the Royal Infirmary at Edinburgh and at Glasgow. After a short period of medical service at sea he became Government medical officer at Montserrat and afterwards at St. Kitts, West Indies. At the latter place he was police surgeon and assistant surgeon to the Cunningham Hospital. After 14 years of medical practice in the West Indies he went to Goudhurst in 1896, practising there until his death. There he held almost all the public appointments and clubs, being medical officer and public vaccinator for the Goudhurst district. He married Harriet Burley Johnson, eldest daughter of Dr. Burdett Johnson, of Montserrat. She has been left a widow with three sons and one daughter. Dr. Mapleton took a keen interest in his profession, and his abilities as surgeon and physician were

much appreciated. He gave his best advice and attention to many cases where there was little, if any, prospect of pecuniary recompense. He had two brothers in the Army Medical Service, one of whom was in charge of the Intombi camp for women and children during the siege of Ladysmith.

THE NATIONAL INSURANCE ACT.

APPOINTMENTS UNDER THE INSURANCE COMMISSION.

Sir Robert Morant, Chairman-Designate of the Insurance Commission for England, has issued under date Dec. 14th, 1911, a notice referring to the appointment of staff under the Act, premising that the notice does not refer to Unemployment Insurance. Sir Robert Morant says:—

"No announcements can yet be made as to the number or character of the posts that are to be filled in appointing the staff of the Commission. Various questions have to be decided as to the kinds of work first to be undertaken and the particular nature of the experience and qualifications most likely to be useful for carrying out these different departments of the work effectively. The Commission will need time for the careful consideration of these matters, and also for consulting with the Advisory Committee to be set up under Clause 57 of the Bill, in regard to the best ways of dealing with the main elements of the problem. As their deliberations proceed, and the Commission find any particular posts to be necessary for which applications from outside the Civil Service are needed, announcements will be made from time to time in the press. The Civil Service Commission have promised their assistance and coöperation to the fullest extent in regard to the selection of staff; and in these and other ways every possible step will be taken to secure that no appointments shall be made, whether from within or without the Civil Service, on any grounds other than fitness for the duties to be undertaken in each case.

Meanwhile the following points should be noted by all persons desirous of seeking employment under the Commissioners:—

A. No application will be considered unless it specifies the kind of post sought for and the special qualifications for that post possessed by the applicant, and application should be addressed solely to the offices of the Insurance Commission, Whitehall, S.W.—marked on the envelope 'Applications.'

B. Under no circumstances should applications, or correspondence in connexion with applications, be sent to the private address of any of the Commissioners.

C. No persons should apply for posts under the Insurance Commission unless qualified in a high degree by special knowledge and experience appropriate to the positions for which application is made.

D. The Commission cannot undertake to acknowledge or reply to any applications.

E. No interviews can be accorded to, or in respect of, applicants for posts, unless previously arranged by correspondence.

F. Any attempts made by candidates seeking posts, of whatever nature or grade, under or in connexion with the Insurance Commission, to enlist support for their applications on political grounds or for political purposes, whether through Members of Parliament or in any other ways, will be regarded as disqualifying such candidates for consideration or for employment by the Commission in any form."

THE PROTEST MEETING AT MANCHESTER.

A large and enthusiastic meeting of members of the medical profession was held in the Midland Hall, Manchester, on Thursday afternoon, Dec. 14th, under the chairmanship of Mr. G. A. Wright. The hall was crowded and the numbers were estimated at 2000. Among those present on the platform were: Sir James Barr (President-elect of the British Medical Association), Dr. T. R. Bradshaw (Liverpool), Dr. E. S. Reynolds, Mr. A. H. Burgess, Mr. W. Coates, C.B. (Manchester), Dr. R. C. Brown (Preston), Dr. J. A. W. Watts (Hyde), Mr. J. M. Ferguson (Burnley), Professor A. M. Paterson, Dr. T. B. Grimsdale (Liverpool), Professor Judson Bury, Professor W. Thorburn, Dr. A. Donald, and Dr. T. A. Helme (Manchester). Mr. P. C. Raiment represented the executive of the proposed meeting in London at the Queen's Hall. Deputations also attended from Shropshire, Mid-Wales, Hereford, Winchester, Folkestone, Dover, and Chatham.

Dr. J. S. PROWSE, the secretary of the movement, stated that letters of support from 200 to 300 medical men throughout the country had been received, and that 12 divisions of the British Medical Association and five other medical societies had approved their attitude.

The CHAIRMAN said that the former meeting at Manchester decided that unless all the essential conditions were guaranteed the profession would not be able to undertake the work proposed by the Bill. Now that the Bill had passed the House of Commons without sufficient guarantees, and the warning had been disregarded, they were there to say that they would not do the work till the Act was amended and all the essentials were provided. This was no change of front as far as they were concerned. It was the original position taken up by the British Medical Association. They would not neglect sick people or refuse to work under a good Insurance Act. The present Bill, bad as it was, if it were fully amended, would be one under which the profession would work, but it must be fully amended. They refused to work this Act as it stood. Some difficulty had arisen from the action of the Council of the British Medical Association. The real difference between them was that while the Council of the Association was prepared to put its trust in things that might happen, most of the profession preferred not to give a blank cheque to Mr. Lloyd George. Their confidence in the discretion of their representatives was shaken. It was idle to say that the demands of the profession had been acceded to or that they had any security. They would see with deep regret the disorganisation of the British Medical Association. They were not hostile to it, or even in rivalry with it, but they felt that a grave and vital emergency had arisen, and that since their first line of defence had wavered seriously they must bring up the reserves to prevent their position from being rushed. They, therefore, proposed to ask all those in the profession who were not organised to join in with existing organisations till the crisis was past. They hoped that then with increased strength both in numbers and *morale* the British Medical Association might go on with its work.

Dr. J. SACKVILLE MARTIN (Leigh) proposed the first resolution:—

That this meeting of the medical profession, in pursuance of the resolution passed unanimously on Nov. 18th and generally adopted throughout the country, now recognises that the only satisfactory method of meeting the situation created by the Government is for the members of the profession to refuse to form a panel under the Bill or to undertake any duties which the Bill proposes to assign to them.

Dr. Martin said that the policy of the Council did not reflect the opinions expressed at meetings of the members throughout the country. The Council proposed, instead of one broad fight, to split it up into many small sectional fights (cries of dissent and approval). Under this plan each division would primarily have to fight its own battle, and afterwards it might be assisted by the strength of the Association. That policy was disastrous; it practically committed them to working the Bill. They would find themselves haggling over prices in different districts, and there would be different prices. Where they lost in one division that division would be held up as an example to others. He denied that the organisation was intended to cause a split in the profession. There was a split, but it did not begin that day. When the Council recommended Mr. Smith Whitaker to accept the post of Commissioner the Association was split from top to bottom. They did not wish to widen the split, but to see if it could be repaired.

Dr. FERGUSON, in seconding the resolution, went over the six cardinal points and declared that none of them had been guaranteed. He said that if the profession would unite they had the necessary machinery in the British Medical Association, and that they could make it work as they wished.

Dr. PERCY R. COOPER proposed as a rider to the resolution the words: "Unless and until the cardinal points are fully agreed to." This was not accepted by the meeting.

Dr. HELME supported the resolution in a vigorous speech which roused the meeting to a high pitch of enthusiasm. He dissected the recent assurance of the Council of the British Medical Association that "there is no legal

barrier against the profession securing the fulfilment of its entire policy." He said that the whole thing bristled with legal and practical barriers which were unsurmountable. Medical men would be helpless once they formed a panel. If they undertook to work the Bill as it then stood in law they would have to take whatever was given them. The Commissioners could do anything they liked, even take away free choice, except increase the total amount available for payment of medical services. Dr. Helme contrasted the two alternative courses. He declared that the policy of the Association—to negotiate and procrastinate—was plunging the profession headlong into disunion. But there was still a chance for all to unite honourably by adopting the other plan, "to at once decline to form a panel or to take office under the Bill as it now stands. To tell the Commissioners at once that the only way for them to work the medical benefit is to give that benefit as a contribution to the insured. In this way we shall remain an independent profession." He claimed that this policy did not wreck the Bill, but used it. They offered to work the Bill on their own terms, for which there was provision already made in the Bill. He did not wish to wreck either the Association or the Bill, but to remove from each an obnoxious element.

At this point Dr. J. H. TAYLOR, of Salford, a member of the Association's Council, with the chairman's sanction attempted to address the meeting in defence of the Council's action and policy, but his presence was strongly objected to, and after much hostile interruption he was told by the chairman that his time was up. Dr. Taylor, amidst great disturbance, appealed to the profession to keep its head. He came before them as a member of that much-maligned and grossly abused body the Council, and he came without a word of apology. His final words were: "We are willing to work as one body, if you will only let us."

The resolution was then put to the meeting, and was carried by an immense majority, only about six members dissenting.

Mr. COATES then moved the second resolution:—

That in the opinion of this meeting it is advisable to form at once a National Medical Union to deal immediately with the conditions arising out of the National Insurance Bill, and to strengthen the hands of the members of the British Medical Association and all other societies and committees now engaged in safeguarding the interests of the medical profession.

Mr. Coates said that the union was required because the will of the medical profession had not been allowed to prevail. They left this matter in the hands of the Council of the British Medical Association, who asked for a mandate which was ungrudgingly given and asked for a fund which was generously subscribed. The "cardinal points" which the Council had been asked to secure in the Bill were as distant as Rome, as extinct as the dodo. The Council had been caught in a net: the subtlety of the spider had been too great for them. The new union must be used to purge them of the Council. It should be an emergency organisation of the whole profession of Great Britain for coördination of the members and non-members of the British Medical Association, for voicing the attitude of the profession towards the Bill as it now stood for enactment, and for facilitating an organised refusal of service under the Bill. The union would remain in existence so long as any question arising under the Act remained in dispute. It should be supplementary to, and should work with, the members of the British Medical Association.

Dr. WATTS seconded. He said that the profession must protect itself because it had been treated with cynical disregard from the beginning. By passing the Bill the Government had challenged them; their object in forming the union was to accept the challenge. Dr. Watts also disclaimed any desire to wreck any existing association. He was afraid that the Council of the British Medical Association had been obsessed by the Chancellor's personality.

Dr. D. S. DAVIES (Bristol) wished to move an amendment, but this was ruled out of order. He said he could not understand how unity could be promoted by the formation of another union.

Mr. RAIMENT (London) invited all those present who could do so to attend the meeting at Queen's Hall on Dec. 19th.

Mr. PINDER (Salford), Dr. PATTERSON (Newbury, Berks), Dr. J. STUART ROSS (Edinburgh), and Mr. C. COURTENAY LORD (Gillingham, Kent) also spoke warmly in favour of the resolution, which was then put to the vote and carried by the same overwhelming majority as the first resolution.

Sir JAMES BARR, in moving the appointment of a preliminary committee to set the new union in motion, had a somewhat mixed reception, but he pacified his audience to some extent by hearty abuse of the Bill and by a tribute to the chairman.

The meeting altogether lasted about two hours. In the confusion of departure the business of nominating and appointing the executive committee was carried out under difficulties, but those who remained seemed satisfied that their interests would be represented by those names which had been chosen.

THE PROTEST MEETING AT BIRMINGHAM.

At much shorter notice than the mass meeting at Manchester of the previous day, a large protest meeting against the treatment of medical interests under the Insurance Bill was held at the Midland Institute, Birmingham, on Friday, Dec. 15th, under the chairmanship of Mr. Frank Marsh. About 700 medical men from Birmingham and the neighbouring counties attended, and if the temper of the meeting did not exactly reflect that of the Lancashire and Cheshire audience the resolutions carried by a large majority differed little in substance or in spirit from those passed the day before. The three resolutions which were proposed from the chair were as follows:—

1. That in the opinion of this meeting of the medical profession of Birmingham and the Midland Counties the National Insurance Bill does not satisfactorily meet the just demands of the medical profession as defined in the "six cardinal points" formulated by the British Medical Association.
2. That in the opinion of this meeting the Bill will create a condition of affairs detrimental to the public interest as well as to that of the medical profession.
3. That in the opinion of this meeting the only satisfactory method of meeting the situation created by the Government is for the profession to decline to undertake any duties which the Bill proposes to assign to them.

As at Manchester, an amendment proposing that the medical profession should decline to work under the Act "unless the six cardinal points were conceded" was rejected, but this suggestion to continue the policy of the British Medical Association received more support at Birmingham than at Manchester, although the large majority voted against it.

Both the CHAIRMAN and the seconder, Dr. HOYLE WHAITE (Birmingham) disclaimed antagonism to the Association, and denied that there was any wish to cause a direct split amongst its members. Their object was to gauge the true attitude of the profession towards the Bill. They advised that the profession should make a united stand and resolutely declare that it would have nothing more to do with the Bill.

The CHAIRMAN said that any division in their ranks now would put an end to all effective opposition to the working of the Act and would simply play into the Chancellor's hand, who had already thrown a bombshell among them by a recent appointment, and had created the false impression in the public mind that the Bill in its medical aspects was acceptable to the profession. He (Mr. Marsh) rejected the idea that the Bill as enacted satisfied the six-fold requirements laid down by the Association. If they accepted service under such conditions as were imposed upon them their independence was gone, and the result would be detrimental alike to the public interest and to the interest of the medical profession. He concluded by referring to the enormous depreciation in the saleable value of working-class practices which had already occurred even before the Bill became law.

Dr. WHAITE stigmatised the Chancellor's proposal that the profession should make the best use it could of the chance he had given it of collective bargaining as an insult and an injustice.

Dr. MILNER M. MOORE, Mr. L. J. STRETTON, Dr. GARMAN, and Professor ROBERT SAUNDBY counselled against action which would bring them out of line with the policy of the Association, and Professor J. T. J. MORRISON supported Mr. Stretton's amendment to add the words which would prevent that result. Professor Saundby, as President of the British Medical Association, approved the Council's action in recommending Mr. Smith Whitaker to accept the Chancellor's offer. He, however, traced the present trouble to the weak action taken by the Representative Body in June last; the stand which was being advocated now should have been pressed for then with the same strength.

The amendment was lost, and the three-fold resolution was passed by a very large majority, thus bringing the practitioners of the Midlands into line with those of the Northern area.

THE PROTEST MEETING IN LONDON.

The mass meeting which had been arranged by Dr. F. J. Smith and an executive committee of London medical men was held in the Queen's Hall on Tuesday afternoon, Dec. 19th, and was the largest gathering of the profession which has yet been held to protest against the medical provisions of the National Insurance scheme. The chair was taken by Sir WILLIAM WATSON CHEYNE, and he was supported upon the platform, among others, by Sir William Church, Sir John Tweedy, Sir Alfred Pearce Gould, Sir William Osler, Dr. Mary Scharlieb, Mr. Brudenell Carter, Professor Howard Marsh, Dr. Sidney Phillips, and Dr. F. J. Smith. The hall was crowded, and only in the highest gallery and at the back of the platform were there any vacant seats; the total number present was well over 2000. Several representatives of the profession in Manchester were on the platform by invitation. Their words were listened to with close attention, and the oratory of Dr. T. A. Helme aroused as much enthusiasm as it had done at the mass meeting at Manchester. The feeling of this large assembly of medical practitioners was almost unanimously in favour of the resolutions proposed, and these were carried by immense majorities. It is to be regretted that Sir Victor Horsley and other apologists of the action taken by the Council of the British Medical Association met with a hostile and disorderly reception, but their presence on the platform was deeply resented by a large number of the medical practitioners present. The confusion which resulted interrupted the business of the meeting and tended to obscure that unanimity of feeling and intention which was so clearly expressed when the resolutions were proposed and submitted to the vote.

The CHAIRMAN in opening the proceedings said they had met under extraordinary and very serious circumstances. A very able and astute statesman had conceived the idea of National Insurance against sickness and unemployment, and had produced a scheme which in some points was admirable but which required careful consideration. He had offered to the public free medical attendance, and the offer had been accepted; but before very long the insured persons would be asking about the kind of medical attendance they were receiving. It was extraordinary that up to the present no definite arrangements had been made with the medical profession, which was to provide the medical attendance promised. No attempt had been made to find out under what conditions it would work, or, if this had been made, the wrong individuals had been consulted. The Chancellor of the Exchequer could not now plead ignorance of the terms under which the profession would do its part of the work. But the Act did not contain any of the demands that the profession had made. What, then, was to be done? This meeting was called in order to tell the Chancellor of the Exchequer that the profession would have no more specious promises, and that until the limited demands of the profession had been put into such a form that there could be no possible quibble, medical men would refuse to give medical treatment as laid down under the Act. There was no strike of the medical profession; they were only asking the Chancellor of the Exchequer to give them the terms which they considered just, and in the alternative they would treat the sick poor in the way they had always done. Under the existing conditions the poor were better off than they would be under the Act. If they were to carry their point they must be united. The effect of this Act would be that thousands of medical men would be reduced to a state of penury or worse. He asked them to support the British Medical Association, the only Association they had, and if fault was found with the Council to get other servants who would better serve the general wish. He begged the speakers who would follow him to avoid all personalities, and to avoid any reference to the Association which would cause its disunion.

Dr. F. J. SMITH, who was received with loud and prolonged cheering, then moved the first resolution, which read as follows:—

> That this mass meeting of the medical profession is of opinion that the six cardinal points originally formulated by the British Medical Association are not guaranteed by the provisions of the Insurance Act in a manner which satisfies the profession.

He passed in review the various provisions of the Act as they affected the medical profession, and showed that any concession that had been made to the profession with one hand the Chancellor had taken away with the other. With regard to medical representation on the Insurance Committees, he showed that it could not be more than one-eighth and possibly only one-tenth, and a section of the Act gave power to approved societies to appoint their own officers on the Committees—just the people they were trying to avoid. Then with regard to statutory recognition, the clause meant nothing, and he foresaw much wrangling with the Commissioners. Again, there was nothing to safeguard the income-limit. The £104 income-limit had not been conceded. He had been told that this limit could have been secured, but the negotiators for the medical profession had preferred to sacrifice professional interests rather than run the risk of putting the Government in danger of defeat. The profession had given to the Council a mandate to secure the six cardinal points as a minimum or to die in the last ditch.

Mr. M. MILTON TOWNSEND seconded. He said the main object of the meeting was to sign a requisition for an extraordinary meeting of the British Medical Association. If the medical profession stood firm they would be able to compel the Government either to give the profession their just demands or to drop the medical provisions of the Act. None of the cardinal points had been conceded, and it was for the meeting to say whether they considered that the demands of the profession had been embodied in the Bill.

At this point Sir VICTOR HORSLEY rose in the body of the meeting and was invited by the chairman to come up on the platform. On attempting to address the meeting he was met with great shouting and opposition, but was eventually allowed to say a few words. He said that with the general terms of the resolution he could find no fault except on the point of grammatical accuracy. The inaccuracy lay in the fact that the six cardinal points of the Association were said to have been ordered by the Representative meeting to be inserted in the Bill. That was not so. Such points as could be inserted into the Bill were to be inserted, and the others were to be settled with the Insurance Commissioners. Again there was uproar, and the meeting refused to allow the speaker to proceed further. In spite of appeals from the chairman and from various groups of the audience, Sir Victor Horsley was compelled to resume his seat.

The resolution was then put and carried with only six dissentients.

Mr. P. C. RAIMENT proposed the second resolution:—

> That this mass meeting re-asserts the fundamental importance of the demands of the medical profession, and is of opinion that every medical practitioner should refuse to accept any office for giving medical attendance and treatment to persons insured under the Act until those demands shall have been definitely conceded.

He submitted that it was not only legitimate but absolutely imperative that the boycott of the profession should continue until the Government had adopted the six cardinal points, or dropped the medical provisions of the Bill altogether. The third alternative was to allow the medical profession to make their own arrangements with the insured. The unity of the profession could best be attained and the Government be compelled to concede its demands by each individual member of the profession refusing to work under the Act.

Dr. T. A. HELME seconded. The National Insurance Bill, he said, had now become law, and in face of such a crisis this was no time for quarrelling among themselves. They were all agreed on the six points, and they would not work unless those points were conceded. The Council of the Association urged them to proceed at once to form the Local Committees and to continue negotiating and bargaining. To bargain with advantage they must stand on equal terms. On the one side there were working men with executive powers and the Commissioners, and on the other a medical body without statutory powers and with only the privilege of going on its knees and begging. The Act had passed with its Harmsworth amendment, and its framework could not now be altered. Was that what they wanted? Was club practice under lay control the fulfilment of their ideals? There was one thing on which the profession might all unite, and he was there to tell them that the men of the North desired united action for themselves and asked the men of the South to stand by them. In this way the profession would get what it wanted. They must refuse to take office as stated in the terms of the resolution. They must make known to the Commissioners their position, and so far as the medical profession was concerned the matter ended. All recognised

that there was much in the Act that was good, but the profession would not allow Mr. Lloyd George to give his charity at their expense. The medical service of the poor to be efficient must be under medical control. The Council of the British Medical Association had failed them, their confidence in it was gone. Pledges were not sufficient; a guarantee must be obtained.

Mr. G. H. PINDER supported the resolution, and said that the profession in Yorkshire, Lancashire, and Cheshire was united solidly.

Dr. BRIERLEY said that the profession must have statutory powers to carry into effect its wishes. By the Act they were asked to work contract practice under conditions of abject slavery.

Sir A. PEARCE GOULD, after an impressive plea for unity and a powerful protest against the evils of club practice, said the profession would refuse to act until their just demands had been conceded. The Act said that the Commissioners were to see that provision was made for adequate medical attention to the poor. Little had been said about remuneration, but how could that be determined until it was decided what was to be paid for? No notion had yet been given as to the character and nature of the work demanded of the profession. They all wanted to see the medical treatment of the industrial population of this country done as well as it could be done, and the medical profession properly remunerated. The new legislation was an extension of the legislation of the past century based on charity. Let them do their work as best they could, but let them insist on being paid like men.

Dr. J. H. KEAY, speaking on behalf of the Council of the Association, asked whether anyone knew of any Bill dealing with social legislation during the past 100 years in which everything had been embodied and nothing left to be fixed by Commissioners; but at this point he was interrupted and was compelled to resume his seat.

Dr. WILLIAM DOUGLAS agreed that the six cardinal points were the irreducible minimum, and claimed that the British Medical Association was using every possible means to ensure that no practitioner should undertake the medical attendance of insured persons unless absolutely in accordance with the six cardinal points of the Association.

Dr. WHEELER HART, of Manchester, said the profession never dreamed that the Council would approve of any Act of Parliament which would not guarantee that they should get the six points by statutory means. If there was to be a strike this was the issue on which it would take place. The points must be so embodied in the Act that they could be carried out by constitutional means, and by ways which were consistent with their work as professional men and gentlemen.

Before the close of the meeting Dr. SIDNEY PHILLIPS proposed that the resolutions passed with such unanimity by those present should be forwarded by the chairman to the Prime Minister and the Chancellor of the Exchequer. This was seconded by Sir JOHN TWEEDY and carried with acclamation.

On their departure members of the British Medical Association were given an opportunity of signing their names to a requisition to the Council of the Association for an extraordinary general meeting, to be held within 21 days, in accordance with the articles of the Association. This received many signatures, and has since been forwarded to the headquarters of the Association. Its wording was as follows:—

NATIONAL INSURANCE BILL.

Requisition for an Extraordinary General Meeting.

Dec. 19th, 1911.

TO THE CHAIRMAN AND COUNCIL OF THE BRITISH MEDICAL ASSOCIATION,—We, the undersigned members of the British Medical Association, hereby require the Council, in accordance with Articles 20, 21, and 22 of the Articles of Association of the British Medical Association to convene an Extraordinary General Meeting of the British Medical Association for the purpose of discussing the following resolution as special business, namely:—

That, in the opinion of this Extraordinary General Meeting of the members of the British Medical Association, the National Insurance Act does not safeguard the six cardinal points of the policy of the British Medical Association in a manner satisfactory to the members of the aforesaid Association, and we consider that the Council of the British Medical Association has failed in its duty towards its members.

Here followed the names and addresses, and the Divisions to which they belong, of the members of the Association signing the requisition.

THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL PROFESSION.

Sir Victor Horsley, Dr. J. H. Keay, and Dr. A. J. Rice-Oxley have addressed a letter to the *Times*, intended to define the constitutional position of the Association, which they were unable to do at the meeting in Queen's Hall, being refused a hearing. The letter contends: (1) That in dealing with the Insurance Bill the Association, through its Representatives, and not the Council, has been responsible for the policy pursued; (2) that the Council was instructed that points in the policy of the Association, if unable to be secured otherwise, should be determined by the Insurance Commissioners; (3) that with regard to the wage-limit, the Representatives found that it was impossible to fix either a flat rate or a common method of remuneration; and (4) that "free choice of doctor," owing to amendment of the Harmsworth amendment at the instigation of the Council, was provided for in the Act.

A PROTEST MEETING AT SHEFFIELD.

A large number of Sheffield medical men, nearly 300 in number, met on Tuesday last and protested almost unanimously against the conditions of the Act. Mr. Archibald Cuff, who presided, said that if the profession accepted less than the minimum demands which they had formulated they would sacrifice their whole position, professional and financial. Mr. Lloyd George had made concessions, but these had been nullified by other concessions. Their leaders had capitulated too easily and accepted these trifling concessions when a bolder course would have been better. Neither the House of Commons nor the public had believed that they were in earnest.

A resolution was proposed refusing to form a panel under the Act or to undertake any duties which it proposes to assign to the profession. An amendment in favour of refusing to enter into arrangements for the treatment of insured persons on terms inconsistent with the declared policy of the British Medical Association was defeated, only five voting for it. The resolution was then carried.

THE SCOTTISH COMMISSIONERS.

The appointment of the following Scottish Commissioners under the National Insurance Act is officially announced:—

Chairman:—Mr. James Leishman, Treasurer of the City of Edinburgh.

Deputy Chairman:—Dr. John Christie McVail, M.D., LL.D.

Commissioners:—Mr. John McNicol, General Secretary, Loyal Order of Ancient Shepherds, Ashton Unity; and Miss M. M. Paterson, H.M. Deputy Principal Lady Inspector of Factories.

Secretary:—Mr. John Jeffrey, Inspecting Officer, Local Government Board for Scotland.

THE WELSH COMMISSIONERS.

The Welsh Commissioners have been announced as follows:—

Chairman:—Alderman T. J. Hughes, Vice-Chairman of the Glamorgan County Council.

Commissioners:—Dr. Meredith Richards, Medical Officer of Health of Croydon; Mr. J. Rowland, M.V.O.; and Hon. Violet Douglas-Pennant.

Secretary:—Professor T. Jones.

"ENEMIES OF THEIR PROFESSION."

To the Editor of THE LANCET.

SIR,—In an unfortunate moment I agreed, at the request of the honorary secretary of the Marylebone Division, who was going for a holiday, to undertake a postal canvas of the medical practitioners resident in the division asking them (1) to sign an "undertaking"; (2) to give a "guarantee";

and (3) inviting those who were not members of the Association to become so. The honorary secretary of the division had been requested by the late medical secretary of the Association to carry out this canvas. I should not have thought it possible to call forth so much personal abuse in such a little time, and it is quite evident that there is a large number of medical men in the division at the present time in a peculiarly irritable condition.

The following is a fair specimen of a large number of communications I have received during the last few days by post and telephone :—

I consider it extremely offensive on your part to send me a circular in which you threaten me that the profession to which we both have the honour to belong will "regard those who after repeated applications persist in refusing to commit themselves to a definite statement on behalf of the profession's policy as being, however unintentionally, enemies of their profession."

The statement between the inverted commas is abstracted from the fourth paragraph of Circular 3 issued with the sanction of the Council of the Association, one of the documents I was requested to circulate. I understand that a great many members of the medical profession residing in the Marylebone division are holding me personally responsible for what they are pleased to term this "offensive paragraph," and so, with your permission, I hasten to deny the soft impeachment of being a "blackmailer," and to disassociate myself with, to say the least of it, such unfortunate phraseology as is to be found at the end of this fourth paragraph of Circular 3.

I signed Circular 3 as an officer of the Association, but also as one who had no control over the actions of the Council or of the late medical secretary. I wish I had!

I am, Sir, yours faithfully,

Wimpole-street, W., Dec. 19th, 1911. COMYNS BERKELEY.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—As the result of the recent Final Fellowship Examination held on Nov. 23rd, 27th, 28th, 29th, 30th, and Dec. 1st, for which 72 candidates presented themselves, of whom 33 were approved and 39 were rejected, the council at its meeting on Dec. 14th conferred the Diploma of Fellow upon 31 candidates (including one lady—Miss Eleanor Davies-Colley, M.D., B.S. Lond., Royal Free Hospital—the first lady to obtain the Fellowship). The following are the names of the successful candidates :—

Harry Robinson, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Thomas Waddelow Smith, M.R.C.S., L.R.C.P., L.S.A., King's College Hospital; Alfred John Hull, Captain R.A.M.C., M.R.C.S., L.R.C.P., Guy's Hospital; Arthur Charles Haslam, M.D., B.S. Lond., M.R.C.S., L.R.C.P., St. Thomas's and St. Bartholomew's Hospitals; Harold Rowe Jeremy, M.R.C.S., L.R.C.P., London and St. Bartholomew's Hospitals; Henry Lewis Morgan, M.B., B.S. Lond., M.R.C.S., L.R.C.P., London Hospital; James Richard Henry Turton, M.B., B.S. Lond., M.R.C.S., L.R.C.P., St. Bartholomew's and St. George's Hospitals; Gathorne Robert Girdlestone, M.B., Ch.B.Oxon., M.R.C.S., L.R.C.P., Oxford University and St. Thomas's Hospital; Alexander Todd McCaw, M.R.C.S., L.R.C.P., London Hospital; Bertram Arthur Lloyd, M.B., B.S. Lond., M.R.C.S., L.R.C.P., Birmingham University and London Hospital; David Ranken, M.B., B.S. Lond. and Durh., M.R.C.S., L.R.C.P., Durham University and St. Bartholomew's Hospital; Philip Alfred Reckless, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Lionel Colledge, M.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and St. George's Hospital; Habibmia Ismail Janmahomed, M.D., B.S. Lond., M.R.C.S., L.R.C.P., and Vincent Townrow, M.B., B.S. Lond., M.R.C.S., L.R.C.P., Guy's Hospital; Bernard Grainger Goodwin, M.R.C.S., L.R.C.P., Birmingham University and London Hospital; Harry Lee, M.B., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and Guy's Hospital; William Robert Parkinson, M.R.C.S., L.R.C.P., St. Thomas's Hospital; Samuel Ariaratnapillai Vairakiam, L.M.S. Ceylon, M.R.C.S., L.R.C.P., Ceylon Medical College and London Hospital; Wilfrid Langrish Pink, M.B., B.S. Lond., M.R.C.S., L.R.C.P., St. Thomas's Hospital; Andrew Samuel Moorhead, M.B. Toronto, M.R.C.S., L.R.C.P., Toronto University and London and Middlesex Hospitals; Aleck William Bourne, B.A., B.C. Cantab., M.R.C.S., L.R.C.P., St. Mary's Hospital; Howard Bullock, M.B., Ch.M. Sydney, M.R.C.S., L.R.C.P., Sydney and Oxford Universities and London Hospital; Casement Gordon Aickin, M.B., Ch.B. New Zealand, Otago University and St. Bartholomew's Hospital; James Harris Connolly, M.B., Ch.B., M.D. Edin., Edinburgh University, St. Bartholomew's and Middlesex Hospitals; Eleanor Davies-Colley, M.D., B.S. Lond., Royal Free Hospital; Henry Mulrea Johnston, B.A., M.B. R.U.I., Queen's College, Belfast, Dublin University, and St. Bartholomew's Hospital; Alfred Fay Maclure, M.D., B.S. Melbourne, Melbourne University and Middlesex Hospital; Robert Charles MacWatt, M.B., C.M., B.Sc. Edin. (Lieutenant-Colonel, I.M.S.), Edinburgh University and London Hospital; Charles Gordon Shaw, M.D., B.S. Melbourne, Melbourne University and Middlesex and St. Mary's Hospitals; and Thomas Wingate Todd, M.B., Ch.B. Manchester, Manchester University.

The following gentlemen successfully passed the examination but are not eligible to receive the Fellowship because they have not yet attained the requisite age of 25 years :—

Robert Coltart Harkness, M.B., Ch.B. Edin., M.R.C.S., L.R.C.P., Edinburgh University and St. Bartholomew's Hospital; Arthur Gordon Haynes Lovell, M.B., B.S. Lond., M.R.C.S., L.R.C.P., St. Mary's Hospital; and Bernard Constable Maybury, M.B., B.S. Lond., M.R.C.S., L.R.C.P., St. Thomas's Hospital.

Licences to practise Dentistry were also conferred upon the undermentioned 44 gentlemen who have complied with the by-laws :—

Eric Bernard Armitage, Middlesex and Royal Dental Hospitals; Norman Arthur Austin, Birmingham University; Ernest Walter Bacon and Edwin Randolph Bailey, Guy's Hospital; Alfred Barritt, Middlesex and National Dental Hospitals; Victor Emmanuel Dawson Bergh, Guy's Hospital; John William Bowen, St. Bartholomew's and Royal Dental Hospitals; Henry James Burch, Guy's Hospital; Arthur Caspar Stevenson Cottam and James Kenneth Crawford, Charing Cross and Royal Dental Hospitals; Philip Percival Davies, Middlesex and National Dental Hospitals; Thomas Clement Davies, Charing Cross and Royal Dental Hospitals; Harold Graham Elliott and Reginald Gilbert Farrington, Guy's Hospital; Edwin Joseph Handford, Bristol University; Harold Harvey, Birmingham University; John Otway Hayes, Middlesex and National Dental Hospitals; Ernest Victor Jones, Charing Cross and Royal Dental Hospitals; Michael William Joseph Davis Joseph, Birmingham University; William Symons Lakeman, Guy's Hospital; Harold Lionel Laws, B.A. Oxon., M.R.C.S., L.R.C.P., St. George's and National Dental Hospitals; Frank Lodge, Charing Cross and Royal Dental Hospitals; Harold Leonard Meyer and Raphael Neft, Guy's Hospital; Thomas Spencer Osmer, Middlesex and Royal Dental Hospitals; Jal Framji Patel, L.M.S. Bombay, Bombay University and Guy's Hospital; Percy John Peatfield, Guy's Hospital; Felix Lambert Pradier, Middlesex and National Dental Hospitals; John Griffith Richards, Guy's Hospital; Warren Longtoft Roberts, Leeds University; Russell Rodgers and John Hampden Ross, Guy's Hospital; Robert Dendy Sadler, Middlesex, Royal, and National Dental Hospitals; Isidore Gittleson Samuels and Hubert Dennis Shore, Guy's Hospital; William Christie Tattersall, Middlesex and National Dental Hospitals; Thomas Reginald Trounce, Walter Colin Wade, Douglas Wain, Frank Roland Wallis, and Clifford Toulson Watson, Guy's Hospital; William Henry Whitworth, Manchester University; Charles Henry Wilson, Bristol University; and Henry Stanley Young, St. Thomas's and Royal Dental Hospitals.

UNIVERSITY OF LIVERPOOL.—The Diploma in Tropical Medicine has been awarded to the following :—

F. F. Brown, M.D., C.M. McGill; D. J. Chand, L.R.C.P. & S. Edin., L.F.P.S. Glasg.; J. M. Holmes, B.A., M.B., B.Ch., B.A.O. Dub.; C. L. Ievers, L.R.C.P. & S. Edin., L.F.P.S. Glasg.; E. K. Lomas, M.B., Ch.B. Manch.; D. S. MacKnight, M.B., Ch.B. Edin.; J. V. Mascarenhas, M.B., C.M. Madras; A. L. Oluwole, M.B., Ch.B.; and J. A. Taylor, M.B., Ch.B. Edin.

At examinations held recently the following candidates were successful :—

DEGREES OF M.B. AND CH.B.

Second Examination.—Part A, Ethel Chadwick, G. H. Darlington, A. N. Misbah, G. H. Pearson, L. B. Stott, and A. W. Weston. Part B, F. A. Belam, C. W. Dixon, H. E. Marsden, R. Martlew, A. C. Mooney, and R. E. Roberts.

Final Examination.—Part I.: Kate M. Cowe, D. Parkes, H. P. C. de Silva, and T. O. Williams. Part II.: D. Parkes.

DIPLOMA IN DENTAL SURGERY.

Third Examination.—A. E. Bate.

THE INSURANCE ACT AND NURSES.—At a general meeting of the Midland Association of Matrons and Lady Superintendents (Warwickshire, Worcestershire, and Staffordshire) the following resolutions were unanimously carried :—

That the Midland Association of Matrons and Lady Superintendents in general meeting assembled, seeing that under Clause 17 (or 20) of the National Insurance Bill nurses may be appointed to attend on insured persons, are gravely concerned that thereby recognition by the State of untrained or partly trained nurses may follow, and they consider that such recognition must inevitably lead to deterioration of the standard of nursing profession. The Midland Association of Matrons and Lady Superintendents strongly urge, therefore, that the words "fully trained" be inserted before the words "district nurse" and "nurse" in Clause 17 (or 20).

That the Midland Association of Matrons and Lady Superintendents beg that a thoroughly trained nurse may be placed upon the Advisory Committee to be nominated by the Insurance Commissioners under the National Insurance Bill.

REMARKABLE STATISTICS REGARDING DEFECTIVE EYESIGHT.—The Lambeth board of guardians, at its last meeting, considered a return showing that in 12 months 632 visits were made by children in the Poor-law schools at Norwood to the Royal Eye Hospital. The medical officer reported that each child sent to the institution was suffering from defective vision and in need of treatment by a specialist. No less than 122 pairs of spectacles had been provided, costing £20 9*s.* 6*d.*, whilst repairs were executed amounting to £12 17*s.* 6*d.* The travelling expenses to and

from the hospital were £21 1*s.* 5*d.* There were 70 girls and 58 boys in the school wearing spectacles, the proportion being somewhat in excess of 20 per cent. of the school population. The board decided in future to send the children for treatment in regard to their eyes to the clinic established by the London County Council at Chestnut-road, West Norwood.

ROYAL INSTITUTION.—The annual Christmas course of juvenile lectures at the Royal Institution begins on Dec. 28th at 3 o'clock, when Dr. Chalmers Mitchell will deliver the first of six lectures on the Childhood of Animals.

His Excellency the Viceroy and Governor-General of India has appointed Brevet-Colonel R. H. Firth, R.A.M.C., to his personal staff as honorary surgeon, from Nov. 3rd, 1911, *vice* Colonel R. H. Forman, retired.

LITERARY INTELLIGENCE.—The first volume of "A New System of Surgery," of which the general editor is Mr. C. C. Choyce, F.R.C.S. Eng., and the pathological editor Professor J. Martin Beattie, M.D. Edin., is announced for early publication by Messrs. Cassell and Company.

AT a meeting of the Senate of the University of London on Dec. 13th the Royal Dental Hospital and London School of Dental Surgery was admitted as a School of the University in the Faculty of Medicine (in dentistry only) for a period of five years as from Oct. 1st last.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Act.

THE National Insurance Bill became an Act of Parliament on Saturday, Dec. 16th, when it received the Royal Assent. The alterations made in the measure in the House of Lords were numerous, but for the most part they were intended merely to improve the drafting of the Bill. Their effect on the provisions of the Bill as it left the House of Commons is small. For instance, the designation "Local Health Committee" has been changed to "Insurance Committee." The official Opposition in the House of Lords adhered to its intention expressed by the Marquis of LANSDOWNE on the second reading, and refrained from any attempt to examine or reframe the provisions of the measure. The attitude of the Opposition was that at this period of the session it was impossible to undertake the systematic review of a Bill so complex and lengthy, and that the Government must accept the entire responsibility for it. It is common ground to politicians of all parties that the details of the Act are so complicated, and the varieties of circumstance which they have to meet are so numerous, that amending Bills will be necessary as experience reveals the weak points.

The Medical Profession and the Insurance Act.

Some references to the position of the medical profession under the National Insurance legislation of the Government were inevitable during its passage through the House of Lords. When the measure was in Committee on Thursday, Dec. 14th, the Bishop of BANGOR proposed to introduce into Clause 15 (administration of medical benefit) a provision giving to medical practitioners who had been struck off the panels the right of an appeal to the General Council of Medical Education and Registration. Viscount HALDANE, who had charge of the Bill in the House of Lords, resisted the amendment, arguing that the powers given to the Insurance Commissioners to revise such removals were adequate. The amendment was negatived without a division. Speaking on Clause 15, Viscount MIDLETON made some criticism on its effect. He feared that the general extension of contract practice would make intolerable demands on the medical profession, for which the scale of remuneration contemplated by the Chancellor of the Exchequer and his advisers was quite inadequate. When persons might call in a medical men without having to pay for his visits, many would ask for medical attendance who now went without it. Viscount HALDANE'S answer was that he did not think any difficulty would arise in getting doctors to do the work. It was often extremely difficult for young medical men to secure a start in their profession; but if they got their names placed upon the panel the Bill would give them an opportunity which they had not at present.

The attitude of hostility of the medical profession, particularly in the North of England, to the terms offered to them under the National Insurance Act has caused some apprehensions in Ministerial quarters at Westminster. The spokesmen of the Government have expressed a "hope" that the difficulties with the profession will be removed by the regulations issued by the Insurance Commissioners and by the negotiations conducted in each locality. Lord ASHBOURNE, on Friday Dec. 15th, put a question to the Government on the attitude of the medical profession. Viscount HALDANE was absent from his place when the question was put, but Earl BEAUCHAMP replied that the Government hoped that the medical men would be willing and ready to work the Bill. In expressing this view he admitted that he had read the report of the Manchester meeting held on the previous day.

The Prorogation.

On Saturday, Dec. 16th, Parliament was prorogued until Wednesday, Feb. 14th. Among the measures to receive the Royal Assent was the Rag Flock Act.

HOUSE OF COMMONS.

WEDNESDAY, DEC. 13TH.

Sleeping Sickness.

Dr. CHAPPLE asked the Secretary of State for the Colonies whether the evidence that glossina morsitans was a carrier of the trypanosome of sleeping sickness was now sufficiently conclusive to justify him in so relaxing the severity of the game laws of Nyassaland as to permit of the natives hunting game known to harbour the trypanosome in their blood, in order that both the game and the infecting fly which invariably accompanied it might be driven off from the populous centres and the black and the European population and their domestic animals be protected from the spread of this disease.—Mr. L. HARCOURT replied: There is not yet sufficiently conclusive evidence to justify my taking the course suggested. A scientific Commission, under the direction of Colonel Sir David Bruce, is now engaged in investigating in the Protectorate the relations between the fauna of the country, the tsetse fly, and the trypanosome, and when definite results are reached I shall not hesitate to adopt such measures as may be required. It must be remembered that domestic animals as well as game are suspected of being carriers of the trypanosome.

Dr. CHAPPLE: Is the right honourable gentleman not aware that sleeping sickness in man and trypanosomiasis in domestic animals are spreading in Nyassaland, and that these are associated with the presence of game and tsetse around the populous centres?—Mr. L. HARCOURT: I have been in close communication with Dr. Kinghorn, and I am considering the matter very carefully. Whilst the Commission is inquiring into it I think I ought to be allowed to wait for their recommendations.

Dr. CHAPPLE: Is the right honourable gentleman aware that in the meantime sleeping sickness is spreading very rapidly in Nyassaland, and that Professor Koch recommended that the game be driven back from populous centres because of the danger to natives and domestic animals from the proximity of game and infective tsetse, and is it not a fact that Dr. Kinghorn has experimentally inoculated susceptible animals with trypanosomiasis from the bite of infected glossina morsitans, the tsetse fly of Nyassaland?

The SPEAKER: The honourable Member can hardly expect the Secretary for the Colonies to answer those matters without notice.

Dr. CHAPPLE subsequently, on the motion for the adjournment, called attention to the immediate importance of doing something with regard to the spread of sleeping sickness in Nyassaland. There was, he said, a great waste of precious time involved in waiting for the report of the Sleeping Sickness Commission, while in the meantime the disease was spreading amongst the natives and the whites and also amongst the domestic animals. A number of whites as well as natives had been dying in Nyassaland from sleeping sickness. A report had just come to hand from Nyassaland in which the following sentence occurred: "The health of the native community has been quite satisfactory apart from the existence of sleeping sickness, which has slowly been extending during the last 12 months in spite of every effort to arrest it." The honourable Member was proceeding to discuss the relation of the disease to domestic animals when the House was "counted out" owing to the absence of a quorum.

The Insurance Bill and Medical Benefit.

Mr. NORMAN CRAIG asked the Secretary to the Treasury whether any and, if so, what steps would be taken to ensure that, in the event of the National Insurance Bill becoming law, insured persons would receive the medical benefit purported to be secured to them by the Bill.—Mr. MCKINNON WOOD replied: I trust that no difficulties will arise in this respect, but I can assure the honourable Member that if they should arise adequate steps will be taken to deal with them.

Patent Medicines.

Mr. LYNCH asked the Secretary of State for the Home Department whether, in regard to the Select Committee to consider medical matters, he would consider the advisability of making the terms of reference fairly extensive, so that not merely questions of patent medicines might be dealt with, but also the practice of medicine by unqualified men.—Mr. MCKENNA replied: I do not think it would be wise to extend the scope of the inquiry beyond patent medicines.

Mr. LYNCH asked the right honourable gentleman whether he was in a position to state whether the Select Committee promised for next session to inquire into the subject of patent medicines and allied matters would be a departmental committee or in the nature of a Royal Commission; and whether the medical profession would be represented both in regard to science and to professional practice.—Mr. MCKENNA answered: I am unable at present to make a definite announcement, but it is proposed that the inquiry should be by a Select Committee of this House or possibly a joint Select Committee.

THURSDAY, DEC. 14TH.

Anthrax.

Mr. JOWETT asked the Secretary of State for the Home Department whether he would say how many cases of internal anthrax had occurred during the 10 years commencing Jan. 1st, 1900, in establishments where woolcombing regulations were in force, and how many of these were fatal.—Mr. MCKENNA answered: The number of reported cases of internal anthrax in woolcombing establishments during the 10 years 1901 to 1910 was 18, of which 17 were fatal.

Mr. JOWETT also asked the right honourable gentleman whether he would state how many cases of internal anthrax occurred among woolsorters during the 10 years immediately preceding the one in which the woolsorters' regulations, issued in 1897, were put into force, and

how many were fatal, and the number of cases of internal anthrax among woolsorters during the last ten years, and how many of these were fatal.—Mr. MCKENNA said, in reply: The number of reported cases of internal anthrax among woolsorters during the 10 years 1901 to 1910 was five, of which all were fatal. One case, which was also fatal, has occurred during the present year. The figures for the 10 years preceding the special rules cannot be given, as the obligation to notify cases was not imposed until 1896. I am advised, however, that such evidence as there is points to the greater prevalence of the disease then than now.

Mr. LYNCH: Is the right honourable gentleman aware that under proper conditions, which are possible, the mortality from anthrax should be reduced to nil?

Mr. MCKENNA: I believe that every precaution that can be taken is taken now, but perhaps the honourable gentleman will communicate with the Home Office what the proper precautions should be. I shall be very glad to consider them.

Mr. LYNCH: In other countries it has been so reduced.

Sanatorium Funds.

Mr. HICKS-BEACH asked the Chancellor of the Exchequer whether any of the sums available under the National Insurance Bill or the Finance Bill, 1911, for the purposes of the provision of sanatoria could be allocated towards the cost of Poor-law institutions which had been, or were being, or might be, provided for the treatment of tuberculosis. —Mr. LLOYD GEORGE wrote in reply: The answer is in the negative.

The Certification of Lunatics.

Captain FABER asked the Home Secretary whether, looking at a recent case in which a doctor refused to allow a man to be removed to an asylum owing to weakness, although he had himself certified the man insane, he would consider the advisability of preventing any local authority from appointing only one doctor to certify lunatics; and whether the Local Government Board or the Lunacy Commissioners had any power over a single doctor and were able to call in another doctor, if necessary.—Mr. MCKENNA wrote in reply: A local authority has no power to appoint any doctor to certify lunatics for reception into asylums; it rests with the justice who makes the order under Section 16 of the Lunacy Act, 1890, to call in any medical practitioner whom he may choose to examine the patient and sign the certificate. Neither the Local Government Board nor the Lunacy Commissioners have any power over the doctor who has given a certificate under Section 19 (2) for the suspension of removal, nor are they able to call in another doctor.

Vision Tests.

Mr. LYNCH asked the President of the Board of Trade whether, in reference to the various offices under his control, he could state what proportion of candidates tested for vision were colour blind; whether any classification of results was obtainable, as, for instance, with regard to degree or kind of colour blindness, or the association of this defect with any other physical condition; and, if so, whether he could give the statistics for the last five years, supplemented by any comments of the medical authorities which might be useful in the scientific regard of the question.—Mr. S. BUXTON furnished the following written reply: The only examinations in colour vision conducted by the Board of Trade are those for persons serving, or intending to serve, in the Mercantile Marine or in the fishing industry. Particulars of these examinations are published in an annual report on the sight tests, a copy of the latest issue of which I am sending to my honourable friend. As candidates for certificates of competency are required to undergo the sight tests on every occasion on which they present themselves for examination, many persons appear more than once in the total number of examinations, and the figures are therefore no guide to the general incidence of colour blindness. I am not aware of any data showing the association of colour blindness with any other physical condition, but information is available as to the nature of the colour defects of candidates who fail to pass the tests. These are classified on the Young-Helmholtz theory of colour vision, according to whether complete or incomplete red or green blindness is present. The whole question of the sight tests at present in force is now being considered by a departmental committee. A table giving the statistics desired by my honourable friend is appended:—

—	1906.	1907.	1908.	1909.	1910.
Number of examinations in colour vision	6410	6564	6288	6028	7393
Number of failures	57	76	44	71	112
Nature of defects:					
Complete red blindness	10	29	15	20	32
Incomplete red blindness	9	5	4	15	17
Complete green blindness	25	31	18	23	42
Incomplete green blindness	13	11	7	13	21

SATURDAY, DEC. 16TH.

Welsh Insurance Commissioners.

In answer to Mr. ELLIS GRIFFITH, Mr. LLOYD GEORGE said that the names of the Insurance Commissioners for Wales under the National Insurance Bill were:—Chairman, Alderman T. J. Hughes, Vice-Chairman Glamorgan county council, who for 12 years had been chairman of the financial committee of the council; Commissioners: Dr. Meredith Richards, medical officer of health, Croydon, who had had a large and varied experience of all kinds of medical work; Mr. John Rowland, M.V.O., of the Treasury; and Miss Violet Douglas-Pennant, who had had wide experience of social work; Secretary, Professor Thomas Jones, M.A., secretary of the King Edward VII. Welsh National Memorial Fund.

BOOKS, ETC., RECEIVED.

APPLETON, D., AND CO., New York and London.

Heredity in Relation to Evolution and Animal Breeding. By William E. Castle, Professor of Zoology, Harvard University. Price 6*s.* net.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, London. (Published for Department of Education, Sudan Government, Khartoum.)

Fourth Report of the Wellcome Tropical Research Laboratories at the Gordon Memorial College, Khartoum. Volume A.—Medical. Andrew Balfour, M.D., B.Sc., F.R.C.P. Edin., D.P.H. Camb., Director. 1911. Price 21*s.* net.

CHURCH OF ENGLAND TEMPERANCE SOCIETY, 4, Sanctuary, Westminster, London, S.W.

Modern Medical Opinions on Alcohol. Being a Series of Lectures delivered by well-known Medical Men. Price 1*s.*

CHURCHILL, J. AND A., 7, Great Marlborough-street, London.

The Medical Directory, 1912. Sixty-eighth Annual Issue. Price 14*s.* net.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XXXI. Session 1910-1911. With List of Officers, Members, &c. Price 12*s.* 6*d.* net.

CONSTABLE AND CO., LIMITED, 10, Orange-street, Leicester-square, London, W.C.

Recent Methods in the Diagnosis and Treatment of Syphilis, the Wassermann Serum Reaction and Ehrlich's Salvarsan. By Carl H. Browning, M.D., Lecturer on Clinical Pathology, University of Glasgow, Director, Clinical Research Laboratory, Western Infirmary, Glasgow, and Ivy Mackenzie, M.A., B.Sc., M.B., Ch.B., Director, Western Asylums' Research Institute, Glasgow, Physician to the Out-Patients' Department, Western Infirmary, Glasgow. In collaboration with John Cruickshank, M.B., Ch.B., and Charles G. A. Chislett, M.B., Ch.B., Walter Gilmour, M.B., Ch.B., Hugh Morton, M.B., Ch.B. With an Introduction by Robert Muir, M.A., M.D., F.R.S., Professor of Pathology in the University of Glasgow. Price 8*s.* 6*d.* net.

FUNK AND WAGNALLS COMPANY, Salisbury-square, London, E.C.; 44-60, E. 23rd-street, New York.

Life, Death, and Immortality. By William Hanna Thomson, M.D., LL.D., Author of "Brain and Personality," "What is Physical Life," &c., Consulting Physician to the Roosevelt Hospital, &c. Price $1.00 net.

"GARDEN LIFE," Office of, Hatton House, Great Queen-street, London, W.C.

The Amateur Gardener's Diary and Dictionary, 1912. Price 1*s.* net.

GILL, GEORGE, AND SONS, LIMITED, 13, Warwick-lane, London, E.C.

Red Cross Manual of First Aid and Stretcher Drill for Red Cross Students. By D. M. Macdonald, M.D., Medical Officer of Health, Leven, Fife, Examiner to the St. Andrew's Ambulance Association, formerly Captain R.A.M.C.T.F. (Scottish Horse). Price 1*s.* net.

GURNEY AND JACKSON, 33, Paternoster-row, London.

Entomology for Medical Officers. By A. Alcock, C.I.E., M.B., LL.D., F.R.S., I.M.S., retd., Lecturer on Medical Entomology, &c., at the London School of Tropical Medicine. Price 9*s.* net.

HARPER AND BROTHERS, 45, Albemarle-street, London, W.

Ancient Types of Man. By Arthur Keith, M.D., LL.D. Aberdeen. Price, cloth, 2*s.* 6*d.* net; leather, 3*s.* 6*d.* net.

HAZELL, WATSON, AND VINEY, LIMITED, 52, Long Acre, London, W.C.

Hazell's Annual for 1912. A Record of the Men and Movements of the Time. Revised to November 25th, 1911. Edited by Hammond Hall. Twenty-seventh Year of Issue. Price 3*s.* 6*d.* net.

HERRICK BOOK AND STATIONERY COMPANY, THE, Denver, Colorado, U.S.A.

The Ophthalmic Year Book. Volume VIII. Containing a Digest of the Literature of Ophthalmology, with Index of Publications for the Year 1910. By Edward Jackson, M.D., Professor of Ophthalmology in the University of Colorado, Theodore B. Schneideman, M.D., Professor of Ophthalmology in the Philadelphia Polyclinic, and William Zentmayer, M.D., Attending Surgeon to the Wills Eye Hospital, Philadelphia. Price not stated.

KARGER, S., Berlin.

Anomale Kinder. Von Dr. med. L. Scholz, Direktor der Provinzial-Irren- und Idiotenanstalt in Kosten (Prov. Posen). Price M.8.60.

Die Erkennung der psychopatischen Konstitutionen (krankhaften seelischen Veranlagungen) und die öffentliche Fürsorge für psychopathisch veranlagte Kinder. Von Prof. Dr. Th. Ziehen, Geh. Med.-Rat Direktor der Psychiatrischen und Nervenklinik der Kgl. Charité in Berlin. Price Pf.80.

Leitfaden der Elektrodiagnostik und Elektrotherapie für praktiker und Studierende. Von Dr. Toby Cohn, Nervenarzt in Berlin. Vierte, vollständig umgearbeitete und vermehrte Auflage. Price M.6 60.

Die Störungen des Verdauungsapparates als Ursache und Folge anderer Erkrankungen. Von Dr. Hans Herz in Breslau. Zweite, umgearbeitete und vermehrte Auflage. I. Teil: Die Krankheiten des Blutes, des Stoffwechsels, der Konstitution in ihren Beziehungen zum Verdauungsapparat. Price M.6.

Die Störungen des Farbensinnes, ihre klinische Bedeutung und ihre Diagnose. Von Dr. Hans Köllner, Privatdozent an der Universität Berlin, Assistent der Universitäts-Augenklinik. Price M.14.

Abhandlungen aus dem Gebiete der Geburtshilfe und Gynaekologie. Mitteilungen aus der Zweiten Frauenklinik der königl. ung. Universität zu Budapest. Herausgegeben von Prof. Dr. W. Tauffer, Direktor der Klinik. Band II. Heft. I. Price M.4.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, Broadway House, Carter-lane, London, E.C.

The Evidence for the Supernatural. A Critical Study Made with "Uncommon Sense." By Ivor Ll. Tuckett, M.A., M.D. Cantab., M.R.C.S., L.R.C.P., formerly Fellow of Trinity College, Cambridge, and Senior Demonstrator of Physiology in Cambridge University. Price 7*s.* 6*d.* net.

KING, P. S., AND SON, Orchard House, Westminster, London, S.W.

National Conference on the Prevention of Destitution. Held at the Caxton Hall, Westminster, on May 30th and 31st, and June 1st and 2nd, 1911. Report of the Proceedings of the Public Health Section. President: Sir T. Clifford Allbutt, K.C.B., F.R.S. Price 2*s.* 6*d.* net.

MACLEHOSE, JAMES, AND SONS, Glasgow.

A Manual of Midwifery for Students and Practitioners. By G. Balfour Marshall, M.D., C.M., F.R.F.P.S.G., Senior Gynæcologist, Royal Infirmary, Glasgow, Extra-Academical Lecturer on Midwifery and Gynæcology, Glasgow. Price 14*s.* net.

MURRAY, JOHN, Albemarle-street, London, W.

The Anopheline Mosquito; some Facts and Information for Use in Schools. By R. C. Dauglish. With an Introduction by J. W. W. Stephens, M.D., of the Liverpool School of Tropical Medicine. Price 6*d.* net.

NATIONAL PRINTING DEPARTMENT, Cairo.

Ministry of Education, Egypt. Records of the School of Medicine. Edited by the Director. Vol. IV. (All applications for the volumes of the Records should be addressed to: The Director, School of Medicine, Cairo, Egypt.) Price not stated.

PARMELEE, C. H., Printer to the King's Most Excellent Majesty, Ottawa. CENSUS AND STATISTICS OFFICE (Archibald Blue, Chief Officer), Ottawa.

The Canada Year Book, 1910. Second Series. Issued, June, 1911.

VINTON AND CO., LIMITED, 8, Bream's Buildings, Chancery-lane, London, E.C

Live Stock Journal Almanac for 1911. Illustrated. Price 1*s.* net.

WHITAKER, J., AND SONS, LIMITED, 12, Warwick-lane, Paternoster-row, London.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

MUNRO, DONALD J., M.B., B.S. Lond., has been appointed Second Anæsthetist to the Belgrave Hospital for Children.

OATES, GEOFFREY EUGENE, M.D. Lond., M.R.C.P. Lond., has been appointed Medical Officer of Health of Ilford.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £80 per annum, with apartments, board, and laundry. Also Assistant Pathologist. Salary £100 per annum, with board, residence, and laundry.

BRISTOL ROYAL INFIRMARY.—Dental House Surgeon. Salary £100 per annum, with apartments, board, and laundry. Also Resident Casualty Officer for six months. Salary at rate of £50 per annum, with board, laundry, and apartments.

BURNLEY, VICTORIA HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with residence, board, and washing.

CANCER HOSPITAL, Fulham-road, London, S.W.—House Surgeon for six months. Salary £70 per annum.

CARDIFF, UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Assistant Lecturer and Demonstrator in Physiology, and Lecturer in Physiological Chemistry. Salary to first post is £140, and latter post £60 per annum.

CHEADLE CONVALESCENT HOSPITAL.—Assistant Medical Officer for six months. Salary at rate of £30 per annum, with board and residence.

CROYDON MENTAL HOSPITAL, Upper Warlingham, Surrey.—Pathologist and Third Assistant Medical Officer. Salary £200 per annum, with quarters, board, and laundry.

DERBY, DERBYSHIRE ROYAL INFIRMARY.—Two House Surgeons and House Physician for one year. Salary in each case £100 per annum, with apartments, board, &c. Also Assistant House Surgeon for six months. Salary at rate of £60 per annum, with apartments, board, &c.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £72 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, and washing. Also Ten qualified Clinical Assistants.

GENERAL LYING-IN HOSPITAL, York-road, Lambeth, S.E.—House Physician for three months. Salary £50 per annum, with board and residence.

GLOUCESTER, GLOUCESTERSHIRE EDUCATION COMMITTEE.—Temporary School Medical Inspector. Salary at rate of £250 per annum.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

GRIMSBY AND DISTRICT HOSPITAL.—Senior House Surgeon and Assistant House Surgeon. Salaries respectively £100 and £60 per annum, with board, lodging, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Resident House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £30, with board and residence. Also Casualty Medical Officer. Salary £200 per annum, with luncheon.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

LEEDS GENERAL INFIRMARY.—Honorary Surgeon to the Ear, Throat, and Nose Department; and Honorary Assistant Physician. Also Assistant Clinical Pathologist. Salary £150 per annum.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Resident Medical Officer. Salary £150 per annum, with residence and board.

MANCHESTER, ANCOATS HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board, residence, &c.

MANCHESTER SCHOOL FOR MOTHERS.—Medical Officer. Salary £250 per annum.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Soho-square, W.—Honorary Assistant Physician.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £100 per annum, with board, lodging, and washing.

REDHILL, EARLSWOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and washing.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL.—Resident House Surgeon, unmarried, for six months. Salary £100 per annum, with board, residence, and washing.

SUNDERLAND, CHILDREN'S HOSPITAL.—Resident Medical Officer for six months. Salary £80 per annum, with board, residence, and laundry.

SUNDERLAND ROYAL INFIRMARY.—House Physician for six months. Salary £80 per annum, with board, residence, and laundry.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board, washing, and attendance.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford.—Junior House Surgeon. Salary at rate of £75 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL AND POST-GRADUATE COLLEGE, Hammersmith-road, W.—Clinical Assistants. Also Three Non-Resident Assistant House Surgeons.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Anæsthetist.

WOKING, BROOKWOOD ASYLUM, Knaphill.—Third Assistant Medical Officer. Salary £150 per annum, with apartments, board, laundry and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, rooms, and laundry.

Births, Marriages, and Deaths.

BIRTHS.

KNIGHT.—On Nov. 18th, at Airfield House, Pinetown, Natal, South Africa, the wife of Wilfred Knight, M.B., J.P., of a son.

SCOTT.—On Dec. 12th, at Liss, Hants, the wife of William Lochhead Scott, M.D., B.S., of a son.

DEATHS.

GUBBINS.—On Dec. 7th, in his 57th year, at Newcastle, Natal, from enteric fever, the Hon. Sir Charles O'Grady Gubbins, M.B., a member of the Union Cabinet.

POWER.—On Dec. 14th, at Mogden Cottage, Isleworth, Herbert Robert Power, M.R.C.S., L.R.C.P., Surgeon R.N.V.R.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

HEALTH STATISTICS OF SWAZILAND.

THE annual report of the Resident Commissioner, just issued from the Colonial Office, states that the population, as shown by the Census taken in May, 1911, consisted of 1083 whites and 98,876 coloured. From 7000 to 10,000 Swazis are, however, always absent at work in the Transvaal Province. In the year ending March 31st, 1911, there were amongst the Europeans 32 births (29·54 per 1000; and 18 deaths (16·62 per 1000); the births and deaths of natives are not registered. The public health was good. Malaria is always present in the low-lying parts of the country during the rainy season; it is, however, of a mild type. In ordinary seasons fatal cases are very rare. The Government has distributed pamphlets and posters dealing with the causes and prevention of malaria. Diphtheria and whooping-cough appeared amongst European children in the Hlatikulu district, resulting fatally in a few cases. Syphilis is very common amongst the natives, and three cases of leprosy were reported. No small-pox outbreaks occurred and no vaccination was done. The Administration issues to native applicants free medicines, but on the whole they prefer treatment by the native doctors. The climate generally is mild and healthy, except in what is known as the low veld, which is malarial during the rainy season. The average rainfall for the year was 48·08 inches, as compared with 41·20, the mean for the previous five years. The hospital at Mbabane is the only Government institution in the territory. It contains one European ward and two native wards. Sixty-five patients were admitted during the year.

MEDICAL MISSION EXHIBITION.

UNDER the auspices of the Society for the Propagation of the Gospel in Foreign Parts a very interesting and successful exhibition has been held in Manchester during the past few days. The exhibition was admirably arranged to show medical wards, dispensaries, and operating-theatres that are at present in use in India, China, Burma, South Africa, and elsewhere, while there were exhibitions also of various missions in foreign parts. One of the special features of the exhibition was a valuable exhibit kindly lent by the Liverpool School of Tropical Medicine. Professor Sir Ronald Ross, of Liverpool, in opening the exhibition, delivered an interesting address on the origin of medicine in Ancient Egypt, where the medical profession and the Church were not only associated, but were one; indeed, there is evidence to show that the priests carried on researches into diseases and obtained knowledge which we had, he said, only recently re-discovered. Probably one of their most wonderful discoveries was that the effect of the venom of a serpent could be neutralised by the bite of a venomous serpent. They also knew the relation of the rat to the plague. In his opinion the ideal missionary must be both a priest and a medical man, and the Liverpool School of Tropical Medicine was intimately associated with medical missions, and many of their students had become medical missionaries. Medical missions led the way, civilisation came afterwards.

A FOOT-STRAP FOR BLISTERED FEET.

THE Army Council has issued a circular memorandum regarding a foot-strap for use by soldiers suffering from sore or blistered feet when marching. The device consists of a strap which can be fixed in a figure of 8 round the boot and is broadened at certain points of contact. When a man develops a blister or rubbed foot he puts on the strap, which, on being tightened, fixes the boot, prevents further rubbing, and changes the points of contact where there is pressure. It is claimed that the soldier can then continue to march without pain and that the constriction of the superficial blood-vessels tends to aid the healing of the blister. It is not proposed to supply these straps officially, but the Army Council has no objection to officers and other ranks making use of them should they desire to do so.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1911:—

Dec. 19th-23rd (Moscow).—Third Pan-Russian Therapeutical Congress.
,, 27th-30th (Baltimore).—American Physiological Society.

In 1912:—

Jan. 20th-27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
Feb. 13th-14th (London).—Central Poor-Law Conference.
March 7th-11th (Berlin).—Thirty-third Balneological Congress.
March 23rd-April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
,, (London).—First Congress of Pure Food and Health Society of Great Britain.
April 1st-7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
,, 14th-20th (Rome).—Seventh International Congress on Tuberculosis.
,, 15th-18th (Wiesbaden).—Twenty-ninth German Congress for Internal Medicine.
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 7th-17th (Washington).—Ninth International Red Cross Conference.
,, 27th-June 1st (London).—Eighteenth International Congress of Americanists.
,, (London).—International Horticultural Exhibition.
June 24th-27th (London).—The (Biennial) Health Conference and Exhibition.
,, (London).—Missionary Exhibition.
,, (Dublin).—Celebration of the Bicentenary of the School of Physic in Ireland (Medical School of Trinity College, Dublin).
July 2nd-5th (London).—Congress of the Universities of the Empire.
,, 2nd-6th (Doncaster).—Seventy-third Annual Show of the Royal Agricultural Society of England.
,, 12th-16th (London).—Imperial Conference of Teachers' Associations.
,, 19th-27th (Liverpool).—British Medical Association, Eightieth Annual Meeting.
,, 24th-30th (University of London).—First International Eugenic Congress.
,, 25th-28th (Berlin).—Royal Institute of Public Health.
,, 29th-August 3rd (York).—Congress and Exhibition of the Royal Sanitary Institute.
Aug. 5th-10th (Oxford).—Second International Congress of Entomology.
,, 7th-10th (Glasgow University).—Thirty-second Annual Meeting of the British Dental Association.
Sept. 4th (Washington, D.C.) and Sept. 6th-13th (New York).—Eighth International Congress of Applied Chemistry.
,, 10th-12th (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.
,, 23rd-28th (Washington, D.C.).—Fifteenth International Congress on Hygiene and Demography.
September (Prague).—International Congress of Radiology and Medical Electrology.
(Budapest).—Tuberculosis Exhibition.
(Stockholm).—Olympic Games.
(Düsseldorf).—Third International Medical Accident Congress.
(Perth, Western Australia).—(Three days.) Health Congress.

In 1913:—

(Easter week) (Berlin).—Fourth International Congress for Physiotherapy.
Aug. 6th-12th.—(London).—Seventeenth International Congress of Medicine.
,, 22nd-28th (Cambridge).—International Mathematical Congress.
(London).—Historical Medical Exhibition. (Organised by Mr. Henry S. Wellcome.)
(Chicago).—Congress of the International Association of Refrigeration.
(Paris).—Congress of Physical Education.
(Milan).—Fourteenth International Anti-alcoholic Congress.

In 1914:—

(Vienna).—Third International Congress for Professional Diseases.
(Auckland, N.Z.).—Australasian Medical Congress.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 19th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Dec. 13	29·52	S.	...	67	50	41	44	46	Cloudy
,, 14	29·61	W.	0·27	68	51	43	44	44	Cloudy
,, 15	29·35	S.W.	0·42	60	52	44	48	49	Cloudy
,, 16	29·89	S.W.	...	64	50	42	42	43	Fine
,, 17	29·94	S.W.	0·02	58	54	48	49	50	Cloudy
,, 18	29·83	S.	0·12	56	52	43	50	51	Overcast
,, 19	29·73	S.W.	0·15	56	52	50	52	52	Raining

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.). Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (30th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied.

SOLE AGENTS FOR AMERICA—Messrs. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

The following journals, magazines, &c., have been received:—
Revue de Chirurgie, South African Record, Journal of Tropical Medicine and Hygiene, Archives Générales de Médecine, Annali dell Istituto Maragliano, American Medicine, Birmingham Medical Review, Revue de Médecine, Therapist, Local Government Review, Bulletin of the Johns Hopkins Hospital, American Journal of Clinical Medicine, American Journal of Surgery, Journal of Obstetrics and Gynæcology of the British Empire, Nordiskt Medicinskt Arkiv, Nation in Arms, Annales des Maladies des Organes Génito-Urinaires, Archives de Médecine et de Pharmacie Militaires.

Communications, Letters, &c., have been received from—

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A Lecture

ON

CANCER OF THE RECTUM AND ITS TREATMENT.

Delivered at St. Mark's Hospital for Cancer, Fistula, and Diseases of the Rectum, City-road, London, E.C., on Nov. 2nd, 1911,

BY P. LOCKHART MUMMERY, F.R.C.S. ENG.,

SENIOR ASSISTANT SURGEON TO THE HOSPITAL; SURGEON TO QUEEN'S HOSPITAL FOR CHILDREN, HACKNEY-ROAD, E.

HISTOLOGICAL TYPES.

GENTLEMEN,—Cancer of the rectum may be of two kinds—epithelioma and adeno-carcinoma. Several other varieties are often described, such as medullary, adenoid, scirrhous and colloid carcinoma, but these are only varieties of adeno-carcinoma, and owe their different appearances to the rapidity of their growth and the secondary changes which they undergo; primarily they are all the same.

Epithelioma occurs only at the anal skin margin and has all the usual histological characters of skin cancer. In the later stages it often invades the rectum, but it is always primarily a skin cancer. Adeno-carcinoma starts in the rectal mucosa, and the cells have the typical glandular arrangement of the crypts of Lieberkühn.

Site of the growth.—The commonest position for rectal cancer is at or about the recto-sigmoidal junction, the next commonest situation is the rectal ampulla, and the least common is epithelioma of the anus. Tuttle gives the following figures: Anus, 6 per cent.; intraperitoneal position, 26 per cent.; supraperitoneal position, 67 per cent. We notice that by far the commonest situation is unfortunately the worst from the point of view of treatment—namely, high up in the rectum and involving the peritoneal cavity.

Age.—Cancer of the rectum may occur at almost any age. The youngest case we have had at St. Mark's Hospital was a girl, aged 15 years, while the oldest, I believe, was a man of 83 years. Statistics show that the commonest age is between 40 and 45. But these figures are not trustworthy, as they do not take into account the numbers of population living per 1000 at each age. And personally I believe the commonest age is between 50 and 60.

Sex.—Cancer of the rectum is apparently slightly commoner in men than in women. Most statistics show about 60 per cent. men.

PREDISPOSING CAUSES.

I do not propose to discuss the very vexed question of the etiology, but only to mention some of the conditions which appear to predispose to cancer of the rectum.

Constipation is often stated to be a cause, but that this is an important cause is open to considerable doubt. One must remember that constipation is very common, while cancer is not. Also constipation is much commoner in the female sex, while cancer of the rectum is slightly more common in the male.

Tuttle is strongly of opinion that muco-membranous colitis is a predisposing cause of cancer. While I should certainly admit that the two conditions are not infrequently mistaken for one another, I have no evidence in my own experience that one is a predisposing cause of the other.

SIMPLE GROWTH AS A PREDISPOSING CAUSE.

Personally, I believe by far the most important predisposing cause is a simple growth in the bowel, such as a polypus or simple adenoma. I have so frequently seen cancer originate in innocent adenomata of the rectum that I look upon all simple adenomata or polypi with the gravest suspicion and recommend their immediate and wide removal. Sometimes a simple adenoma will undergo malignant change when it is quite small; while at other times it will reach a considerable size before the change occurs, but sooner or later I believe it always does become converted into a malignant growth, with the exception of cases in very young persons.

Not long ago I saw a patient who for five years had suffered from symptoms pointing to a growth in the bowel—i.e., bleeding and diarrhœa. When I saw him he had an adenoma, which was obviously malignant, and I have no doubt that the original growth was innocent, but had become malignant during the last few months. Simple chronic ulcer of the rectum may also be the starting point of cancer, and should be looked upon as a predisposing cause. I know of certainly three cases in which there did not appear to be any doubt that cancer of the rectum or sigmoid had originated in an old chronic simple ulcer.

MULTIPLE POLYPI.

No list of predisposing causes would be complete without mentioning multiple polypi of the colon. This is a rare disease in which numerous polypi of an innocent nature occur in the large bowel and rectum. So prone are these polypi to become malignant that I have never yet seen a case in an adult where malignant change had not occurred in one or more of the polypi or did not develop soon afterwards. In two cases which I have seen there were several of the polypi in different parts of the large bowel which had become cancerous.

METHODS OF SPREAD OF THE GROWTH.

Cancer of the rectum, like cancer elsewhere, spreads by the lymphatics and by direct extension of the growth into neighbouring tissues. Epithelioma of the anus spreads both out on to the skin round the anus and up into the bowel. In the bowel the extension of the growth up along the lymphatics can in some cases be felt as chains of nodules passing longitudinally up the bowel. On the skin it has the ordinary appearances of a skin cancer. The glands in the groin are early involved, which is, of course, not the case with cancer of the rectum proper, unless the growth has extended out on to the skin.

Cancer of the ampulla is generally first seen as a circular ulcer which spreads radially. When felt in the rectum it feels like a stricture with a thick lower lip; this is due to the fact that as the ulcer spreads its two opposite edges soon meet on the opposite side of the bowel and the thickened lower edges seem to form a sort of lip or funnel. When the bowel is cut open, however, it will almost always be found that the growth is circular and that there is a portion of the bowel-wall not involved. Ultimately, however, the two opposite edges of the ulcer meet and unite, with the result that the growth involves the entire circumference of the bowel. The circular lymphatics in the submucous layer are early involved, and even though the growth may not have extended round the bowel, cancer cells will almost always be found on the opposite side in this layer. The growth also spreads along the lymphatics both up and down the bowel, more usually to a greater extent upwards. In the case of a posterior growth the lymphatics and glands in the meso-rectum and root of the meso-colon are first involved—first the glands against the bowel, and later those in the base of the mesentery and along the blood-vessels. In the case of growths in the anterior wall the lymphatics on the back and fundus of the bladder in the male, or the uterus in the female, may be involved. Growths at the recto-sigmoidal junction spread into the posterior false ligaments of the bladder and into the root of the meso-colon.

Metastasis does not apparently occur early in the case of rectal cancer, and it is surprising for how long a large rectal growth can exist sometimes without metastatic deposits forming. When metastasis does occur it is usually in the liver. Not long ago I saw a patient who for *six* years had had undoubted cancer of the rectum (verified on two occasions by microscopical examination) for which a colotomy had been performed. At the time I saw him he was still in quite good health, and only consulted me with the object of having the colotomy closed; which was, of course, impossible.

SCIRRHOUS CANCER.

There is a rather rare form of rectal cancer sometimes called scirrhous cancer, in which the mucous membrane appears to be very slightly involved, but the growth extends around the bowel in the submucous coat, accompanied by much fibrosis, so that a tight ring stricture is produced with little, if any, ulceration of the mucous membrane.

SYMPTOMS.

Unfortunately cancer of the rectum causes no symptoms of any importance at an early stage. In fact, a cancerous growth in the rectum is not incompatible with perfect health.

I recently saw a patient who told me that he had only just finished a walking tour through the Welsh mountains, during which he had walked 90 miles in five days, and he felt perfectly well, except that he was troubled with a slight diarrhœa. On examination I found a large inoperable carcinoma of the rectal ampulla.

It is important to remember that such text-book symptoms as loss of weight and cachexia only occur in the later stages of the disease and after the growth has existed for many months. The earliest symptoms in my experience are a tendency to looseness of the bowels, a feeling as if the bowel was not completely emptied after an evacuation, and bleeding. Constipation is not, as a rule, an early symptom, except in cancer high up in the bowel or in the large intestine, and even then it is uncommon.

Slight diarrhœa is the most characteristic symptom and usually has the following characteristics. It is spurious—that is to say, the total quantity passed is often less than normal. The patient has frequently to go to stool, but with very little result, often only a little mucus which may be stained with blood. Exercise and meals usually bring on the diarrhœa. The call to stool is usually very urgent and the patient is afraid to go far away from a place to which he can retire if necessary. The diarrhœa varies very considerably, being worse on some days than on others, often amounting to little more than an unusual irregularity of the bowels. The patient very naturally attributes his symptoms to some error of diet and goes to his doctor for a bottle of medicine to help him. If the doctor gives him some astringent medicine the symptoms will usually be much improved, and it is against this danger that I particularly wish to warn you. No matter how slight the symptoms are, the rectum should always be examined before any drugs are given. I know this is sometimes difficult, as the patient may resent an examination, saying that his symptoms are too slight to make a fuss of. Unless, however, medical men will make it a rule to examine the rectum in all suspicious cases, we can do little to improve the results of operation in rectal cancer. At present about two-thirds of the cases we see have already passed the period at which operation is possible. This is much too large a proportion, and can be much reduced if the doctors who first see these cases will make it a rule never to prescribe for a patient with diarrhœa or rectal symptoms without first making an examination. Too often at present when a growth is discovered and found to be inoperable, the patient, with that desire, which is so common to all of us, of wishing to blame someone other than himself for his misfortune, blames his doctor for not having detected his condition earlier. Morning diarrhœa, or in other words an urgent call to stool on first getting out of bed in the morning, is a common early symptom. Another early symptom is the rapid development of piles, the piles in this case being caused by the obstruction to the veins by the growth in the bowel.

Any of these symptoms which I have detailed may, of course, result from a number of conditions besides cancer, but they should always make us suspicious and lead to an examination. Of course, it is not always possible to detect a carcinoma by the introduction of the finger into the rectum, and the use of the sigmoidoscope may be necessary, but in a great many cases the growth can be felt.

Other common symptoms are discomfort or pain in the sacrum, which is not relieved by lying down, and pain in the lower part of the abdomen, especially before or during an action of the bowels. The bleeding varies very much. Sometimes it is altogether absent, while it may be the first symptom noticed. Mucus in the stools almost always occurs to some extent. I have seen several cases where the symptoms which first drew attention to the condition were those of a slight chronic colitis. When a growth is high up in the bowel increasing constipation is often a prominent symptom and may be the first to attract the patient's attention. As the growth increases in size, pain of a dull aching character usually becomes a prominent symptom. The amount of pain varies, however, very much. Growths high up on the posterior wall usually cause more pain than those on the anterior wall, owing to the fact that they soon press upon the sacral nerves as they emerge from the foramina in the sacrum. It is characteristic of the pain that it is either made worse or not relieved by recumbency.

Soon, owing to the fact that the alimentary outlet is partly blocked and there is consequently considerable accumulation in the large bowel, symptoms of toxæmia begin to make their appearance. The patient is a bad colour, has no appetite, is sleeping badly, losing weight, and, in fact, generally out of condition. I believe that these constitutional symptoms, usually attributed to cachexia from the growth, are in most cases due to auto-intoxication from retained fæcal material. In proof of this I would point to the marked improvement, or complete absence of those symptoms, which generally occurs after colotomy.

The rapidity with which bad symptoms come on is dependent, not I believe, so much upon the type or position of the growth as upon the rate of its growth, and especially the amount of obstruction which it causes. Ulceration of the growth also causes a marked increase in the severity of the symptoms.

With the onset of ulceration septic symptoms may supervene. There may be a mild type of septicæmia with occasional rises of temperature, or an abscess may form.

A considerable amount of inflammation often occurs round the growth, giving rise to fixation to other organs, and in the case of anterior growths in male subjects to bladder symptoms. The adhesions so formed to other organs are, however, often not extensions of the growth, but purely inflammatory. This is an important point, as it means that fixation to the bladder, for instance, does not necessarily contra-indicate a good result from removal of the growth. I have several times had cases where adhesions of this nature were broken down during removal of the growth, and no recurrence has followed in the involved organ or organs left behind. The same also applies to glands; many of the enlarged glands in the neighbourhood of a carcinoma are inflammatory only (that is, in cases where ulceration of the growth has already taken place), and the fact that they may have to be left behind will not necessarily involve recurrence. I have known several instances of this, and it has been repeatedly noted by other observers.

DIAGNOSIS.

It is not necessary to say much with regard to diagnosis. The really important thing in this connexion is that the medical man who first sees the case should be sufficiently suspicious of the possible presence of carcinoma to insist upon a proper examination. As regards the differential diagnosis between carcinoma, adenoma, and papilloma of the rectum I do not think this is of much importance. The two latter, though innocent growths, should be freely removed in all cases, as they are undoubtedly pre-cancerous, but the removal need not be so extensive as in the case of cancer.

INDICATION FOR OPERATION.

Next to the initial diagnosis of a growth of some sort in the bowel the most important factor is the question of whether the growth can be properly removed or not. This is often a difficult question, and whenever possible, except in cases where removal is obviously possible, no opinion should be expressed without an examination under an anæsthetic and after the bowels have been emptied. Mere fixation of the growth does not always contra-indicate removal, and some of my best results, as regards recurrence, have been in cases where there was a considerable degree of fixation at the time of operation. Extensive secondary glands, fixation by extension to other important organs, nodules in the liver, and the size or connexions of the growth rendering it mechanically impossible to remove it, are, of course, contra-indications; but the position of the growth alone, as, for instance, that it is very high up, does not necessarily contra-indicate successful removal, and with increasing experience I find that what I often was accustomed to look upon as contra-indications to removal are no longer to be feared.

CONDITION OF PATIENT.

The condition of the patient is a factor which must always be taken very seriously into consideration, and for this reason alone a consultation with the family physician is of the utmost value.

The fact that the patient is young is no contra-indication to removal, though I have sometimes heard it stated that in young people it is useless to remove the growth, as recurrence occurs so rapidly. It is true that if recurrence does occur it will do so rapidly, but if recurrence occurs at all it is evidence that the growth was not adequately removed in the first instance, and as our object should always be to remove the growth widely and completely, this factor has no significance. Young people stand operations well, and the

chances of a cure are therefore greater than in more elderly subjects.

Alcoholic subjects are entirely unsuitable for such a serious operation as rectal excision. Thin and wasted individuals, in spite of their apparent lack of vitality, often do well, but fat patients do very badly, and I am personally more afraid of stout adipose patients for this operation than of any other type. As a rule, their vitality is low, they heal badly, there is poor blood-supply to the cellular tissue, which is in excess, and owing to the presence of fat in the bowel and abdominal wall the operation is rendered very difficult.

Bright's disease and diabetes would certainly contra-indicate operation except in most exceptional circumstances.

PROGNOSIS.

This is a very difficult subject and one about which a reliable opinion is difficult to express. Of late years, however, since it has been the practice to perform operations for rectal cancer, which enable wide removal of the growth and surrounding tissues, far better results have been obtained than was previously the case, and the prospect of complete freedom from recurrence is now considerable if the patient is operated upon before the growth has reached a large size and the bowel is freely resected. The present radical operation for cancer of the bowel is of too recent date for any reliable statistics to be possible. But from my own experience I should estimate the patient's chances of complete freedom from recurrence as quite good in favourable cases, and even where recurrence does occur at least two years more of life is to be expected. Personally, I have had only one case which recurred within two years, and several which have gone well over the three-year limit, while five are over the five-year limit.

TREATMENT.

There is at present only one form of treatment which is in any sense radical or can offer any hope of cure—namely, complete removal of the growth by operation. It is to be hoped that the time is not far off when some better and more effective method of treating cancer will be discovered. I believe that if some of the money now being spent by the Government on social reform were utilised to aid in finding a cure for cancer, it would be of far greater benefit to the race, and would, I believe, soon result in removing or mitigating one of the greatest evils of modern times. Instead of this, however, everything is left to private enterprise, and a discovery which might be hastened by many years by the mere expenditure of sufficient money is left to chance.

The operations for excision of rectal growths have improved in an extraordinary manner in the last ten years, and it is now possible to remove successfully growths which then were considered to be quite beyond operative interference. Herbert Allingham, one of the boldest operators who ever lived, never attempted to remove any growth the upper limits of which he could not reach with his finger. Whereas now we frequently remove growths the lower limits of which can hardly be reached by the finger, and the distance of the growth from the anus is no longer a matter of serious importance.

What in many ways is a still greater improvement is that we are now able by improved technique to obtain in a few cases primary union in the wound and aseptic healing. I have myself now had several cases in which this ideal method of healing has been obtained, and I look forward to the time when it will be the rule instead of the exception to obtain aseptic healing in these cases. The difficulties are many, but since they can be overcome in a few cases, they can be overcome in all, and the improvement in the results will be enormous. To show the importance of this I have only got to mention that at present 90 per cent. of the deaths from excision of the rectum are directly or indirectly due to sepsis. Shock as a cause of death after these operations, serious as they undoubtedly are, can be now completely eliminated as a cause of death, but the dangers of sepsis are undoubtedly very great.

Careful attention to technique in operating, especially in regard to the treatment of the bowel which has to be resected, and care in preserving an adequate blood-supply to the parts left behind, will enable us to prevent sepsis in these cases.

There are, in my opinion, three methods of removing rectal growths which should be used according to the type of case.

Removal by Coccygeal Incision.

1. Local removal of that part of the rectal wall containing the growth through an incision from the base of the coccyx to the posterior edge of the external sphincter, the coccyx being removed, the rectal wall being subsequently sewn up, with both rectal and posterior drainage. This method is the least dangerous of all, being almost free from serious risk, but is only applicable to growths in the ampulla of an innocent nature, such as adenoma and papilloma. It does not give wide enough removal for growths already malignant.

2. The removal of the entire rectum and part of the sigmoid through the same incision, as mentioned in the first method, by a method described by me a few years ago,[1] has given, in my experience, the best results of any in suitable cases, but is not so good as No. 3 in cases of carcinoma at the recto-sigmoidal junction. It has the advantages that it allows of restoration of the bowel, and is a less serious operation than No. 3. Moreover, it can be more quickly performed; it is, however, more difficult.

Abdomino-perineal Excision.

3. Abdomino-perineal excision is the best method for growths at the recto-sigmoidal junction, or which have already reached a large size—i.e., borderland cases. It involves two separate operations, performed, as a rule, consecutively, and there is an inevitable waste of time between the two stages. It enables us to deal with cases previously considered inoperable. It does not necessarily involve a colotomy, and the bowel can in suitable cases be restored. It allows of very extensive removal. It is, however, a very serious operation, and has been attended, even in the hands of expert surgeons, with a very heavy mortality—somewhere not far short of 40 per cent. My own mortality was at first serious with this operation, but I find that with increasing experience I have been able to considerably reduce it, and in the last two years it has been cut down by half, and in time I hope it will be still further reduced. The shortest time in which I have succeeded in doing the complete operation is 85 minutes, and unless one has considerable experience and expert assistance it may easily take two and a half hours.

I do not believe that it is good practice to perform one uniform operation for rectal cancer, nor does it give the patient the best chance. Each case must be judged on its merits, and it is quite unnecessary to condemn all patients to a permanent colotomy. I have two patients who are alive and quite well now, who have both got rectums which function in the normal manner and who had rectal excisions performed—one six and a half and the other seven and a half years ago.

Operation in cases of epithelioma of the anus or in which the anal region is involved.—In all such cases it is imperative that the sphincters should be freely removed together with the skin round the anus. With this object an elliptical incision should be made round the anus and deepened down into the ischio-rectal fossæ. The whole bowel and surrounding tissues must then be cleared away. As it is quite impossible for the patient to have any control subsequently if the bowel is brought down, a permanent colotomy should be established and the perineum entirely closed up.

I do not propose in this lecture to describe the details of these three operations, as space will not allow of this. They are all of them difficult operations, and I should strongly advise anyone wishing to perform them to practise them first on the cadaver before proceeding to operate upon their patients.

PALLIATIVE TREATMENT.

Colotomy.

At one time it was the practice to perform colotomy in nearly all cases and to reserve excision for a very few favourable cases. This led among other things to a reaction against colotomy, and I have seen it asserted recently that this operation is not worth doing except for obstruction, present or threatening. I do not, however, agree with this, and, on the other hand, I am sure that colotomy greatly prolongs life in inoperable cases and adds most materially to the patient's comfort. It very markedly relieves the discharge from the bowel, which causes so much distress, and by enabling the bowel to be kept clean prevents septic complications. I am sure that in most cases it very materially delays the rate of growth of the tumour. I advise colotomy in cases where there is no obstruction for these reasons, and have seen most gratifying results.

[1] Brit. Med. Jour., June 1st, 1907.

Colotomy should be performed early if it is to do good, and not left till the patient is already in serious distress, as, under the latter conditions, it adds to his discomforts, and the beneficial results are not so obvious or, in fact, sufficient to justify its performance. The presence of a colotomy opening, if the operation has been well done, is not incompatible with the patient living an ordinary life and getting about in the usual way.

Curetting.

This is a very useful operation in cases where the growth is quite low down in the bowel. It consists in thoroughly curetting away the growth, or at least all that part of it which protrudes into the bowel, under an anæsthetic. The rectum is plugged for a few hours to control the bleeding, and then kept clean with frequent douches. The curetted area soon heals and for a time the patient is quite relieved of his symptoms. The operation should be repeated when the growth again reaches any size.

This operation gives a surprising amount of relief in suitable cases, and often prolongs the patient's life for a considerable time. I know of one case where a patient was kept alive and in comfort for over five years by this operation. It must not, however, be attempted in the case of growths fixed to the bladder or above the peritoneal reflection.

Other Palliative Methods.

The action of radium is now being largely resorted to in the treatment of inoperative malignant growths, and as the question of its employment will almost certainly arise in those cases in which radical operation is not possible, it is necessary to have some idea in what type of cases it is worth trying. It must first of all be recognised that radium as a means of curing or relieving cancer in the rectum is at present purely experimental. No positive evidence is at hand to prove that it can cure cancer of the bowel—using the word cure even in the very restricted sense in which it is sometimes used in relation to operation. Most of the evidence is entirely opposed to the belief that cancer of the rectum can ever be cured by the action of radium. In a few cases some relief, and in a very few cases considerable improvement, has followed radium applications. In a large number of cases no benefit at all has resulted, and in some cases the symptoms have been rendered worse.

Radium should only be used as an adjunct to operative treatment, never in place of it. It is no use trying radium unless a very large quantity of active radium in suitable applicators is available, and this must be used by experts in its application. My own view is, that unless marked improvement follows one large dose the treatment should be discontinued. It is no use trying it in cases where the growth is not easily within reach of the finger, and applications other than those applied directly to the growth are useless. I have very grave doubts whether, taking into consideration the expense and inconvenience to the patient of the treatment, it is worth trying, or will be likely, even in favourable cases, to give better results than careful attention in the form of antiseptic and astringent douches to the bowel.

As regards other methods of treatment, such as special diets, animal extracts, hot air applications, fulguration, &c., I have never seen anything to justify the belief that any good whatever can come of their use. They cause the patient considerable discomfort and inconvenience, without the smallest possibility of doing good.

APOTHECARIES' HALL OF IRELAND.—The following have been appointed examiners for the ensuing year:—Court A.—Chemistry and Physics: Professor H. Ryan and Mr. J. J. O'Sullivan. Biology and Physiology: Dr. G. M. Keating and Dr. W. O'Kelly. Anatomy: Mr. D. Burke Kennedy and Mr. A. Charles. Pharmacy: Dr. F. G. Adye Curran and Mr. J. D. Crinion. Materia Medica: Mr. T. G. McGrath and Dr. J. C. McWalter. Pathology: Dr. R. J. Rowlette and Dr. G. B. White. Medical Jurisprudence: Mr. F. K. Cahill and Mr. W. Fottrell. Hygiene: Sir C. Cameron and Mr. R. P. McDonnell. Medicine: Dr. J. Lumsden and Mr. C. J. Powell. Surgery: Sir T. Myles and Professor Conway Dwyer. Midwifery: Mr. Seymour Stritch and Dr. P. T. McArdle. Ophthalmology: Dr. E. Magennis and Dr. R. J. Montgomery. Court B.—Chemistry: Dr. J. C. McWalter and Mr. R. P. McDonnell. Materia Medica: Mr. J. D. Crinion and Dr. F. G. Adye Curran. Pharmacy: Mr. J. A. Whelan and Mr. T. G. McGrath.

RADIOGRAPHY IN INTESTINAL STASIS.[1]

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(With Illustrative Plates.)

INTESTINAL stasis is a chronic disease due to the retention for too long a time of the intestinal contents, and the toxic absorption resulting from this undue retention. The symptoms may be slight or severe, but they are very definite. They may be enumerated as follows: abdominal pain, often severe; general depression and want of energy, which may be so extreme as to make life intolerable; poor appetite, with attacks of nausea or vomiting; a bad taste in the mouth; breath of an unpleasant odour; headache, backache, muscular pains and aching in the joints; cold hands and feet and other signs of a poor circulation. Constipation is usually a marked symptom; often it persists in spite of all treatment, the patient being compelled to rely on purgative drugs and injections. Flatulence is always present and leads to attacks of abdominal distension. There is tenderness to pressure over the abdomen, especially in certain regions, of which the right iliac fossa is the most usual. The skin is stained, sometimes to a deep brown colour; it feels unhealthy, as though wanting in elasticity; the sweat has a disagreeable odour. The breasts show changes such as are usually described as chronic mastitis; in more advanced cases cystic degeneration takes place, and the breasts are then in a condition in which a transition to cancer is very liable to occur. Similar changes are produced in other glands, and at operations on these patients chronic pancreatitis is found to exist; in many cases cholecystitis is present also, and gall-stones are very often found.

There can be few diseases in which the symptoms and signs are more definite or more constant, and yet this condition of intestinal stasis was not recognised or understood until Mr. W. Arbuthnot Lane described it, and it is to his accurate and thoughtful observations that we owe our present knowledge of the causes, symptoms, and treatment of intestinal stasis. Mr. Lane has described the anatomical changes that lead to the disease and the secondary effects that follow.[2] It is in this part of the work that I have been able to bring the resources of radiography to his aid by obtaining upon the fluorescent screen and upon photographic plates actual irrefutable ocular evidence of the reality of the changes under consideration.

All mammalian animals retain fæcal matter in the large bowel and are subject to some amount of intestinal absorption. In the view of Metchnikoff this absorption of toxins causes changes which shorten their lives.

Effects of the Upright Posture.

In the human subject the position of the abdominal viscera is altered fundamentally by his adoption of the upright posture. Man gained enormous advantages thereby, but as usual it carried with it certain disabilities, and one of the greatest of these is due to the effect of gravity, which causes the heavier of the abdominal viscera to fall, and in so doing to pull upon their attachments. This tendency of the viscera to fall is accentuated by civilisation, for the upright posture, whether in standing, sitting, or walking, is maintained all day—i.e., for 17 out of the 24 hours—and is only relaxed when the subject is in bed.

"Visceroptosis."

The heaviest parts of the alimentary canal are the stomach, when full of food, and the large intestine when loaded with fæces, and the tendency of these parts to drop is well known. The name "visceroptosis" is often used to denote the fact that the viscera (or some of them) are dropped; in this sense there is no harm in using the word, though it is a clumsy word, and is not needed. Unfortunately it is often used to designate other conditions supposed to be associated with dropping of the viscera; more particularly to weakness of the muscles of the abdominal wall, with bulging of the lower part of the abdomen. Now I find that in many of the most extreme cases of dropping of the viscera there is

[1] A paper read before the Section of Electro-Therapeutics of the Royal Society of Medicine on Nov. 17th, 1911.
[2] Brit. Med. Jour., April 22nd, 1911.

absolutely no tendency for the abdomen to be prominent in its lower part; the abdomen is perfectly flat when the patient stands. When flatulence is severe there may be some *general* prominence of the abdomen. Hence it is better to refer to the condition as "dropping" of the particular viscera concerned.

Anatomical Changes accompanying Dropping of the Viscera.

To Mr. Lane we are indebted for demonstrating and explaining the mechanism of the changes brought about by the dropping of the viscera.[3] When the viscera begin to drop they exert a drag upon the mesentery; this results in the formation of thickened bands in the mesentery. These bands become so thick and strong in certain cases and in certain parts as to form supplementary mesenteries, which support the bowel and tend to prevent the dropping. These "adhesions" are entirely non-inflammatory in origin; they are brought into being as the direct result of preternatural strain, just as in certain handicrafts abnormal thickenings and spurs of bone arise, and give additional strength to parts which are too weak to stand the unnatural strain put upon them.

Kinks.

If the above-mentioned adhesions were equally strong in all parts the viscera would be held up uniformly and all would be well. Unfortunately they are often strong in some places, weak or absent in others; consequently the bowel is held up by them at certain points, and kinks are produced which lead to some degree of obstruction. In severe cases the obstruction is extreme.

The Duodenum.

There are certain points at which the kinks are specially liable to occur when the bowel drops. Following along the digestive canal from the stomach the first of these is met in the third part of the duodenum, at the commencement of the jejunum. There is normally at this point a peritoneal band fixing the end of the duodenum; this band is apt to become thickened. (Fig. 1A.) In normal cases the jejunum

FIG. 1A

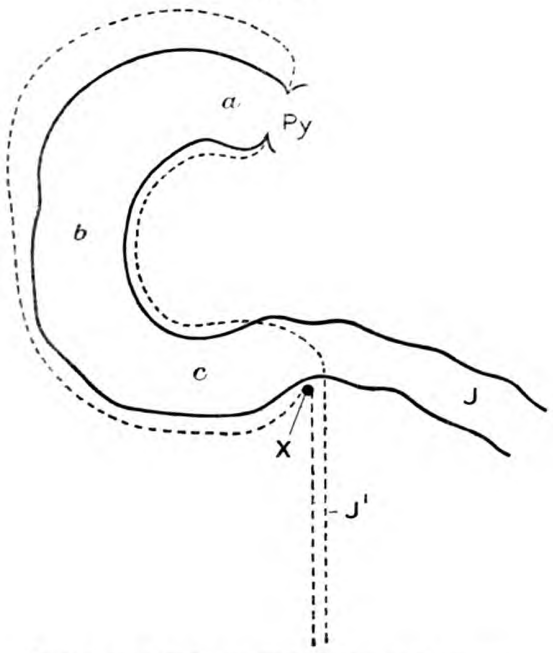


Diagram to illustrate the normal duodenum and jejunum (firm line), and the dilated duodenum and pendulous jejunum (dotted line) due to kinking at the duodeno-jejunal junction by the sharp lower margin of a peritoneal fold, indicated by the point X. The distension of the duodenum is most marked in its first part, where it is least supported, and has a complete peritoneal covering. It is in this part that inflammatory changes are set up in consequence of the abnormal distension. Py, Pylorus. *a*, *b*, *c*, First, second, and third parts of the duodenum. J, J', Jejunum in its normal and in its pendulous position.

[3] Surgery, Gynæcology, and Obstetrics, November, 1910, pp. 496-500.

continues in the line of the duodenum; in the subjects of intestinal stasis, however, the jejunum is frequently dragged down vertically, an abrupt kink being produced. I have described this condition fully elsewhere,[4] but further experience has extended our knowledge of this duodenal kinking, and has shown us that it is scarcely ever the primary abnormality. It is secondary to dropping of other viscera, more particularly of the lower end of the ileum. In healthy persons a bismuth meal passes through the upper parts of the small intestine at a rapid rate; it can be watched running round the coils. At the lower end, however, it encounters the ileo-cæcal valve, and progress here is very much slower; hence the bismuth collects at the lower end of the ileum, in a group of coils normally placed above the pelvis. These coils are very liable to drop into the pelvis. (See Figs. 7, 8, 9, 12, 14, 15, and 16.) The heavy end-coils of the ileum then drag upon the mesentery and exert a downward pull which involves the whole of the small intestine, and causes a downward drag upon the commencement of the jejunum resulting in duodenal obstruction. This is no mere theory or fanciful explanation; I have repeatedly diagnosed the condition beforehand (see Figs. 2 and 4), and subsequently seen it confirmed at operation. I have seen the distended congested duodenum held in a grip at its termination, and the jejunum hanging down vertically at its commencement, and in some cases rotated on its axis, the obstruction being thus increased by torsion of the jejunum.

This duodenal obstruction is not a permanent condition; in slight cases (Fig. 2) it is relieved at once when the patient lies down. It is worst when the patient is compelled to remain upright for long periods, and when he is, for any reason, in an exhausted condition. The mechanical consequences of the kinking are very obvious when they are looked for. The first result is distension (Figs. 3 and 5); this is greatest in the first part of the duodenum—the part which is unsupported and has a complete peritoneal covering. The next result is congestion; later ulceration occurs in the congested mucous membrane. At operations for intestinal stasis, if the duodenum be examined it is nearly always found to show well-defined evidence of congestion; it is full, even distended, thick, red, and prominent. These appearances are seen even in patients who have never had symptoms referable to the duodenum. Very often, however, the symptoms have been severe; there has been great pain, which has often been most persistent, and there has been vomiting. The pain is often severe long before the congestion of the duodenum has gone on to the formation of an ulcer. Pronounced radiographic evidence of duodenal obstruction due to kinking may be obtained in most cases before operation. It is necessary to bear in mind, however, that the kinking is intermittent; it is most severe when the patient is at his worst, as when he has been at prolonged hard work in the upright posture. The obstruction passes off after the patient has been kept in bed for some days, except in severe cases, when it may persist for a week or more. The method of carrying out the examinations was described by me in the paper to which I have already made reference.[5]

The Ileum.

We have now to consider the changes that occur in intestinal stasis at the lower end of the ileum. I have already given an account of these[6]; further experience has fully borne out the results there described, and has enabled me to advance greatly in accuracy of diagnosis. I have now examined a large number of patients, and have subsequently been present at the operation and been able to see the actual condition of the parts, so that, as with the duodenum, there is no room for doubt as to the reality of the anatomical changes first described by Mr. Lane, and now found repeatedly by all surgeons who look for them.

The dropping of the lower coils of the ileum has been described already; it leads to considerable delay in the emptying of the contents of the ileum into the cæcum, especially while the patient's body is erect. A long terminal coil of the ileum rises almost vertically to the ileo-cæcal entrance. (Figs. 7-9, 12, 14-16, 18. This long coil is present in many cases, and leads to a varying amount of delay; in the slight cases it is freely moveable (Figs. 7, 16,

[4] Brit. Med. Jour., May 20th, 1911.
[5] Loc. cit.
[6] Lane's Ileal Kink, Practitioner, April, 1911.

and 18), and pressure upon it with the fingers (while the patient is recumbent) may cause no pain. In other cases there is definite tenderness to pressure at one or more points, the most usual being at the point where it crosses the pelvic brim or at the ileo-cæcal entrance. If there is a fixed point along the terminal coil of the ileum, this point is usually tender also. (Figs. 8, 9, 12, and 15.)

The discovery of a fixed point can be made with great accuracy by means of the fluorescent screen while there is bismuth in the long terminal coil of the ileum; a fixed point here is of the greatest importance, for it indicates the presence, in the particular patient, of a "Lane's ileal kink." The fixity is demonstrable in three ways. Firstly, by observing the movements accompanying deep respiration, when the cæcum is seen to move freely up and down, taking with it the end of the ileum as far as this is free, while the fixed point retains its position unchanged. Secondly, by pressure with the fingers (wearing protective gloves), when the part above and below the fixed point may be moved, but the deepest pressure fails to move the fixed point. Thirdly, by an examination in the upright posture, when the cæcum will fall into (or at any rate toward) the pelvis, leaving the fixed point of the ileum tied up. It is in the upright posture that the effect of an ileal kink is most severe, the two portions of the terminal coil, above and below the kink, hanging down vertically, and producing extreme obstruction in severe cases. (Fig. 15.) Individual cases show great variety in the form of the terminal coil, and the position of the kink. (See Figs. 7–18.) The ileum may be held up at more than one point along the terminal coil (Fig. 12); again, it may be grasped so securely and tightly as to produce permanent obstruction, even in the recumbent posture. (Fig. 12.) The obstruction may be so extreme as to lead to great dilatation of the end of the ileum, which may actually exceed the cæcum and ascending colon in diameter. (Fig. 13.)

The corkscrew formation sometimes shown by the lower portion of the long terminal coil of the ileum is evidence of the manner in which this coil is pulling upon its mesentery. (Fig. 14.)

As a result of the stasis in the ileum bacteria, normally confined to the large intestine, ascend the ileum, giving rise to decomposition of its contents. This is evidenced in the upper parts of the small bowel as pancreatitis and cholecystitis, and the unpleasant breath of these patients bears further testimony to the bacterial invasion of the upper regions of the intestinal tract.

The Appendix.

The appendix is often involved in the newly formed bands that arise in the ileo-cæcal region. It may be held at one point, so that when the patient stands and the cæcum drops the appendix is hitched up at the fixed point and obstructed. Distension of the distal portion of the appendix then occurs and inflammation follows. It is obvious to anyone who approaches the subject without prejudice that the "adhesions" frequently found in the neighbourhood of the appendix cannot be inflammatory in origin; they are often disposed in sheets, and the fingers can then be inserted between the mesentery proper and these adventitious mesenteries. It is certain that the primary disorder is the kinking of the appendix by these newly formed bands; the appendicitis is a consequence of the kinking.

As already stated, the tender spot in the right iliac fossa is usually localised accurately to some point along the end coil of the ileum; it has nothing to do with the appendix. In a good many cases one is able to go further, for a little bismuth is found to have entered the appendix. In such cases direct pressure can be brought to bear (by means of the fingers) upon the appendix, and the absence of tenderness of this organ can thus be confirmed. (Figs. 18 and 20.) Conversely, the discovery of a tender appendix is important, while fixity of the appendix, disclosed in this manner, may also be of consequence.

Ileal Stasis.

I have stated already that considerable delay in the passage of the intestinal contents from the ileum to the cæcum is produced by the falling into the pelvis of the lower coils of the ileum, leaving a long terminal coil rising to the cæcum. The delay thus brought about is independent of kinking, and may be great, especially in the upright posture. The delay is greatest in feeble subjects, and in them, even in the supine posture, there is often the greatest difficulty in the way of the passage of the contents from the ileum to the cæcum; they are unable to surmount the obstacle formed by the promontory of the sacrum and the pelvic brim. (Figs. 10 and 11.)

The Hepatic Flexure.

The next part of the intestine at which obstruction by bands is liable to occur is in the region of the hepatic flexure, and just beyond, in the first part of the transverse colon, where bands sometimes arise, running from the under surface of the liver down to the transverse colon. This is much less common than in the cæcal region, but when bands occur at the commencement of the transverse colon they may produce great obstruction. The contents of this part of the bowel are solid; hence the effect of a slight diminution of the calibre of the gut is far greater than in the case of the

DESCRIPTION OF ILLUSTRATIONS.

Fig. 1.—Stomach and duodenum after a bismuth meal, showing a spasmodic hour-glass constriction of the stomach and delayed passage through the duodenum. C, P, Cardiac and pyloric portions of the stomach separated by a spasmodic constriction at S. *a*, *b*, *c*, First, second, and third parts of the duodenum. U, Umbilicus, marked by a penny.

Fig. 2.—Stomach and duodenum, showing an early stage of kinking at the duodeno-jejunal junction. Note the jejunum passing vertically downward at its commencement. *a*, *b*, *c*, First, second, and third parts of the duodenum. Py, Pylorus. Jej, Jejunum. C, P, Cardiac and pyloric portions of stomach.

Fig. 3.—Duodenum, in a girl aged 19, showing a phase of the powerful contractions by which it sought (in vain) to overcome the effect of kinking at the duodeno-jejunal junction. (Confirmed by operation.) The duodenum appeared to be writhing. *a*, *b*, *c*, First, second, and third parts of the duodenum. Cr, Crest of ilium. U, Umbilicus.

Fig. 4.—Stomach and duodenum, taken seven hours after a bismuth meal, showing an early stage of kinking at the duodeno-jejunal junction. Note the jejunum passing vertically downward at its commencement. At the time of taking this skiagram a quantity of bismuth had passed through to the hepatic flexure. The delay in the stomach and duodenum is due solely to the duodeno-jejunal kinking. *a*, *b*, *c*, First, second, and third parts of the duodenum. Jej, Jejunum. Py, Pylorus. H F, Hepatic flexure. U, Umbilicus.

Fig. 5.—Duodenum showing well-marked kinking at the duodeno-jejunal junction. The duodenum is distended. It was seen to be contracting actively against the obstruction produced by the kink. *a*, *b*, *c*, First, second, and third parts of the duodenum. Py, Pylorus.

Fig. 6.—Horseshoe loops of ileum. Taken ten hours after a bismuth meal. The loops were slightly fixed at two points. (Loose adhesions were found at the subsequent operation.) U, Umbilicus.

Fig. 7.—Taken seven hours after a bismuth meal, showing a long terminal coil of the ileum, free from tenderness or obstruction. U, Umbilicus.

Fig. 8.—Ileal kink. Taken 25 hours after a bismuth meal, showing a long, terminal coil of the ileum rising out of the pelvis; fixed by adhesions at the point X, close to the ileo-cæcal entrance. There was tenderness to pressure at this point. The dropped transverse colon is also shown. U, Umbilicus (confirmed by operation).

Fig. 9.—Ileal kink. Taken 10½ hours after a bismuth meal, showing the long terminal coil of the ileum rising out of the pelvis. Fixed by adhesions at the point X. In the same subject as Fig. 17. (Confirmed by operation.) U, Umbilicus.

Fig. 10.—Ileal stasis—in a girl aged 13. Taken 10 hours after a bismuth meal. (In the same subject as Figs. 20 and 23.) U, Umbilicus.

Fig. 11.—Ileal stasis, in a woman aged 40. Taken 37 hours after a bismuth meal. After 85 hours there was still some bismuth in the end of the ileum. Very severe symptoms (as described on p. 1828) cured by the operation of "short-circuiting." U, Umbilicus.

Fig. 12.—Ileal kink, in a man aged 71. Taken 24 hours after a bismuth meal. Showing a long terminal coil of the ileum, hitched up for the upper 3 inches and obstructed in the last inch. (Confirmed by operation and the patient cured.) U, Umbilicus.

Fig. 13.—Taken 24 hours after a bismuth meal, showing extreme obstruction by adhesions at the end of the ileum, with enormous dilatation of the ileum, in a man aged 26. Cured by division of the adhesions. U, Umbilicus.

Fig. 14.—Taken 5 hours after a bismuth meal, in a man of 32, showing a long terminal coil of the ileum, hitched up near the ileo-cæcal valve, and a corkscrew formation in its pelvic portion, showing that the coil was pulling upon its mesentery. Three hours later this long coil still contained bismuth. U, Umbilicus.

Fig. 15.—Ileal kink, in a man aged 36. A sharp kink, causing obstruction, is shown at a point 4 inches from the ileo-cæcal valve. At this point the ileum was firmly fixed to the iliac fossa. Above and below this point the gut was freely moveable. (Confirmed by operation.) U, Umbilicus.

Fig. 16.—Taken 10½ hours after a bismuth meal, in a woman aged 51. The long terminal coil of the ileum is pulling upon its mesentery, but is not fixed or kinked.

Fig. 17.—Taken 47 hours after a bismuth meal, in the same subject as Fig. 9 (aged 57). Fibrous bands ran from the under surface of the liver down to the transverse colon, obstructing it just beyond the hepatic flexure. (Confirmed by operation.) U, Umbilicus.

Fig. 18.—Taken 5 hours after a bismuth meal, in a man aged 49. The terminal coil of the ileum is unobstructed. The appendix is well shown by the bismuth it contains. No tenderness of the ileum or the appendix.

Fig. 19.—Taken 102 hours after a bismuth meal, in a man aged 36, showing extreme stasis in the transverse colon, which is greatly elongated and dropped. The hepatic flexure does not rise as high as the iliac crest. Trans, Transverse colon. Rect, Rectum. U, Umbilicus.

Fig. 20.—Taken 34 hours after a bismuth meal, in a girl aged 13 (the same subject as Figs. 10 and 23), showing marked dropping of the transverse colon. The appendix is also shown.

FIG. 1.

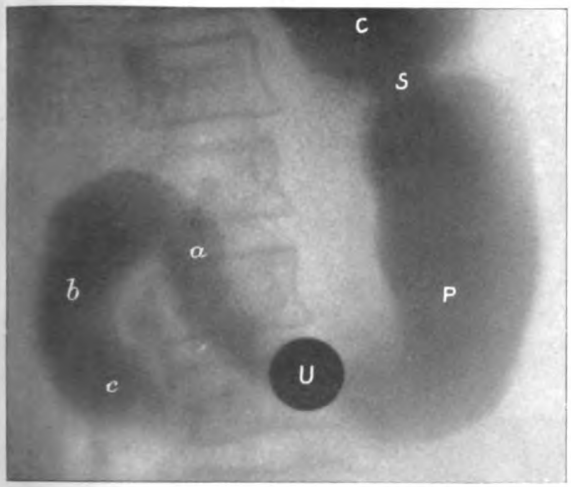


FIG 2.

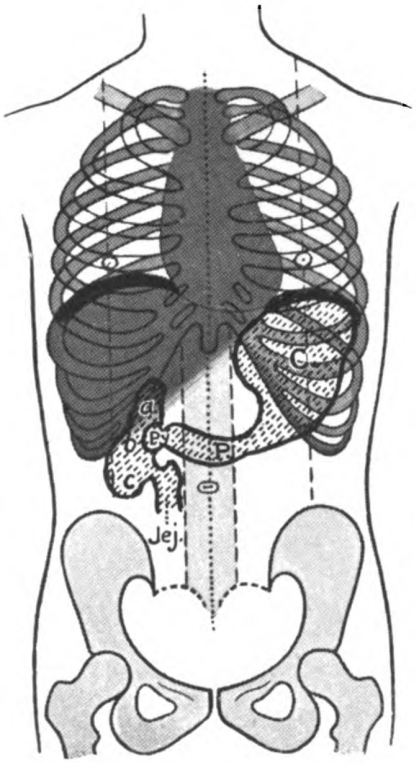


FIG. 3.



FIG. 4.

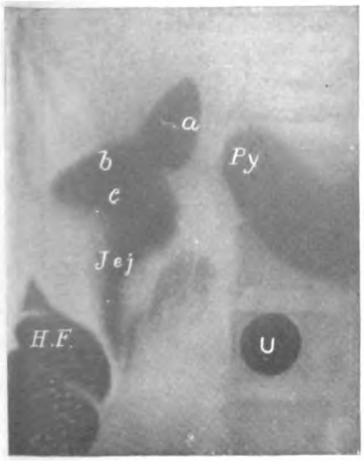


FIG. 5.

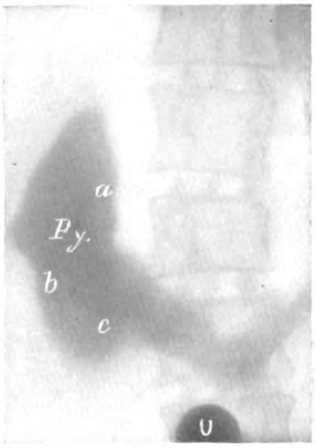
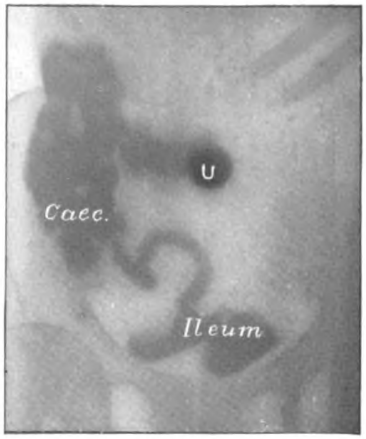


FIG. 6.



To illustrate Dr. Alfred C. Jordan's Paper on "Radiography in Intestinal Stasis."

FIG. 21.

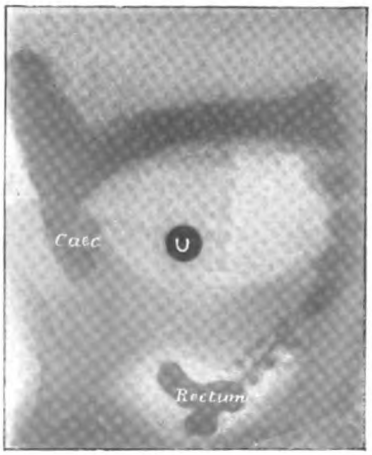


FIG. 22.

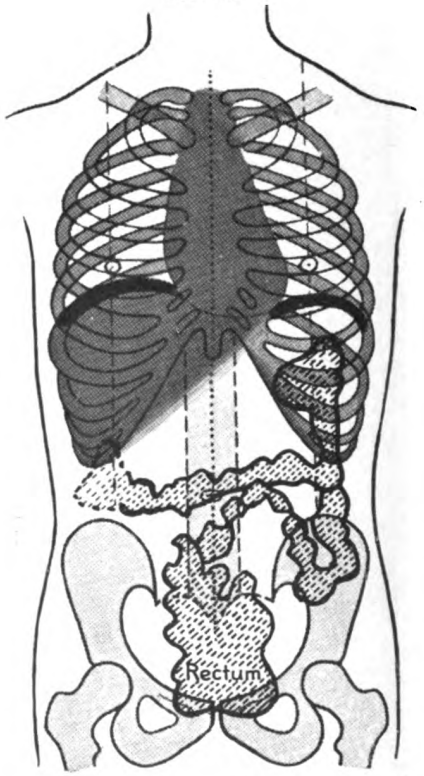


FIG. 23.

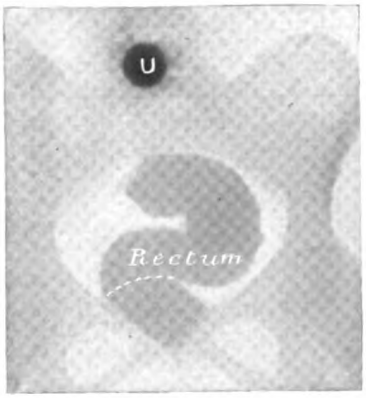


FIG. 25.

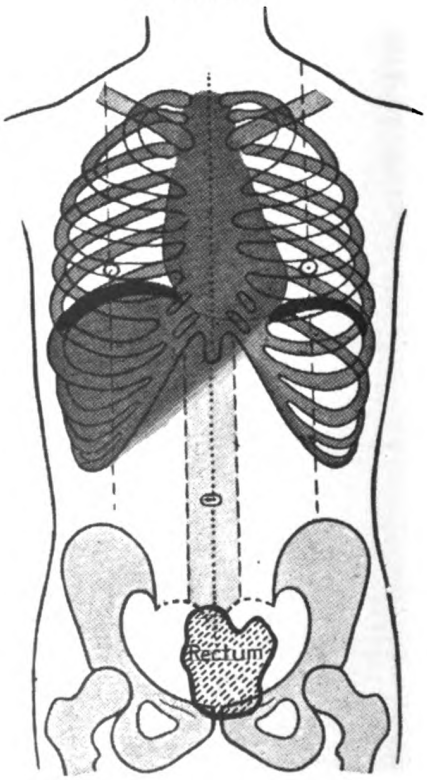
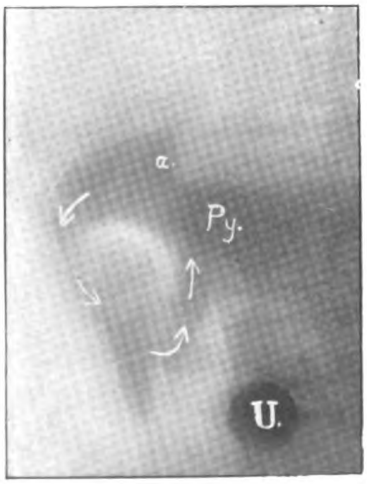


FIG. 24.



To illustrate Dr. Alfred C. Jordan's Paper on "Radiography in Intestinal Stasis."

Fig. 21.—Taken 20 hours after a bismuth meal, in a man aged 54, showing the short, straight sigmoid tied down, and its lumen narrowed by adhesions, and numerous diverticula communicating with the central lumen. (Confirmed by operation and the patient cured.) U, Umbilicus.

Fig. 22.—Taken 80 hours after a bismuth meal, in a woman of 46, showing marked stasis in the large bowel, and a greatly elongated sigmoid and rectum. There was also stasis, exceeding 40 hours in duration, in the end of the ileum, much as in Fig. 14. A remarkable cure was achieved by the operation of "short-circuiting."

Fig. 23.—Elongated and dilated S-looped rectum, in a girl of 13 (same subject as Figs 10 and 20), taken 58 hours after a bismuth meal. There was an evacuation every day or two, but only a small portion of the rectal contents was eliminated at a time. The portion marked off by a dotted line represents a good-sized motion.

Fig. 24.—Skiagram of a "vicious circle" following gastro-jejunostomy, showing the course taken by a bismuth meal from the pylorus through the duodenum, and back again into the stomach by way of the gastro-jejunostomy opening. The operation had been performed eight months previously for the cure of a duodenal ulcer, but the patient, after a brief period of relief, had so much pain and vomiting and bile, that the surgeon (after the X ray diagnosis) reopened the abdomen, and closed up the gastro-jejunostomy opening. (See p. 1827.) a, First part of the duodenum. U, Umbilicus. Py, Pylorus.

Fig. 25.—Taken nine hours after a bismuth meal in a case of severe intestinal stasis, cured by the operation of "short-circuiting." The whole of the bismuth is in the rectum, proving that all intestinal stasis has been abolished.

small intestine. (Fig. 17.) If torsion of the bowel behind the fixed part occur, the condition known as "volvulus" will be brought about.

The Splenic Flexure.

The splenic flexure is normally fixed below the diaphragm by the costo-colic ligament; this is always a strong band, and it keeps the splenic flexure in place even when the ascending and transverse colon are dropped so that the hepatic flexure does not rise above the iliac crest, while the transverse colon hangs in a great loop, the middle of which occupies the pelvis in company with the dropped cæcum, the dropped great curvature of the stomach, the dropped lower coils of the ileum, the sigmoid flexure, and the rectum, all pressing upon the pelvic organs proper. (Fig. 19.) In such a case there is a very long rise from the lowest part of the transverse colon to the splenic flexure, and, especially in the upright posture, fæces may be retained for days in the transverse colon.

The Sigmoid Loop.

The sigmoid loop is very frequently the seat of abnormal bands or adhesions in the peritoneum; they pass down to the outer surface of the meso-sigmoid. In some cases they bind down the whole of the sigmoid, which then takes a short, straight course from the iliac crest obliquely downward and inward to the rectum. This state of affairs is favourable to the patient unless the tube be actually narrowed by pressure of the peritoneal bands upon it; narrowing in this region causes obstruction, and diverticula may be produced, communicating with the narrowed central lumen of the sigmoid. (Fig. 21.) In other cases only the ends of the sigmoid loop are fixed by bands, close together, the loop itself being free, and projecting into the false pelvis. Thus two kinks are produced, the lower of which is a very sharp one and may cause great obstruction. This obstruction leads to lengthening of the loop, and renders it very liable to the occurrence of volvulus. The most severe case of volvulus I ever saw was found at operation to be produced in this way. In other cases the upper part only of the sigmoid loop is fixed down; the lower part then runs without separation into the rectum, forming a long mobile tube in the pelvis. (Fig. 22)

The Rectum.

An elongated S-looped rectum is not uncommon in the subjects of intestinal stasis, more especially in children (Fig. 23), and it is clear that in efforts to defæcate the pressure brought to bear upon the abdomen by the abdominal muscles and diaphragm is in the long axis of the body, and is hence at right angles to the length of the loops of the rectum. The effect of such efforts is to press the loops closer together, and increase the lateral elongation. Thus the condition becomes steadily worse; an enormously capacious rectum is produced, and is continuously packed with fæces. There may be a full-sized motion daily, but only a small portion of the rectum at the lower end is evacuated thereby, leaving by far the greater part of the fæces to stagnate and to poison the system (see Fig. 23). The results of this poisoning are very serious, especially in children, whose vitality and resistance to micro-organisms are thus lowered so that they are rendered very liable to tuberculous disease. It is a suggestive fact that children suffering from tuberculous disease of the bones or joints are always found to have an elongated rectum. This is yet another fact which I have often been able to ascertain by the X rays in the first case, and subsequently seen confirmed by operation.

Treatment.

We have seen that the anatomical changes found in intestinal stasis affect every part of the intestinal tract, and that in most cases several parts are affected, though to a varying extent. Obviously the treatment will depend on the degree of affection of the various parts in the individual case.

To take an example. A patient may have symptoms pointing to the presence of a duodenal ulcer. The X ray examination may provide indisputable evidence of the presence of duodenal kinking (and I have found such evidence very often in patients with symptoms pointing to duodenal ulcer—e.g., Figs. 1, 3, 4, and 5). So far the clinical diagnosis has been confirmed, for duodenal kinking, as already explained, is very likely to lead to a duodenal ulcer. We must not rest here, however; we must follow the bismuth meal further, and we shall find in every case some degree of kinking or obstruction at the lower end of the ileum. We may find very definite obstruction in this region; it becomes clear at once, therefore, that the mere treatment (whether medical or surgical) of the duodenal affection would not be a rational procedure. In following the bismuth meal still further through the large intestine we are likely to find further evidence of stasis, possibly of very severe stasis. Hence, it is clear that we are never wise in applying treatment for the cure of duodenal ulcer until we have investigated the entire alimentary canal. As a matter of fact, the duodenum is the only portion of the alimentary canal that is never affected singly.

Gastro-jejunostomy.

Hence the operation of gastro-jejunostomy for the cure of duodenal ulcer is not rational; this operation should be reserved for cases of actual organic stenosis of the pylorus or duodenum. I have now seen a large number of patients at various periods after having gastro-jejunostomy performed for the cure of duodenal ulcer. No doubt many patients have obtained great relief from the operation, but it must be remembered that duodenal ulcer is a very readily curable condition, three weeks' rest in bed sufficing, as a rule, to effect a cure. Thus the recumbency necessitated by the operation would be expected to permit of the cure of the duodenal ulcer, even though no new opening had been made from the stomach into the jejunum. It is true that duodenal ulceration is very apt to recur when the patient returns to his ordinary occupations, and this is frequently the reason for which patients consent to an operation. In the cases, few in number, in which the duodenum is the most serious point of obstruction, the result of gastro-jejunostomy may be permanently satisfactory, although the patients are for ever deprived of a great part of their gastric digestion. The fact should be borne in mind that the operation of gastro-jejunostomy would be expected to do good by holding up the jejunum in such a position as to prevent the occurrence of kinking at the duodeno-jejunal junction for ever after. This good effect is procured quite independently of the making of a new opening between the stomach and the jejunum; it is a benefit bestowed by accident.

In a great many cases, however, the relief obtained by gastro-jejunostomy is merely temporary, not much greater, in fact, than would be obtained by simple rest in bed on a milk diet. I have now examined a considerable number of patients in whom the operation of gastro-jejunostomy had been skilfully performed by eminent surgeons, but intestinal troubles still existed, or had returned after apparent cure. The symptoms complained of are varied: all have pain; many have vomiting, and the vomit usually contains bile and is very distressing; most exhibit all the signs and symptoms of intestinal stasis. An X ray examination in such cases shows various conditions. In most the bismuth meal finds its way out through the new opening at a rapid rate, so that nearly the whole of it has left the stomach within half an hour, provided the patient remain upright.

"Vicious Circle."

In a certain number of cases a "vicious circle" is produced, the bismuth leaving the stomach by the pylorus and returning once more by the new opening, carrying with it

a large quantity of bile. This is vomited, with great pain and distress to the patient. (Fig. 24.) With a view to avoid the possible creation of a vicious circle some surgeons now actually close the pyloric aperture by a process of invagination at the time of performing the gastro-jejunostomy. In other words, they first create a pyloric stenosis and then proceed to cure it by a gastro-jejunostomy. Observing these cases subsequently by the fluorescent screen after a bismuth meal, I have found that while some of the meal passes out by the new opening, a portion is carried on by the powerful peristaltic contractions of the stomach beyond the new opening, and is seen to beat against the pylorus, which has become bulbous in form from the pressure of the gastric contents. The reason these patients are sent for an X ray examination is pain, and there is no possible doubt but that the pain is due to pressure upon the closed pylorus.

The conclusion—the only rational one that can be formed—is that the operation of gastro-jejunostomy should only be performed for the treatment of actual gastric or duodenal stenosis, but not for duodenal ulcer unless in the rare cases in which a series of X ray examinations, properly carried out, has demonstrated the absence of any marked kinking or stasis in the lower parts of the intestinal tract. Now these are the very cases in which duodenal ulcer yields readily to simple medical means with rest in bed, and ordinary precautions suffice to prevent a relapse.

Radical Cure of Intestinal Stasis.

In the more usual case in which the presence of an ileal kink can be demonstrated, the operation of gastro-jejunostomy can do no lasting good; and the same is true of the cases in which there is well-marked stasis in some or all parts of the large intestine. In these cases, surgical treatment, to be rational, must be directed to the cure of the intestinal stasis. This is accomplished by the operation of "short-circuiting," which consists in dividing the ileum near its lower end, and making an anastomosis between this divided end and the upper part of the rectum. By this means the whole of the stasis due to the ileal kink and the large bowel is abolished. The operation, if skilfully performed, is no more risky than other abdominal operations (such as posterior gastro-jejunostomy). The enforced recumbency is sufficiently prolonged to enable the duodenal ulceration to heal, and when the patient resumes his ordinary life there is no longer any drag upon the jejunum leading to kinking at the duodeno-jejunal junction. I have seen patients in whom the symptoms of duodenal trouble were very well marked make a complete and lasting recovery as the result of the operation of making an anastomosis between the ileum and the rectum. The duodenum was not touched at the operation, but it was carefully examined and found to be distended and congested. In one case there was a well-marked duodenal ulcer.

The operation of making an anastomosis between the ileum (near its lower end) and the rectum is the best procedure in all severe cases of intestinal stasis which fail to yield to less radical treatment. The operation has been carefully described,[7] and I need only draw attention to a few points. Where definite kinks are found, due to fibrous bands, the surgeon is often tempted to content himself with their mere division (this was done in Figs. 12 and 13). Experience shows, however, that this is rarely sufficient; the adhesions are apt to reform, and the symptoms return. In making the anastomosis the end of the divided ileum is sutured into the side of the rectum. It is important to make the anastomosis as near the end of the rectum as practicable—at any rate, below the last of the sigmoid kinks described above. If the new opening were made above the sigmoid kink there would be obstruction, and a cure would not be effected. Frequently the temptation is great to clamp the prominent loop of the sigmoid which presents itself in the left iliac fossa (Fig. 22), and to suture the ileum into it; this should not be done on any account. With the anastomosis properly made into the rectum the sigmoid kink, when present, is of great use in preventing the possibility of the ileal contents flowing back into the descending colon, and giving rise to flatulent distension.

After-results.

The results of the operation on the intestinal stasis are very striking. All abdominal pain is abolished; the constipation is relieved; the headache and other aches leave off; a good appetite replaces the nausea; from a state of depression the patients become bright and cheerful; the staining of the skin clears up; the breasts return to their healthy state. A woman, aged 46 years, was recently admitted to Guy's Hospital to have both breasts removed for supposed cancer; there was extreme cystic disease of the sort which commonly becomes cancerous. The X ray examinations revealed the existence of severe intestinal stasis. (Figs. 11 and 22.) Within a week after the intestinal operation the breasts began to improve, and by the end of three weeks they were practically normal; the woman was greatly improved in all other respects; she had begun to gain in weight. This gain in weight occurs in all cases; the circulation improves so that the extremities are found to be warm, and the patients begin to enjoy life again. During the X ray examinations that precede the operation patients frequently tell me they have lost all desire to live, so extreme is the depression produced by intestinal stasis. A careful study of a number of these patients before and after operation has been published by Mr. Harold Chapple.[8] After recovery from the operation a bismuth meal passes through, and is all collected in the rectum by the end of seven or eight hours, proving that all intestinal statis has been abolished. (Fig. 25.)

I trust I have succeeded in showing that intestinal stasis is a most important disease in the diagnosis of which radiography is of the greatest assistance by affording evidence which is positive and beyond dispute of the existence and the position of the obstructions in the intestines which form the subject of this paper. The condition can now be accurately diagnosed beforehand by radiography, and the accuracy of the diagnosis afterwards tested by operation. Obviously this means of diagnosis is of the greatest value.

Weymouth-street, W.

[7] Harold Chapple: Brit. Med. Jour., April 22nd, 1911.

[8] Loc. cit.

A CASE OF RUPTURED EXTRA-UTERINE PREGNANCY, WITH REMARKS UPON DIAGNOSIS.

BY ISLAY B. MUIRHEAD, M.D. GLASG.

THE following case of rupture in extra-uterine pregnancy illustrates the uncertainties which surround the diagnosis of that condition. It shows, with reference to several of its supposed necessary accompaniments, that rupture may in some instances run its course without any one of them being observed from first to last. It enables us to realise how serious are the dangers to which the divergence between the clinical facts and the authorised theory may give rise.

The patient, aged 27 years, had menstruated regularly at intervals of three weeks until her marriage some ten months ago. Since then the duration of the "periods" had gradually lengthened, with the result that when seen by me on Nov. 1st last she had been "unwell" for three weeks continuously. There was no pain, and examination at that date seemed to indicate a healthy condition of the uterus and appendages. She was told to rest, and that if the menorrhagia continued curetting would be advisable. On the 5th severe pain was felt suddenly along the right tube, and she became pale, faint, and almost pulseless. Apart from some percussion dulness over the seat of pain the result of the physical examination was still negative. Rupture of an extra-uterine pregnancy was diagnosed and laparotomy advised, whereupon the friends requested that specialist A should be called to consult.

When seen by A on the 6th, 20 hours from the seizure, the pain had much abated and the pulse and colour were not very markedly abnormal. Being unable to discover any lump or undue resistance in the abdomen or vagina, A thought that extra-uterine pregnancy might be excluded, and that the pain was perhaps connected with trouble in the appendix. For the present he advised rest, to be followed in a day or two by curetting. The rest treatment was continued, with temperatures of from 98° to 101° F. till the 9th, when the curetting was done. The uterus was found to be slightly enlarged, but otherwise it was normal. Following the operation the menorrhagia ceased and the temperatures fell to from ½ to 1 degree below normal. On getting up for the first time on the 27th much pain was felt over the abdomen, with the centre now in the left tube and ovary.

On Nov. 29th the patient was seen by consultant B, who,

finding nothing abnormal in the physical condition, was of opinion, notwithstanding the change in the position of the pain-centre, that the symptoms were connected with a "grumbling appendix." Under rest and anodynes the pain diminished, but at 12.30 A.M. on Dec. 2nd it returned in great severity with marked blanching and, now for the first time, some slight tendency to flatulent distension of the bowels.

At 10.15 on the same morning the patient was seen by consultant C, who, perhaps because he was longer-fingered than the others, was able to feel per vaginam some small object, partly firm, partly yielding in Douglas's pouch. C, while more impressed than the others had been by the character and mode of occurrence of the symptoms, was obviously puzzled, and did not seem inclined to interfere with the temporising methods hitherto pursued. I therefore felt obliged to say plainly that in my opinion further delay would place the patient's life in imminent danger, and this, combined with the above discovery of the body in Douglas's pouch, at length overcame C's hesitation.

What was found was briefly this. The pelvis and general peritoneum contained much blood, mostly fluid, but with many soft coagula. There were no firm or encysted blood-clots and no effused lymph, pus, or other definite signs of peritoneal inflammation. Attached to the left ovary was a small-apple-sized cyst containing clear fluid, and in the right tube an inch and a half from the fimbriated end, was a walnut-sized, firm, smoothly oval mass, the source of the trouble. There were no signs of external rupture, and it seems probable that hæmorrhage had occurred inside the tube at the two extemities of the oval, accounting for both the vaginal and the intraperitoneal bleeding. These conditions were dealt with in the usual way, and the patient is now making an excellent recovery.

Reviewing the history, it is evident that the point upon which the diagnosis broke down was the question as to what does or does not constitute evidence of intraperitoneal hæmorrhage. In this connexion it may be observed that the discovery of a small, firm, moveable body in Douglas's pouch, so far from being evidence of blood clots, either fresh or encysted, would seem rather to suggest a fibroid growing by a pedicle from the back of the uterus, so that C, whose practice was right, might be judged to have argued less logically than A and B, whose advice might have resulted disastrously. In face of the fact that of three experts two were wholly misled by deferring too much to the established surgical tradition, while a third narrowly, and more by accident than design, escaped the like fate, it may seem a paradox to say that the diagnosis was obvious from the first. Yet I believe the statement to be simple truth, and that the rule of waiting till one is able to detect tumour and uterine fixation, whilst in many cases it may seem to work extremely well, is sure in the end to lead to trouble. By way of substitute for it I venture to suggest that in a woman of child-bearing age, sudden severe pelvic pain, with pallor and collapse, is in itself sufficient to establish a diagnosis of rupture of an extra-uterine pregnancy and to make immediate laparotomy imperative.

Stoke Newington Common, N.

Reviews and Notices of Books.

A BATCH OF ANNUALS.

1. *The Official Year Book of Scientific and Learned Societies of Great Britain and Ireland.* Twenty-eighth annual edition. London: Charles Griffin. 1911. Pp. 374. Price 7*s.* 6*d.*

2. *Whitaker's Almanack, 1912.* By JOSEPH WHITAKER, F.S.A. London: 12, Warwick-lane, E.C. Cloth, pp. 858, price 2*s.* 6*d.* net; paper, pp. 536, price 1*s.*

3. *Whitaker's Peerage, Baronetage, Knightage, and Companionage for 1912.* London: 12, Warwick-lane, E.C. Pp. 837. Price 5*s.* net.

4. *Hazell's Annual for 1912.* London: Hazell, Watson, and Viney, Limited. Pp. 592. Price 3*s.* 6*d.* net.

5. *Who's Who, 1912.* London: Adam and Charles Black. Pp. 2364. Price 10*s.*

6. *Who's Who Year Book, 1912-13.* London: Adam and Charles Black. Pp. 168. Price 1*s.* net.

7. *The Englishwoman's Year Book, 1912.* By G. E. MITTON. London: Adam and Charles Black. Pp. 390. Price 2*s.* 6*d.* net.

8. *The Writers' and Artists' Year Book, 1912.* London: Adam and Charles Black. Pp. 137. Price 1*s.* net.

9. *Amateur Gardeners' Diary and Dictionary for 1912.* London: Offices of *Garden Life.* Pp. 227. Price 1*s.* net.

10. *Live Stock Journal Almanac, 1912.* London: Vinton and Co., Limited. Pp. 344. Price 1*s.* net.

1. *The Official Year Book of Scientific and Learned Societies* contains a list of the scientific and learned societies of Great Britain and Ireland and concise information with regard to the officers of the societies, dates of meetings, conditions of membership, and the publications which they issue. In addition there are lists of papers read at many meetings, with the names of their authors, so that the "annual" forms a fairly full record of the work done in science, literature, and art from July, 1910, to July, 1911. The medical section comprises 60 pages. Other sections cognate with medicine are chemistry, biology, and psychology. The United Services Medical Society appears under the Section of Medicine, its appropriate place; but there is no cross reference to it in the Section of Naval and Military Societies, an omission to which we have on a previous occasion called attention.

2. *Whitaker's Almanack* is an indispensable book of reference for the home, the office, and, indeed, in every department of life, the information which it contains being extremely accurate and arranged in an easily accessible form. The present issue, in addition to the well-known features of the annual, contains many new articles, much additional statistical information, and is larger than the previous issue by 66 pages. Among the new matter are articles and statistics on "Labour Unrest of the World," "A Summary of Public and Private Wealth," "Trade Union Statistics," "Aviation in 1911," "The Mercantile Fleets of the World," "Suez Canal Traffic," "Boy Scout Movement," "Wages and Employment," and "Friendly Societies." In the tabular list of new books and new editions published in the United Kingdom in 1910 it is interesting, if not a matter of congratulation, to notice that out of a total of 11,705, medical and surgical publications number 316, and head the list among scientific books. The index contains upwards of 7000 references.

3. *Whitaker's Peerage, Baronetage, Knightage, and Companionage* is another reference book which holds a deservedly high place among works of its kind. The present issue has been enlarged by 25 pages, and includes a full account of the Coronation taken from official sources.

4. *Hazell's Annual*, which is in its twenty-seventh year of issue, continues to be the desk companion of many busy workers. For ready reference with regard to events of the past year, questions relating to the government of the country, education, trade, and so on, *Hazell's Annual*, which describes itself as a Record of Men and Movements of the Time, is particularly valuable to the public man and to the journalist. The index shows that the book has been revised to Nov. 25th, 1911. It may be mentioned that the Insurance Act is admirably summarised—if, indeed, it can be summarised in its present state—and in view of possible Home Rule legislation Mr. Gladstone's schemes of 1886 and 1903 are compared in parallel columns.

5. *Who's Who.*—There is no necessity to describe this well-known annual biography of living people beyond saying that it grows in size with each succeeding year, and that the information which it contains is trustworthy, being largely auto-biographical. At some time or other every educated man and woman must find it necessary to consult a work of

this kind, which not only deals with prominent personalities of the day but—what is of yet more use—also gives interesting details of less known men and women. The fulness of these details sometimes moves the reader to amusement, when he is not interested for serious reasons in learning the exploits or tastes of the individual; but when he wants such information he is extremely pleased to find it in an accessible source and a concrete form.

6. *Who's Who Year Book* is a useful supplement to the above, bearing a similar name. It contains lists of Members of Parliament, of holders of ecclesiastical preferments, of churches and chapels, of owners of winning racehorses, of Newdigate prizemen, of prominent physicians and surgeons, of managers of railways, of presidents of societies, of professors at universities, of titled American ladies, and other matters which everybody on occasion may need to look up.

7. *The Englishwoman's Year Book* will appeal to women of all ranks and all ages. The information contained deals with every department of life—education, sport, literature, philanthropy, the professions, and industries. It is an encyclopædia within its indicated limits.

8. *The Writers' and Artists' Year Book* contains lists of journals and magazines, both British and American, with details as to their character, scope, requirements, the remuneration given, and other information useful to the writer and the artist. As showing the up-to-date character of the book, it may be mentioned that there is a list of cinematograph journals, and the names of firms which accept plots for cinematograph films are also given. The book is indispensable to everyone who makes his living or part of his living by the pen or pencil, and some of the advice given or implied is very valuable.

9. *Amateur Gardeners' Diary and Dictionary.*—Amateur gardeners, of whom there are many in the medical profession, will find this a handy and useful little book. A blank page is devoted to each week of the year for notes of the work done and to be done, while facing these pages is printed information with regard to the weather, such as average rainfall, temperature, and sunshine, and the general work of the garden and greenhouse appropriate for the time of the year. Space is included for accounts and exchange of plants, and at the end of the book there is a dictionary of plants, which contains cultural directions in a concise form.

10. *Live Stock Journal Almanack.*—Not many medical men in these days can find time actively to interest themselves in farming and the breeding of live stock, but those fortunate in being able to enjoy the country life will probably find matter of interest in this annual. It contains a large amount of statistical information and illustrated articles on subjects appealing to the farmer and others, whether amateur or professional, interested in the subjects of which it treats.

JOURNALS AND MAGAZINES.

Journal of Pathology and Bacteriology. (Official Organ of the Pathological Society of Great Britain and Ireland.) Vol. XVI., No. 2. Published from the Department of Pathology, University of Cambridge. Price 7*s.* 6*d.* Yearly subscription £1 1*s.*—Dr. J. M. Beattie and Dr. A. G. Yates, of Sheffield, describe observations on Sugar Tests and Pathogenicity in the Differentiation of Streptococci. Forty-two strains of streptococci, which had been isolated from pus, joints, rheumatic and other lesions in man, were examined. The sugar-fermentation tests proposed by Dr. M. H. Gordon proved useless in their hands as a means of differentiation and classification, nor could any definite distinctions be drawn from the results of inoculation experiments on animals.

Dr. J. P. McGowan, of Edinburgh, records a series of interesting observations on an epidemic among cats, supervening on and simulating distemper, and characterised by a purulent and bloody discharge from the nose and eyes and often ending fatally. A diplococcus, hitherto undescribed, was isolated from the nose and heart blood in all cases. From many of the animals that had already suffered from distemper the author has isolated the organism which he regards as the cause of distemper; this disappeared with the onset of the second infection and was replaced by the diplococcus. Dr. A. E. Boycott and Dr. R. A. Chisolm, of London, describe a series of observations on rats regarding the influence of underfeeding on the blood. They find that underfeeding for three weeks on a diet deficient in proteid to such an extent that the animals lost one-third of their weight does not cause any wasting of the red cells or of the whole blood. Dr. Boycott makes a further contribution to the study of the Rate of Regeneration of Hæmoglobin after Hæmorrhage. After a hæmorrhage of one-third of the whole blood a large rabbit regains the normal level in about 19 days, a small rabbit in 13 days, a large rat in 6½ days, and a small rat in 5 days. The greater powers of regeneration in young animals is correlated with their more rapid growth. Rats regenerate proportionately faster than rabbits because their red cells normally have a shorter life and the marrow has to be proportionately more active to make good the normal loss. Dr. Chisolm, writing on "The Influence on the Blood of the Rat of the Presence of a Transplanted Sarcoma," finds from the exact study of 74 animals, compared with 87 normal rats, that the presence of a transplanted sarcoma usually causes a fall in the total and percentage amounts of hæmoglobin and an increase in the volume of the blood. This anæmia does not depend on the presence of ulceration, and is usually accompanied by wasting of the body tissues. There is reason to believe that with small tumours, and with small tumours only, the animal increases its hæmoglobin and its blood volume to meet the needs of the tumour.

Dr. C. H. Browning and Dr. J. Cruickshank, of Glasgow, report an elaborate study on the Action of Cholesterin and its Derivatives on Lecithin as Syphilitic Antigen and as Hæmolysin with Cobra Venom—(1) in promoting the absorption of complement with lecithin in the presence of syphilitic serum, (2) in inhibiting the lysis of red blood corpuscles by lecithin, cobra-venom. The various substances investigated vary in their action according to both the physical condition (turbidity) of the emulsion and the chemical constitution, and are not equally effective as regards the two modes of action investigated. Thus, cholesterin esters are very efficient in the syphilis reaction, but have hardly any effect on lecithin-cobra-venom hæmolysis. In both reactions cholesterin itself is most effective. Dr. Cruickshank, in a paper on the Histological Appearances Occurring in Organs Undergoing Autolysis, states that in organs undergoing aseptic autolysis at body temperature in salt solution there is great œdema of the tissues and rapid plasmolysis, nuclear changes occurring more slowly. In tissue kept in a moist chamber there is no œdema or plasmolysis, the nuclei degenerate more quickly, and the changes closely resemble those seen in necrotic tissue in the body. The changes are markedly slowed by the presence of toluol, and are almost completely inhibited by heating to 57° C. They are accelerated by staphylococci or a staphylococcus filtrate, but not by tubercle

bacilli or tuberculin. No histological signs of fat were found to appear.

Mr. C. E. Walker and Dr. H. E. Whittingham, of Glasgow, in their Further Observations on the Resemblance between the Cells of Malignant Growths and those of Normal Gametogenic Tissue, by carefully enumerating the chromosomes in a large number of dividing cells in the normal human testis, find that they can be divided into two groups, one of which tends to show about 16, the other about 32 chromosomes. The same distribution is found in malignant tumours. In inflammatory proliferation, though there are many cells with 16 and many with 32 chromosomes, the distribution is very irregular, and the distinction into two definite groups largely disappears. The authors consider that their results strongly support the essential similarity between the cells of malignant tumours and those of normal gametogenic tissue. Dr. M. J. Stewart, of Leeds, in a paper on the Histopathology of Cancrum Oris, describes five typical examples of cancrum oris which present a constant histological picture. In very acute cases there is little or no tissue reaction; in others there may be many leucocytes, plasma cells, and mast cells. Spirilla extend deeply into apparently normal tissue; fusiform bacilli do not extend so far, and necrosis of the tissues takes place only after invasion by these latter organisms. In the superficial necrotic area many cocci and filamentous organisms are found. Dr. O. Klotz and Dr. M. F. Manning, of Pittsburg, in a study of the Fatty Streaks in the Intima of Arteries, especially the narrow longitudinal pale streaks found chiefly on the posterior wall of the thoracic aorta, deals with their occurrence, nature, and significance. These streaks are most common between the ages of 11 and 30, are almost constantly present in fatal cases of typhoid fever (33 out of 35), and are common in infective conditions generally. Anatomically, there are fatty change and degeneration in the subendothelial connective tissue, and in more advanced cases also in the subjacent musculo-elastic layer. There is also more or less marked proliferation of the intima, forming a small nodule over the degenerated area, in or about which there is never any acute inflammatory reaction. These lesions usually disappear without leaving any demonstrable traces, but in some cases the proliferation of the subendothelial layer is the commencement of nodular arteriosclerosis. The condition probably has no connexion with definite atheroma of the aorta. Dr. L. S. Milne, of New York, in a study of Chronic Arthritis describes the changes found in the joints in arthritis deformans (rheumatoid arthritis), and compares them with those occurring in gonorrhœal infection, in tabes, and in experimental infections in animals.

Quarterly Journal of Microscopical Science. Edited by Sir E. RAY LANKESTER, K.C.B., F.R.S., with the coöperation of ADAM SEDGWICK, M.A., F.R.S., SYDNEY J. HICKSON, M.A., F.R.S., E. A. MINCHIN, M.A., F.R.S., and GILBERT C. BOURNE, M.A., F.R.S. November, 1911. London: J. and A. Churchill. Price 10*s.* net.—The opening paper of this number is of considerable medical interest as a contribution to the study of pathogenic amœbæ. It is divided into two parts, in the first of which Major W. Glen Liston, I.M.S., gives a very full account of certain cultures of amœbæ isolated from dysenteric lesions and other sources, while in the second part Mr. C. H. Martin, demonstrator of zoology in the University of Glasgow, describes preparations of amœbæ from Major Liston's cultures. These cultures were obtained in Bombay from (1) an abscess of the liver; (2) a dysenteric stool; (3) Bombay City tap-water; and (4) the stool of a healthy monkey. A preliminary examination of the cultures, which had been planted more than a month previously, showed that in each case all the amœbæ were encysted, and that in all they were associated with a variety of bacteria. It was next found that two types of cysts were present in the culture from the abscess of the liver, one type having a diameter varying between 6 and 8μ and the other a diameter varying between 12 and 15μ. In subcultures these forms reproduced themselves true to type—that is to say, large cysts were always formed by amœbæ which had developed from a single large cyst, while small cysts were always the product of small cysts. The two types also differed in respect to their methods of multiplication and their behaviour in saline solution. The large amœba was observed to multiply by endogenous budding as well as by division into two individuals; the small amœba, however, cultivated from the small cysts of the same culture, was never seen to give off buds; division in this case was direct or amitotic. When dilute saline solution was added to an actively developing subculture from the liver-abscess culture the large amœba always assumed a more or less rounded form, with numerous needle-like pseudopodia projecting from the surface, while the small amœba, on the contrary, almost always assumed a worm-like or gregarine shape, throwing out one or two long pseudopodia. Physiological tests failed to demonstrate any pathogenic properties in either of these two amœbæ. Mr. Martin, in his description of preparations from the above-mentioned cultures, says that the small type of amœba from the abscess of the liver and the amœba of dysentery seem to agree absolutely in all their essential features. The morphology of the organisms is illustrated by three full-page plates of drawings.

Miss Muriel Robertson contributes a paper on the Division of the Collar-cells of the Calcarea Heterocœla. She says that although this process is a typical metazoan mitosis it reveals some rather primitive features, such as the very slight development of the spireme, the absence of rays from the centrosomes and the general indistinctness of the chromosome. The organisms were contained in a kind of marine sponge. The next article consists of Observations on the Trypanosome of the Little Owl (Athene noctua), with remarks on the other Protozoan Blood-parasites occurring in this Bird, and is a long paper written jointly by Professor E. A. Minchin and Mr. H. M. Woodcock. For the purpose of this research these gentlemen spent about three months at Rovigno, in Istria, but most of their owls had to be procured from Vienna or Breslau. Of 18 birds examined 12 were found to be infected with one or more parasites—either leucocytozoon, protoseoma, halteridium, or trypanosome. After describing at least three types of trypanosome of the owl, they record their opinion that all the different forms of this organism in the blood of athene noctua belong to one and the same species, for which they propose the name trypanosoma noctuæ (Schaudinn). The succeeding paper is a lengthy one by Mr. Charles H. O'Donoghue, on the Growth-Changes in the Mammary Apparatus of Dasyurus and the Relation of the Corpora Lutea thereto. The animal chiefly investigated was the Australian native cat, dasyurus viverrinus, a small marsupial which has a breeding season once a year. After describing the formation of the mammary gland, Mr. O'Donoghue gives a full account of the changes which occur in it prior to ovulation, during pregnancy, after parturition, and when ovulation is not succeeded by pregnancy. He arrives at the conclusions (1) that the corpus luteum is a ductless gland producing a secretion (a hormone) which is the exciting cause of the growth of the mammary gland during pregnancy and at other times; and (2) that there is at present no satisfactory theory of the causation of milk secretion. Professor E. W. MacBride describes an anomaly of conformation in Echinus. The next two papers are closely related to one

another and have practically the same subject—namely, the effect which the rhizocephalan parasite, sacculina neglecta, has upon the sexual physiology of crabs belonging to the two genera inachus and carcinus invaded by it. The authors of the papers—Mr. Geoffrey Smith and Mr. Guy C. Robson—found that sacculina invariably led to an increased deposition of fat in the "liver" of the crabs, but that the sexual effects were not exactly the same in the two genera.

The Journal of Physiology. Edited by J. N. LANGLEY, Sc.D., F.R.S. Vol. XLIII., Nos. 3 and 4. London: C. F. Clay, Cambridge University Press. Nov. 20th, 1911. Price 8*s*.—In The Influence of Colloids on Diuresis, Frank P. Knowlton gives one classification of diuresis which distinguishes two kinds: one which is accompanied by increased oxygen consumption by the kidney, and therefore may be considered as due, at least in large part, to secretory activity—e.g., diuresis by injection of urea, caffeine, or Na_2SO_4; the other, even though the increase of urine is relatively enormous, is unaccompanied by any change in oxygen consumption—a phenomenon which it is natural to consider as purely mechanical, a conspicuous example being the diuresis following the injection of physiological saline solution. Among the factors associated with this mechanical production of urine are change in (1) arterial blood pressure; (2) blood flow through kidney; and (3) physical effects caused in the blood by the diuretic agent. This paper is in part an extension of somewhat similar work already published by Barcroft and Staub. Having excluded certain factors, the author's attention was directed to the question as to whether any residuum of diuresis could be attributed to changes in the osmotic pressure of the proteins in the plasma. Most of the experiments were made on anæsthetised rabbits. Elaborate tables and diagrams are given to show the effect of colloids on saline diuresis—e.g., diuresis due to injection given intravenously of a Ringer's solution. The colloids injected were salt-free gelatine (5 per cent.), gum acacia (5 per cent.), and starch. Another series of experiments deals with the influence of colloid on chloride (hypertonic solutions of NaCl, 5 per cent.) or sulphate diuresis Na_2SO_4 (15 per cent.). The author concludes that colloids which possess an osmotic pressure—e.g., gelatine and gum acacia—are effective in inhibiting the diuresis produced by normal saline solution or by hypertonic NaCl, but are largely ineffective upon the diuresis caused by Na_2SO_4. Colloids possessing no such osmotic pressure are without such action. The colloids in the concentration used caused no measurable change in blood flow through the kidney, and did not influence the gaseous metabolism in the gland. The author arrives at the conclusion that change in the concentration, and therefore in the osmotic pressure, of the blood colloids is a factor in the production of urine in the glomerulus.

A. G. W. Owen and Professor Sherrington, in their Observations on Strychnine Reversal, continue and extend the thesis that strychnine changes an inhibitory reflex to an excitatory one—a result already observed by using the knee extensor muscle, the vastocrureus. The authors' experiments were conducted on deeply anæsthetised cats. Decerebration was performed and the semitendinosus, the chief knee flexor, was isolated by appropriate nerve sections, so that it remained the only unparalysed muscle in the limb. The reversal obtains in the knee flexor as well as in the case of the knee extensor—with the ankle extensor as with the knee extensor. The next communication is from the Laboratory of Experimental Therapeutics of the University of Chicago, by Joseph L. Miller and E. M. Miller, on the Effect on Blood Pressure of Organ Extracts, the results of which amplify those already known on this subject.

The Physiological Laboratory and School of Agriculture, Cambridge, is the source of the next paper by F. H. A. Marshall, entitled "The Male Generative Cycle in the Hedgehog, with Experiments on the Functional Correlation between the Essential and Accessory Sexual Organs." The males in most species of mammalia do not exhibit the same degree of sexual periodicity as is shown by the females. The accessory glands of the male hedgehog undergo a periodic metamorphosis, which the author has investigated, partly by a series of experiments in which the animals were castrated or vasectomised, either completely or unilaterally. The results of the experiments demonstrated very clearly the existence of a close functional correlation between the essential and accessory generative organs in the male hedgehog. The vesiculæ seminales are secretory glands, and do not contain spermatozoa. Dr. Hopkins adds a note on the Chemistry of the Vesicular Fluid of the Hedgehog. We failed to notice any reference to Gley's observations on the fluid of the vesiculæ seminales of the guinea-pig.

The contribution by A. V. Hill on a New Form of Differential Micro-calorimeter for the Estimation of Heat Production in Physiological, Bacteriological, or Ferment Actions is from the Physiological Laboratory at Cambridge. It gives an account of a calorimeter—on the principle of a Dewar flask—by means of which one can determine the heat produced in long periods of time by small cold-blooded animals, by plants, or by micro-organisms. The paper by W. M. Fletcher, on the Alleged Formation of Lactic Acid in Muscle during Autolysis and in Post-survival Periods, is one that will interest organic chemists as well as physiologists.

On the much vexed question of the Innervation of the Coronary Vessels, T. G. Brodie and W. C. Cullis used an isolated mammalian heart, and compared their results with those of Schäfer, who "injected as much as 0·00015 to 0·0006 gramme of adrenalin." The authors explain the results they obtained, as compared with those of previous observers, as due to the much larger dose of adrenalin employed in their experiments. Schäfer's minimum dose was 15 times greater than that of their maximum. In the Action of Homologous Alcohols and Aldehydes on the Tortoise Heart H. M. Vernon finds that the toxicity of the alcohols increases with their molecular weight, that of iso-amyl being 23 times greater than that of methyl alcohol. This is a paper which should be interesting particularly to pharmacologists. Sokoru Oinuma, in a paper on the Question of the Presence in the Frog of Vaso-dilator Fibres in the Posterior Roots of the Nerves Supplying the Foot and in the Sciatic Nerve, finds that the posterior roots of the eighth and ninth spinal nerves in the frog contain no vaso-dilator fibres for the hind limb, but the sciatic nerve itself does.

The following are some of the titles in the Proceedings of the Physiological Society, July 22nd and Oct. 21st:—F. W. Pavy and W. Godden: Inhibition of Post-Mortem Production of Sugar in the Liver and of Certain Forms of Glycosuria by the Intravenous Injection of Dilute Solutions of Sodium Carbonate. E. L. Collis and M. S. Pembrey: Observations upon the Effects of Warm Humid Atmospheres on Man. G. R. Mines: The Influence of Certain Ions on the Electric Charge of Colloids, and its Bearing on Comparative Physiology (preliminary communication). Charles H. O'Donohue: The Relation Between the Corpus Luteum and the Growth of the Mammary Gland. A. G. Levy: Sudden Death under Light Chloroform Anæsthesia (a further communication). Joseph Barcroft and Franz Müller: The Formation and Estimation of Methæmoglobin.

SAVILL MEMORIAL FUND.—The Savill Memorial Fund has now reached £355, and the treasurer, Mrs. Hardy, 18, Iverna-court, Kensington, W., will be glad to receive any further contributions. The committee has decided to give a yearly medal and found a scholarship in clinical neurology with the fund, which still remains open.

THE LANCET.

LONDON: SATURDAY, DECEMBER 30, 1911.

THE ANNUS MEDICUS 1911.

YEAR by year we carry out a medical stock-taking at Christmas-time, and year by year it grows more difficult to know what to include or what to exclude. But we are happy to know that such an annual summary, however brief, is of service to many of our readers, and that especially it is useful for future reference. We make little attempt at prophecy: it is well-nigh impossible, unless courage be carried to rashness, to pick upon any given piece of scientific work during the year of its record, and point to it as the beginning of a new principle or the embryo of a method of treatment with which great things will be wrought. Our present stock-taking possibly leaves out of notice some innovation destined in the near future to have much significance; and possibly again it may attribute undue importance to something which is on the edge of being superseded. A *résumé* of this nature, whatever pains be spent upon it, must necessarily fall short of completeness, but we are encouraged by our readers to continue the custom of our predecessors and to add another chapter to the history of modern medicine that has been compiled in these pages, and in its present form, for half the lifetime of THE LANCET—now becoming an impressive period. Year by year the chapters have grown longer, and space forbids us to make each of them more than an expanded index, but it is, we trust, a discriminating index.

MEDICINE.

Tuberculosis.

THE subject of pulmonary tuberculosis has again attracted a large amount of attention, not only from members of the medical profession but also from legislators and from the public generally. The Public Health (Tuberculosis) Regulations, 1908, provided for the notification of the disease occurring amongst the inmates of Poor-law institutions or amongst persons under the care of district medical officers. An Order which came into force in May of this year provided for the notification of pulmonary tuberculosis occurring amongst the in-patients or out-patients of those hospitals supported wholly or in part by voluntary contributions. According to these regulations a medical officer of any hospital, within the period of 48 hours after his first recognition of the malady in a person upon whom he is in medical attendance at the hospital, must complete, sign, and transmit a notification of the case, in the form shown in the special schedule to this Order, to the medical officer of health for the area within which the hospital is situated. The results obtained by these regulations have evidently proved satisfactory in the opinion of those who are able to judge, for new regulations have now been issued completing the system of notification, and hereafter it will be the duty of every medical practitioner, with certain exceptions specified in the regulations, to notify every case of pulmonary tuberculosis occurring in the course either of his public or of his private practice. The new regulations come into force on Jan. 1st next. The result of the practical application of this scheme will be watched with interest, but some time must elapse before a judgment can be formed as to the effect of compulsory notification on the incidence and death-rate of the disease.

In delivering the Presidential Address before the British Medical Association at Birmingham Professor R. SAUNDBY drew attention to the advantages and importance of the coöperation of medicine and the public in the campaign against tuberculosis. He pointed out that the practical measures which are being organised to deal with tuberculosis are probably to be regarded as the outcome of the fact that everyone now knows that consumption, the commonest form of tuberculous disease, is communicable through the agency of dried sputum from cases of this disease. He also stated that if it can be still further brought home to the public generally that the disease is in a large majority of cases curable if recognised early and appropriately treated, and that it is preventable and not an inevitable result of family predisposition, there can be little doubt that an effective and comprehensive campaign, both curative and prophylactic, will soon be inaugurated. He likewise pointed out the significance of the fact that the diminished incidence of pulmonary tuberculosis was concurrent with increasing sobriety, better housing, growing education, and the social and moral elevation of the people. The establishment of dispensaries for the treatment and guidance of patients suffering from consumption will doubtless prove of great value.

As part of the National Insurance Act Mr. LLOYD GEORGE has provided a sum of £1,000,000 for the maintenance of sanatoriums, and in that way removes from the scope of domiciliary treatment a considerable proportion of tuberculous patients who would otherwise make serious calls upon the sum available for domiciliary medical attendance and provision of drugs. He has also allotted £1,500,000 for the erection of sanatoriums in those districts where such institutions are desirable.

The final report of the Royal Commission appointed to inquire into the relations of human and animal tuberculosis was issued during the year, and is a document of great scientific interest and of extreme practical importance. In regard to the question whether tuberculosis in animals and man is one and the same, the conclusions arrived at are that the human and bovine types of bacilli are morphologically indistinguishable, but that they differ appreciably in their cultural characters and in their pathogenic effects in various animals. The slight cultural differences are considered by the Commission as insufficient to establish the two types as distinct organisms, and it prefers to regard them as varieties of the same bacillus, and to consider that the lesions which they produce, whether in man or other animals, are manifestations of the same disease. The reply to the second term of the reference to the Commission—viz., whether animals and man can be reciprocally infected with tuberculosis—is very definitely and unequivocally in the affirmative. The third term of the reference—viz., to determine under what conditions, if at all, the transmission of tuberculosis from animals to man takes place, and what circumstances are favourable or unfavourable to such transmission—is a very wide one. The conclusion of the Commission was that, whatever may be the source of tuberculosis in adolescents and in adult man, there can be no doubt that a considerable proportion of tuberculosis affecting children is of bovine origin. Even in adolescents and adults so large a proportion of the cases investigated—i.e., 5 out of 55—showed the presence of the bovine type

as to indicate that the same avenues of infection are possible at other periods of life than childhood. The importance consequently of strict administrative measures to deal with the prevention of the danger from infected milk and meat is urged by the Commission, whose attitude serves to illustrate the important practical bearings of the work.

Tuberculin has been extensively employed in the treatment of tuberculosis, and during the past year numerous observers have recorded their experience. The method of administering the remedy and the variety to be employed have received especial attention. Considerable difference of opinion still exists, but there is a steadily growing belief that tuberculin is of real value, especially in early cases of the pulmonary variety. The theory that the success attained in treating suitable cases of this disease by means of graduated labour is due to auto-inoculation is also gaining ground.

The procedure of producing artificial pneumothorax in the treatment of pulmonary tuberculosis has again been revived in this country. Dr. CLAUDE LILLINGSTON, in an article contributed to THE LANCET of July 15th, described the practical details of the method, together with the indications for its employment. In view of all the risks and complications of the operation we cannot but feel that this plan should at present be restricted to severe febrile cases which ordinary therapeutic measures are failing to influence favourably, and further, that its tentative character should be carefully explained to the patient and his friends. It is obviously not a procedure to be lightly recommended, and until much more information is forthcoming, both in regard to its immediate and remote results, it is impossible to form any judgment of its value.

An interesting report on how tuberculosis is spread in India was issued by Dr. J. A. TURNER, executive health officer, Bombay. In addition to the danger of infection by sputum and the flesh and milk of animals, he laid stress on another possible source by which the malady might be spread—namely, the contamination of food matters by individuals and animals the subjects of active tuberculous disease. He thought that cattle in India are affected, but only to a limited extent. His investigations led him to believe that the habits of the natives undoubtedly tend to convey the bacilli, and that the difficulties in the way of prevention must prove even greater than in England.

Measles.

In the early part of the year measles assumed an epidemic form in London and many great centres, and once more proved the remarkable tendency of the disease to display fluctuations in major waves of prevalence, over and above its well-known predilections for certain seasons of the year, and its rise and fall in minor waves, often of biennial rhythm. The number of deaths in one week in London rose to 197, the highest total weekly number of deaths from measles ever recorded in the metropolis. This very serious mortality was the more emphasised because other infantile maladies have in recent years shown marked abatement. The Metropolitan Asylums Board decided to utilise its hospitals for the treatment of certain cases of measles; this was a wise proceeding, as tending considerably to reduce the case mortality, and the children of the very poor could be far better cared for in these institutions than in their own homes. A useful memorandum was issued by the medical officer of the Local Government Board in which the difficulties and possibilities as regards control of measles were fully discussed. The greatest difficulty is, perhaps, the recognition of the disease. Medical attendance is but rarely sought for this complaint among the poorer classes, and without such attendance recognition and notification cannot follow. There is, however, one important source of information as regards measles which has not so far been utilised as fully as it might have been. The school attendance officer is in a very favourable position to hear rumours as to the possible existence of measles in any given family, and an efficient coördination between himself and the local medical officer of health might bring to light suspected cases and lead to the exclusion of patients and families from schools, or even to the closure of certain sections of schools. The high mortality is brought about largely by the result of inexperienced nursing and treatment, and if medical advice could be sought at an early stage, or the children in certain instances be removed to an isolation hospital and properly treated, many lives might be saved.

Diphtheria.

The probable influence of diphtheria carriers has been the most debated point in connexion with this disease. Dr. ANGUS G. MACDONALD contributed an interesting paper to our columns on the subject. As a result of his inquiries he came to several conclusions, of which the following are the most important. Carriers are found at all ages and of either sex. In many cases it cannot be said that one case was actually derived from another, for the detected carrier may have given the disease to those around, or may only have just received it. The presence or absence of an obvious pathological condition is no criterion of the fact of a carrier, of the length of carrier life, or of virulence. The length of carrier life seems to have no effect on virulence; bacilli have been demonstrated to be virulent after four or eight months in the ear and nose of different individuals. Carriers are found amongst those most intimately associated with other carriers or cases: at home between mother or nurse and child, and child and child who play together; at school the carriers found are few and always closely associated (in play and not necessarily in school-room proximity) with some other carrier or case. Dr. MACDONALD maintains that the control of diphtheria depends on the control of the carrier. He thinks that the carrier should be notified as a case of diphtheria, no matter of what age or sex, and due quarantine and observation would be maintained until satisfactory demonstration of the disappearance of the pathogenic bacillus. As everything points to the conclusion that the bacillus is essentially a human parasite, he believes that a determined attack on the lines of thorough bacteriological investigation should result in stamping out diphtheria altogether from the land.

Acute Poliomyelitis.

An epidemic which occurred in Devon and Cornwall during the summer months drew attention to an infective malady which has been but little studied in this country. Early in August a notice appeared in one of the Devon papers of an outbreak of "spotted fever" in the area around Holsworthy. Later in the same neighbourhood cases were recorded of acute poliomyelitis, and some difficulties of diagnosis arose. At a meeting of the Devon county education committee on Sept. 8th Mr. G. ADKINS, the county medical officer, gave an account of the outbreak of acute poliomyelitis in various parts of the county. He stated that 25 schools had been closed, and that the disease was present in 12 of the 52 districts of the county. There had been 80 cases altogether, and 16 deaths had occurred. He also stated that three definite cases of "spotted fever" were known amongst those reported. We took the opportunity[1] of briefly explaining the main differences between cerebro-spinal fever and acute poliomyelitis, and indicated the manner in which they may be communicated. Recently a memorandum has been issued by the Permanent Secretary of the Local Government Board recommending the notification of both these diseases.

Plague.

The reports and papers on suspected cases of human plague in East Suffolk and on the epizootic of plague which

[1] THE LANCET, Sept. 23rd, p. 896.

attacked rodents in that district during the autumn and winter of 1910 possessed the deepest interest for all epidemiologists. The epidemiological and administrative sides of the outbreak were dealt with by the late Dr. H. T. BULSTRODE, while the flea fauna of the rats and rabbits, together with the species of the rats found, were reported on by Dr. C. J. MARTIN and Mr. SYDNEY ROWLAND, of the Lister Institute. Rat plague had probably been prevalent in some degree in this neighbourhood from 1906, and perhaps earlier, and it is a matter of great interest to note that, notwithstanding this widely prevalent epizootic, there were only from 1906 onwards three, or at most four, primary cases of human plague, the remainder being secondary cases. This relative immunity is probably in large measure to be accounted for by the different habits of the brown and the black rat, and by the circumstance that not one example of Pulex cheopis, the flea of the black rat, was discovered. Further, as Dr. MARTIN and Mr. ROWLAND show, 50 per cent. of the rat-flea population consisted of a flea which apparently bites man but rarely. The remainder of the rat-flea population was composed of Ceratophyllus fasciatus, which does not bite man very readily—not nearly so readily as does the rat-flea of India. There is, therefore, left only about one man-biting rat-flea to every two rats, a flea prevalence which, according to the work of the Indian Plague Commission, is too small to give rise to a human epidemic in India. In Dr. BULSTRODE'S view, a study of plague literature points to the conclusion that the pneumonic type played a more important part in the diffusion of plague in past epidemics than is generally believed. In the report a detailed account is given of the mysterious outbreak which occurred on the banks of the Orwell in the winter of 1909 to 1910, and which involved eight persons with five deaths. This outbreak resulted in two post-mortem examinations and three inquests, there having been, it seems, some suspicion of poisoning. But this suspicion is certainly dispelled by the searching examination to which Dr. BULSTRODE subjected the evidence, and it is clear that a communicable malady, having the incubation period and many of the signs and symptoms of plague, was in question. Whether this was actually an outbreak of bubonic and septicæmic plague cannot be certainly determined, but the outbreak is best explained upon the theory that the disease was plague.

Anthrax.

A report was published by the Worshipful Company of Leathersellers on the Incidence of Anthrax amongst those Engaged in the Hide, Skin, and Leather Industries, with an Inquiry into Certain Measures aiming at its Prevention. The report was drawn up by Dr. CONSTANT PONDER, the bacteriologist to the Company's technical college, who had been engaged in investigating industrial anthrax. From his investigations several interesting and important conclusions were drawn. Some 40 per cent. of all the cases of anthrax in British leatherworkers are due to handling Chinese or East India goods. The cutaneous infection would seem to be the most common, 82 per cent. of the cases exhibiting pustules on the head or neck. No case of pulmonary anthrax infection, such as occurs amongst the Bradford wool-workers, had been reported amongst those working in hides and skins, and only two cases of the intestinal form had occurred in the last seven years. The point in Dr. PONDER'S report which is well brought out, and upon which great stress is laid, is the fact that the infective material—i.e., the anthrax spore—is most likely to be found in discharges dried upon the fur, and at the cut ends of subcutaneous capillaries. He has carefully studied the many and varied methods which have for their object the destruction of the infective materials. The difficulty is to find a plan which will destroy the organisms and their spores without harming the hides and skins. It is remarkable that no case of anthrax infection has ever been traced to wet-salted hides, and Dr. PONDER therefore suggests that all skins and hides should be imported in the wet-salted state. This is a plan which has much to recommend it from the point of view, not only of the leather-workers themselves, but also of the brokers and even of the shippers.

Ankylostoma Infection.

Of diseases due to animal parasites few within recent years have attracted so much attention as the condition of ankylostomiasis, and in the Milroy lectures delivered before the Royal College of Physicians of London Dr. A. E. BOYCOTT gave an excellent account of the present knowledge on the subject. The parasite has been found very widely distributed in both hemispheres, and many obscure forms of anæmia have eventually proved to be due to ankylostomiasis. Dr. BOYCOTT drew an important distinction between ankylostomiasis and ankylostoma infection. Any individual who harbours these parasites in his intestine is a worm-carrier and is thus the subject of ankylostoma infection, but he may show no evidence of this other than the passage of ova and the presence of an eosinophile reaction in his blood; whereas if the number of parasites be sufficient, grave anæmia, dyspepsia, and other disabling symptoms occur, and the patient is then the subject of the disease ankylostomiasis. The worm-carrier may be as important a factor in the dissemination of the disease as the bacteria carrier is in connexion with diseases such as typhoid fever and diphtheria, unless adequate precautions are taken. The essentials for the production of the infection by ankylostoma are fæcal contamination of the soil with ova of the parasite, sufficient moisture to prevent their desiccation, and temperature conditions favourable to their development. In the tropics these conditions are almost invariably to be found, and the disease spreads so widely that it is estimated that it may reduce four-fifths of the population to a permanent state of chronic ill-health, since re-infection is constantly occurring. In regard to the modes of infection, LOOSS'S observations that the encapsuled larvæ enter the skin, reach the lungs, pass up the trachea and down the œsophagus have been generally confirmed. Dr. BOYCOTT believes that mouth infection can and does occur, and stated that he was accidentally infected by this channel himself, having failed to infect himself by the skin route. It is generally admitted, however, that the latter is the more usual mode of infection, and this discovery has proved of value in the preventive treatment of the infection.

Rheumatoid Arthritis.

In delivering the Hunterian lecture before the Royal College of Surgeons of England Mr. KENNETH W. GOADBY made some suggestive observations on the association of disease of the mouth with rheumatoid arthritis and certain other forms of rheumatism. In a preliminary survey of the subject he remarked that a large number of cases of arthritis deformans, using this term in its inclusive sense, are now recognised to be of infective origin, others are of definite neural origin, but between the two are a considerable number which, according to some observers, may be infective, according to others atrophic, neural, or even idiopathic. He called attention to the presence of various so-called rheumatic symptoms in persons subject to disease of the jaw, particularly the type of disease known as pyorrhœa alveolaris and associated with a discharge of pus from the gum margins and rarefaction of the alveolar process, and frequently the body of the bone. He gave an account of his own researches on the especial relation of rarefying alveolar osteitis to arthritis deformans, which are of considerable

value and interest. He isolated several micro-organisms from the pus obtained from the gum margin and found that one in particular seemed to give more variation in its opsonic index than any of the others. It was found on careful examination that the organism in question differed very much in its general morphology, and in a certain number of other particulars, from the ordinary streptococcus of the mouth. In conclusion Mr. GOADBY said that his contribution to the study of arthritis deformans coincident with alveolar osteitis does not seek to establish a specific organism as the etiological factor in all cases of rheumatoid arthritis, infective fibrositis, muscular rheumatism, and so on, but that in diseases of the jaw, especially rarefying alveolar osteitis, a strepto-bacillus is present, pure cultivations of which inoculated into or around the knee-joints of rabbits have produced symptoms similar to and indistinguishable from arthritis deformans; that in such disease of the mouth and jaws the treatment of the disease locally and by means of autogenous vaccine prepared from the strepto-bacillus has been associated with amelioration and disappearance of the arthritic symptoms in a greater number of instances than can be ascribed to fortuitous coincidence.

Polycythæmia and Plethora.

Within recent years many interesting results have been obtained in regard to the pathology of the blood by studying its cytological characters. Polycythæmia and plethora have been especially investigated by Professor H. SENATOR, of Berlin, and he has published an interesting work on the subject. Excluding secondary and physiological conditions, there are two forms of primary or idiopathic polycythæmia. One, first described by H. VAQUEZ, characterised by cyanosis, enlargement of the spleen, and polycythæmia, is generally known as polycythæmia rubra megalosplenica; the other is called Geisböck's disease or polycythæmia hypertonica; it has been less often observed, and only about a dozen undoubted cases are on record. The symptoms are not unlike those of the splenomegalic form, but in about half the cases apoplectic seizures occur and chronic nephritis and arterio-sclerosis are much more frequently apparent. The patients usually present a typical apoplectic habit of body.

Diseases of the Heart.

In delivering the Oliver-Sharpey lectures before the Royal College of Physicians of London Dr. JAMES MACKENZIE dwelt on the significance and treatment of heart failure. He described in plain language the meaning of the term "fibrillation of the auricles," and pointed out that the recognition of this condition and of the phenomena accompanying its onset presents the subject of the most common form of heart failure in an entirely new light, and affords ground on which a sound prognosis and a natural therapy can be based in many obscure cases. Dr. MACKENZIE maintained that heart failure simply means an inability of the heart muscle to maintain the circulation, but he was of opinion that the methods usually employed to estimate the inefficiency are inadequate. In the course of his lectures he described in detail the methods of examination which should be carried out, and concluded that the only real test of the integrity of the heart muscle is its power to respond to effort, holding that the amount of effort that can be undertaken without distress affords a basis for estimating the degree of impairment. Passing on to those conditions in which indications of heart failure actually exist, his remarks on treatment were based on the contention that failure arises because the "period of rest" cannot restore a sufficient amount of work force, the essential principle of treatment becoming self-evident—namely, rest. Rest may be secured for the heart by actual physical rest assisted by those drugs which procure the effects of rest by causing the slowing of the heart's rate; such drugs are, of course, to be found in the digitalis group.

The subject of cardio-vascular degeneration was fully considered by Dr. J. MITCHELL BRUCE in the Lumleian lectures delivered before the Royal College of Physicians of London. In considering the treatment of this condition he laid stress on the importance of ascertaining the cause of the degeneration. He drew attention to certain types of cases, classifying them under certain heads—viz., syphilitic disease of the heart and aorta, glycosuric cases, gout and cardio-vascular degeneration, physical strain, and nervous stress. Dr. BRUCE maintained that the subject of treatment appeared in a more satisfactory light when considered under the above indications than when cardio-vascular degeneration is regarded from the point of view of a single substantive disease. Some of the causes mentioned can be directly treated, whilst others demand great tact and discrimination on the part of the physician.

Diseases of the Lungs.

In the annual oration delivered before the Medical Society of London Dr. W. PASTEUR chose as his subject "Post-Operative Lung Complications." He showed that deflation of the pulmonary bases, resulting from reflex inhibition of diaphragmatic movement, is an essential, if not the chief, factor in the causation of post-operative pneumonia, and that the rôle of the anæsthetic is only a very secondary one. He placed before his hearers figures which proved that these after-effects are far from rare, and that in the present confused state of the knowledge concerning them mistaken diagnoses are probably of frequent occurrence. Dr. PASTEUR contended that in order to clear up the complex nature of these accidents and to arrive at a more reasonable classification of post-operative lesions it was necessary that the lungs should be carefully examined by a competent observer and the exact position of the heart beat noted before every abdominal operation. In this way alone would it be possible to appreciate the slight changes in the breath sounds, in the respiratory movements of the chest, or in the position of the apex beat, which indicate the onset of trouble, and often give a sure indication of its nature. Dr. PASTEUR said he was convinced that a good deal could be done in the way of preventing or alleviating many of these troubles, but before this could be achieved with any hope of success an accurate diagnosis of after-effects of operations on the lungs must be established.

Diseases of the Nervous System.

Dr. F. W. MOTT delivered an interesting series of lectures on heredity before the Royal Institution. In the last lecture he considered heredity and insanity. He maintained that hereditary predisposition is the most important factor in the production of insanity, imbecility, and epilepsy, and emphasised that it is the *tendency* to nervous and mental disease, generally speaking, which is inherited. This may be termed the neuropathic taint. He believed that alcohol is a powerful coefficient, but not of itself the main cause, in the production of insanity, except in the rather infrequent cases of alcoholic dementia. He stated that certain types of insanity may be transmitted with greater frequency than others. This has been termed "similar heredity." The types are: periodic insanity (also termed "manic-depressive"), delusional insanity, and epilepsy. The general rule, however, is for a different type to appear. He further was of opinion that recurrent insanity is probably the most potent cause of insane inheritance, owing to the fact that patients are not segregated for any length of time. Facts tend to support the belief that the recurrent types of insanity during lucid intervals may breed a stock of potential lunatics and paupers.

Lectures of the Year.

The Lumleian lectures were delivered by Dr. MITCHELL BRUCE on a Clinical Study of Cardio-Vascular Degeneration. We have already referred to some of his remarks under the heading of Diseases of the Heart. Dr. A. F. HERTZ was the Goulstonian lecturer, selecting as his subject "The Sensibility of the Alimentary Canal in Health and Disease." He concluded that the alimentary canal from the commencement of the œsophagus to the junction of the rectum with the anal canal is completely insensitive to tactile stimulation. He also showed that the mucous membrane of the œsophagus and stomach is insensitive to stimulation by dilute hydrochloric acid and certain dilute organic acids. In discussing the causation of fulness and distension, Dr. HERTZ contended that fulness and distension are due to a slow increase in tension exerted from within on the circular muscular fibres of the stomach and intestine. The muscular coat is stretched and thus a form of muscular sense is constituted. In considering the causation of actual pain in the various parts of the intestinal canal he arrived at a similar conclusion—namely, that the only immediate cause of true visceral pain is tension; this is exerted on the muscular coat of hollow organs and on the fibrous capsule of solid organs. The Croonian lectures were delivered by Dr. HENRY HEAD on the work carried out by himself and Dr. GORDON HOLMES on Sensory Disturbances from Cerebral Lesions. The Bradshaw lecture was delivered by Dr. GRAHAM STEELL, the subject being "Intra-thoracic Tumours and Aneurysms in their Clinical Aspect."

We have referred to the Milroy lectures delivered by Dr. BOYCOTT on Ankylostoma Infection and to the Oliver-Sharpey lectures delivered by Dr. MACKENZIE on Heart Failure. Dr. C. THEODORE WILLIAMS was the Harveian orator, his subject being "Old and New Views on the Treatment of Consumption."

SURGERY.

The Vermiform Appendix.

The surgery of the abdomen still remains the most important branch of the science, and the appendix has not lost its place of interest in the eye of the surgeon. The question is still widely debated whether it is advisable for the surgeon to operate immediately on every case of appendicitis as soon as it is seen, or whether he may safely postpone the operation to the "interval," when it is generally agreed that the risk of operation is very much less. It is at least a curious fact that on this point there should be so much difference of opinion, and it is also curious that nearly all those surgeons who are opposed to immediate operation live in London. There is, indeed, much to be said on both sides, but the fulminating cases which lead rapidly to death cannot, as a rule, be distinguished from mild cases. Such cases can only be saved by an immediate operation; fortunately, they are rare, but they do occur, and sometimes when they are least expected. Dr. R. E. HALAHAN has reported a case which is extremely apposite. A man, 24 years of age, had some colicky pains, but he was able to do his work, though with returns of pain. A day's rest in bed was followed by so much improvement that he considered himself well, and it was only on persuasion that he travelled to Buenos Aires to visit the British Hospital. The journey took 17 hours, but during it he felt practically well. When he was admitted into the hospital his pulse was normal and his tongue was clean, but a slight attack of appendicitis was diagnosed, and as he lived far from medical aid he was advised to have the appendix removed at once, even though the attack appeared to be subsiding. When the appendix was exposed it was found to be gangrenous for most of its length, and it was bathed in foul pus. The patient recovered, but it can hardly be doubted that if the operation had been postponed the case would have ended fatally. Mr. H. J. PATERSON has drawn attention in the columns of THE LANCET to the hidden dangers of appendicitis, and Mr. E. M. CORNER has shown how impossible it is in many cases to diagnose even gross lesions of the appendix. A case of much interest was recorded by Dr. D. D. MALPAS, for it is an account of his own plight. Some 20 years ago he had an attack of appendicitis, from which he recovered slowly under rest. In October, 1910, for three or four days he had slight pains in the right iliac fossa which he ascribed to disease of the appendix, but as he was travelling at the time and as the pains passed off in a few days he did not pay much attention to them. A month later he felt ill, with a little iliac pain, but his temperature was subnormal and the pulse was only 68, and he was able to pay visits. Though the symptoms were in no way urgent, Dr. DE LOSTALOT, of Biarritz, decided to operate, and at the operation a large quantity of clear gelatinous fluid escaped and the appendix was found perforated and surrounded by a yellow gelatinous mass which was apparently the result of the secretion of mucus by a small polypoid adenoma growing in the interior of the appendix. In this case the mild symptoms present gave no suggestion of the severity of the lesion. Another striking case of rapid and severe perforating appendicitis in which relief from pain had occurred before operation was recorded by Dr. F. W. FORBES-ROSS and Dr. QUINTON CHALMERS. The relief from the previous acute pain was probably due to the perforation of the appendix and the relief of tension, for acute general peritonitis had already started when the operation was performed, against the decided opposition of the patient. Recovery followed the operation, at which a large perforation was found, and the abdomen contained much thin pus.

At one time it was thought that the concretions which are so often found in the appendix were foreign bodies, but after their true nature was pointed out very little attention has been paid to foreign bodies in this situation, and some surgeons seem to be sceptical as to their occurrence. Mr. L. A. BIDWELL has contributed a paper in which he has described a number of cases in which he has found foreign bodies in the appendix. In three cases he found a small shot, in one a small piece of glass; hairs were not uncommon, sometimes from toothbrushes, and sometimes from paint-brushes which had been sucked. The seeds of strawberries, raspberries, and figs often occurred; grape seeds have also been found, and in one case a thorn from a rose tree was present. Fragments from eggshells and pieces from an enamelled saucepan were also discovered. Mr. BIDWELL considers that a foreign body is to be found in about 20 per cent. of all cases of appendicitis if a careful search is made.

Mr. H. J. PATERSON has drawn attention to the fact that appendicitis is by no means rarely present, although no signs of the affection have manifested themselves, and, in fact, that very marked lesion of the appendix may be present although there have never been any signs of an attack. The most typical symptom present in such cases is pain following the taking of food; it is generally referred to the left of the middle line and sometimes it radiates towards the right iliac fossa. A pain of this character may be attributed to duodenal ulcer, and, in fact, the two lesions are often associated. In two-thirds of the cases in which Mr. PATERSON had operated for duodenal ulcer he had found appendicitis also. He suggested that the duodenal ulcer was the result of toxic absorption from the appendix or from the large intestine.

Intussusception of the Vermiform Appendix.

Intussusception of the vermiform appendix is decidedly rare. Mr. H. M. COOPER has reported a case of this condition which occurred in a boy 10 years old. The child had pain and sickness after a tea party, but these subsided after an aperient; the symptoms recurred, however, eight days later.

The child looked ill, and there was some tenderness in the right iliac fossa, but the bowels were open. The next day the pulse was 120 and he had much pain in the iliac fossa with vomiting. When the abdomen was opened by Mr. G. R. TURNER no appendix could be seen, but a mass was felt inside the cæcum. The cæcum was laid open and then it was seen that the appendix lay within the cæcum completely intussuscepted and gangrenous. It was removed and the child recovered.

Even rarer than intussusception in the child is the same condition in the adult. Mr. JOHN H. WATSON, of Burnley, has reported a case. The patient was a weaver, 18 years old. After lifting a heavy beam he felt a severe pain in the lower part of the abdomen; it was so severe as to prevent his resuming work for some hours, but he went to work the next day. The pain continued at intervals for a fortnight, when a distinct lump was felt, but the patient was kept under observation for four weeks, and then as the symptoms did not mend he was admitted into hospital. It was then evident that he was suffering from chronic obstruction, and an operation was undertaken. When the abdomen was opened a large intussusception was found involving the greater part of the colon. All but 4 inches could be reduced by manipulation, and it was found necessary to resect the part that could not be reduced. The divided ends were closed, a lateral anastomosis was performed, and perfect recovery followed. When the excised portion was examined it was found that the starting-point of the intussusception was the appendix, which had apparently become cystic previously.

Foreign Bodies in the Stomach.

Cases of the presence of foreign bodies in the stomach are not at all rare, but it is seldom that such a case as that recorded by Dr. A. H. VANDERVIT and Dr. H. P. MILLS is reported. A mulatto woman, aged 33 years, was admitted into an asylum for acute mania ending in dementia, and she died seven years later, but she had never had any signs of disease of the digestive system. She was often seen to pick up nails and pins, but was never seen to swallow any. At the necropsy the stomach stretched down to the left iliac fossa in the form of a long pouch, in which lay a mass of foreign bodies, weighing 5 lb., and consisting of more than 1400 nails, screws, thimbles, and other objects. Some other foreign bodies had made their way through the wall of the stomach and had caused the formation of adhesions.

Mr. WILFRED BALGARNIE has recorded a case in which a woman had suffered from severe pain and very troublesome vomiting for five years, and at last, as rest and milk diet gave no relief, the abdomen was opened and a pin was found sticking in the small omentum; it was removed, recovery followed, and there was no return of the symptoms. Dr. I. D. CHEPMELL has also given particulars of a very similar case which occurred in his practice in Paris more than 50 years ago. A baby, about 18 months old, screamed whenever he was touched, and it was evident that there was a specially tender spot in the upper part of the abdomen. A small incision was made over this spot and a needle and thread were removed, with complete relief of the pain. The relation of this case in THE LANCET reminded Dr. EDWARD LIDDON that 60 years ago, when he was clinical clerk to Dr. BENTLEY TODD and Dr. LIONEL BEALE was house surgeon, a woman was admitted complaining of obscure gastric symptoms, and a small painful spot was found in the epigastrium. A small incision allowed a small needle to be extracted, and a day or two later another was removed in the same way. During the ensuing four or five weeks 43 needles in all were removed. The patient was very neurotic, and it was not possible to discover exactly how the needles had reached the position in which they were found.

Rupture of Abdominal Viscera.

A very useful piece of work has been carried out by Mr. A. RENDLE SHORT, who has analysed the cases of serious abdominal injury received into the Bristol Royal Infirmary during the 10 years ending 1909. There were 30 cases in all, but cases brought in dead and most of those in a dying condition were excluded from the series. There were 8 cases of ruptured liver, and 2 of these recovered—one of these was not seen until two days after the injury and nothing was done, while in the other the rent was packed with 3¼ yards of gauze. There were 6 cases of ruptured intestine, and of these 4 recovered. In one case the jejunum was torn right across; the operation was performed six hours after the injury, and end-to-end anastomosis was done, with a successful result. There were 3 cases of ruptured spleen, and all of them proved fatal; in each of the cases the patient was not admitted until some hours after the operation, and in one case two days had elapsed. Of 6 cases of ruptured kidney 3 recovered; in one of the fatal cases the liver was also ruptured. There were 5 cases of ruptured bladder, and 1 recovered. The most striking fact shown by this series of cases is that in every case of rupture of an abdominal viscus in which the pulse-rate on admission exceeded 100 per minute the patient died within 24 hours. Increased rapidity of pulse is present in most cases of serious injury, but in one case of ruptured liver it fell from 84 to 62.

Rupture of the Large Intestine from Compressed Air.

The use of compressed air in machinery has led to a number of accidents in which the hose containing the jet of compressed air has for a joke been turned against a companion. In some of these the current of air has been directed to the mouth, but 16 cases have been collected in which the stream of air has been turned towards the anus, though the hose has not necessarily been placed in contact with the clothes, but the pressure of the air has been so great that it has forced the anal sphincter and caused rupture of the sigmoid flexure or other part of the large intestine; the rupture may be multiple. The mortality is very high, for 13 of the 16 cases died. Nine cases were not operated on, and they all died, but of the 7 cases in which a laparotomy was performed 3 recovered. It is clear that the abdomen should be opened at once. An important paper on this subject has been written by Dr. ANDREWS.

Complete Gastrectomy.

Cases in which the whole of the stomach has been removed by operation are still sufficiently rare to make the record of any case well worth noticing, and the after-history is especially interesting. Mr. B. G. A. MOYNIHAN in 1907 described in THE LANCET a case in which he had performed this operation, and now he has recorded the post-mortem examination. The patient lived three years and eight months after the operation. He was quite well till a year before death occurred, but then he began to show signs of profound anæmia. Under treatment he improved, but before long he began to fail again and grew weaker, with loss of appetite and occasional vomiting, and at last he died. At the necropsy the peritoneum was found to be free from disease, although there were some old fibrous adhesions between the beginning of the jejunum and the scar in the anterior abdominal wall. The lower end of the œsophagus was anastomosed to a loop of jejunum, which had been brought through the transverse mesocolon. At the seat of the anastomosis and for a short distance beyond the jejunum was dilated though the duodenum was of its normal size. As there was a complete absence of any recurrence of the new growth and he survived for four years the result may be considered very satisfactory.

Pancreatic Cyst.

Dr. D. I. CONNOLLY has reported a case of pancreatic cyst

in a girl 14 months old. She had never had a day's illness till three or four days before admission into hospital, but then the child refused food and diarrhœa set in. On examination of the abdomen there was resistance in the right hypochondrium. On the second day after admission slight jaundice appeared, the abdomen was more distended, and a definite rounded tumour could be made out. The jaundice deepened, and the child developed an irregular temperature mostly above 102° F., and on the tenth day after admission she died. At the necropsy a cyst was found arising from the head of the pancreas, of which only the tail was left. The condition is extremely rare and was well worth recording.

Intestinal Obstruction.

Mr. EDMUND OWEN has described a case of intestinal obstruction caused by gall-stones. The patient was a lady, aged 60 years, who was suffering from violent abdominal pain and uncontrollable vomiting of one day's duration. She acknowledged that for about ten years she had suffered from sharp attacks of pain in the upper part of the abdomen recurring about every second week and lasting 24 hours, though in one attack the duration had been seven weeks. There was some resistance in the right iliac fossa and a tentative diagnosis of intestinal obstruction due to cancer of the cæcum was made. It was resolved to open the abdomen in the right iliac fossa, and when this was done there was found a piece of small intestine with greatly thickened wall, and in the interior there was a hard mass evidently consisting of gall-stones. The mass was firmly wedged in the bowel, but by a little coaxing the stones were pushed upwards into the thickened part of the intestine and were easily removed through a longitudinal incision. The mass consisted of two large gall-stones. The edges of the wound were stitched together and covered in with a row of Lembert's sutures of fine silk. The patient soon improved and at the end of a week the wound was healed, though a small localised collection of pus formed a few days later. Gall-stones are a rare cause of intestinal obstruction, though by now many cases have been put on record.

Mr. E. A. WRIGHT has reported a case of intestinal obstruction due to hair. The patient, a girl aged 21 years, complained of abdominal pain and vomiting, and she stated that the bowels had not acted for several days. On examination a round, hard lump was found in the right epigastric region about the size of an orange, and per rectum a hard moveable mass could be felt. She said she had suffered from constipation for some years. As no marked improvement occurred, though the vomiting was temporarily arrested, the abdomen was opened and the lump was explored by the hand. It was about 3 inches in length, and it was found to block the small intestine completely. The bowel was opened by a small incision and the obstructing mass was removed; the other lump was found to be in the stomach, and by incision in the anterior wall the mass was removed with some difficulty. It was found to consist of a mass of matted hair weighing nearly 3 pounds. Temporary improvement followed, but soon severe diarrhœa occurred and the patient died from exhaustion six days after the operation. Masses of hair in the stomach are rare, and more rarely still is intestinal obstruction produced by a mass of hair.

The Functions of the Omentum.

Dr. D. P. DALBRECK WILKIE has investigated the functions and surgical uses of the omentum. He has proved that it possesses a very remarkable capacity for taking up any solid particles left in the peritoneal cavity, and therefore in acute peritonitis the bacteria tend to adhere to the omentum, which forms a very favourable battle-ground for the phagocytes in the fight between the host and the germs. There is no evidence that the omentum has any power of intelligent movement, and experiments give some ground for believing that in cases of strangulation of the bowel, where the vitality of a portion of it is endangered and a resection of the doubtful part is deemed inadvisable on account of the general condition of the patient, the omentum may with benefit be wrapped round the loop of gut.

Excision of Bowel for Tuberculosis.

Mr. ARTHUR E. BARKER has recorded two cases of extensive excision of the colon and ileum for tuberculous disease, and has described very fully the principles and details of the operation. So much depends on special points in the technique that such a description is of great value. In the first case the patient was a woman aged 40 years, and she had suffered from a fæcal fistula in the right groin for a year. The cæcum, with 4 inches of colon and 27 inches of the ileum, were removed, and the operation lasted two and a half hours, spinal analgesia being employed. The patient recovered completely, and three years after the operation she was plump and well. In the second case a soldier, aged 32, had suffered from signs of chronic intermittent obstruction and wasting. A large tuberculous mass of bowel was removed in two operations; the wounds healed without a flaw and the patient was perfectly well when last seen.

Evagination of Meckel's Diverticulum.

Mr. J. W. THOMSON has described a case of evagination of Meckel's diverticulum. The patient was a baby, 13 months old, with a history that after separation of the cord an opening was noticed at the umbilicus, from which occasionally fæcal matter was passed. After straining much eversion occurred with persistent vomiting. As reduction was out of the question a circular incision was made round the opening and the abdomen was opened. It was found that the fistula was due to a Meckel's diverticulum. The everted diverticulum and the adjoining portion of the intestine were excised and an end-to-end anastomosis was performed. The child seemed to improve for a time but died suddenly ten hours afterwards in convulsions.

Iodine in the Preparation of the Skin for Operation.

Within the last few years iodine as an antiseptic for preparing the skin of the patient for operation has been widely employed, and sufficient time has now elapsed to enable those who have employed it to express a decided opinion as to its value. Its modern use commenced in Germany, and it was first advocated in this country by Mr. J. LIONEL STRETTON, and its use has been advocated by many other writers. The strength employed varies, some using it even as strong as 10 per cent., but this seems unnecessarily strong, and a strength of that of the tincture of the British Pharmacopœia—that is to say, 2½ per cent.—gives very satisfactory results. It is applied by most surgeons a few hours before the operation, and again on the operating table, but in emergency cases a single application suffices.

Section of the Posterior Roots of the Spinal Nerves.

Professor FÖRSTER, of Breslau, who has done much work on spinal surgery, and Mr. E. W. HEY GROVES have contributed papers on the value of dividing the posterior nerve root in certain conditions. Some of the earlier operations were performed for the relief of intense pain, but in only a small minority was the operation successful in its results, and the explanation given by Mr. GROVES is that in the unsuccessful cases the pain was psychical in origin, and therefore it is clear that division of the sensory roots could not do much good. Greater success, however, has been obtained in the treatment of the crises of locomotor ataxia, and in some cases the improvement has been so great that the patient has been able to return to his occupation. The suggestion of this method of treatment came from Professor

FÖRSTER, and he performed the first operation in 1908; also in certain cases of spastic paralysis associated with disease of the pyramidal tract division of the posterior nerve roots has been employed, and with remarkable success in suitable instances. Explanation of this benefit is not clear; at all events, spasm is in all these cases definitely relieved, and if the pyramidal tract is still fairly undamaged great improvement in motility follows.

Cleft Palate.

For several years there has been much discussion as to which operation for cleft palate is to be preferred. The majority of surgeons employ Langenbeck's operation or some modification of it; while a few, headed by Mr. ARBUTHNOT LANE, are in favour of employing the "flap method." In the Surgical Section of the Royal Society of Medicine a special debate was held on the subject, and it was also discussed in the surgical section of the annual meeting of the British Medical Association in Birmingham. The two methods must be judged by their results, age and other factors being duly considered. Sufficient material for a verdict must now be accumulating. Mr. R. W. MURRAY has contributed a valuable paper in which he has detailed the history of the operation and described fully its technique.

Quinine for the Prevention of Pain after Amputation.

Dr. V. PLETH and Dr. V. W. PLETH have described the use of quinine after amputations. A ½ per cent. solution of the bi-sulphate of quinine is employed, and when the amputation is completed, the solution is injected into and round the main nerves, and some is also injected into the tissues covering the stump. No post-operative pain is felt. The solution is non-toxic, it can easily be sterilised by boiling, it is inexpensive, and no harm seems to follow its use.

Operation for Stone in Male Bladder.

Mr. WILLIAM F. HASLAM, of Birmingham, delivered the Lettsomian lectures before the Medical Society of London on the operation for stone in the bladder of the male, and in these lectures he gave an historical account, which we believe has never been surpassed, of operations for stone from the earliest times to the present. He also described and analysed the answers he had obtained to a series of questions which he had sent to surgeons attached to the larger hospitals as to the methods employed by them, and from these answers he was able to deduce several interesting conclusions as to the present practice. It may be mentioned that for the removal of a stone from the male bladder after puberty, when there is no evidence of prostatic enlargement, the majority of the surgeons preferred suprapubic lithotomy to lithotrity.

Transperitoneal Cystotomy.

Mr. SETON PRINGLE has described an important case in which he removed a large papilloma from the bladder of a man 40 years old. He did it through the peritoneum and the result was very satisfactory. The operation of transperitoneal cystotomy was apparently first performed by HARRINGTON in 1893 and he was followed by RICHARDSON in 1895. The mortality appears to be only a little over 4 per cent. and it seems to be indubitable that the operation gives much better access to the growth than the extraperitoneal method, and it is probable that the risk of recurrence is greatly reduced, though as to this it is as yet somewhat early to speak. Mr. PRINGLE has described the mode of operation and has discussed the comparative merits of the ordinary extraperitoneal operation and the newer procedure.

Torsion of the Testis.

Cases of torsion of the testis are not very common. Dr. WILFRED ATTLEE has recorded a case which occurred in a boy, aged 16½ years, who felt pain in the right testis as he was kicking a football. The pain steadily increased and before long he felt faint and vomited twice. He was seen three hours after the first injury and it was readily recognised that the testis had become twisted, and from the history of the case Dr. ATTLEE was inclined to think that the rotation was in the direction of the hands of a clock if one looked upwards towards the patient's head. Manipulation proved this to be correct, for after turning the testis back to the extent of a right angle the epididymis rotated with a jerk back to its normal position and the pain immediately disappeared. It is not always possible to reduce so easily a testis which has undergone torsion of the cord.

Ureteral Grafts.

Dr. A. CHIASSERINI, of Rome, has contributed an interesting article on ureteral grafts, and he describes some of the many experiments he has been making to discover the best material for forming grafts. He has employed pieces of vein and artery to replace portions of the ureter removed, and he came to the conclusion that there was a possibility of the vessel introduced between the two utereral ends becoming firmly united, but the transplanted piece tends to contract so as to draw the two ureteral ends together, and the lumen of the graft becomes nearly obliterated, therefore he is compelled to think that vascular grafts are unsuited for replacing portions of the ureter.

Direct Gastroscopy.

Several recent improvements have been made in the direct gastroscope, and there seems little doubt that by the use of a direct vision gastroscope passed under visual observation there is the minimum risk of doing any harm. Dr. G. WILLIAM HILL gave at the Birmingham meeting of the British Medical Association an interesting demonstration of the use of a gastroscope which he had devised.

Myositis Ossificans Traumatica.

Mr. RICKMAN J. GODLEE and Mr. G. H. MAKINS have each contributed an interesting paper on traumatic ossifying myositis. In Mr. GODLEE'S paper he describes a case in which a youth, aged 18 years, was kicked on the front of the thigh at football. Swelling occurred and kept him in bed for one day. A hard oval enlargement formed on the front of the lower half of the thigh, and two months after the accident he had to give up football on account of pain and stiffness. A skiagram taken a little later showed a definite shadow. It was resolved, in consultation with the late Mr. H. H. CLUTTON, not to perform any operation, and in six months the patient had no further trouble, though still the skiagram showed a small flake of bone. Mr. MAKINS described three cases, in one of which the late Mr. CLUTTON removed a bony mass, but in the other two no operation was performed. They all did well. It seems clear that operative treatment should only be considered advisable when the process has manifestly come to a definite standstill and yet the patient suffers from functional disability.

The Treatment of Syphilis.

A large number of contributions have been made during the year on the subject of the treatment of syphilis, especially bearing on the question of the use of salvarsan. It is obvious that different opinions exist as to the merits of this drug, and more prolonged experience is needed before authoritative statements can be made as to its real range of value and its different methods of administration.

Lymphangioplasty.

The operation of lymphangioplasty is still in its infancy, and surgical opinion has not been yet fully formed with regard to it. Therefore it is desirable that cases of the operation should be published whether successful or not. Mr. R. ATKINSON STONEY and Dr. T. GILMAN MOORHEAD have reported an interesting case in which Sampson Handley's operation of lymphangioplasty was employed for ascites, with disappearance of the fluid. The patient was a man, 20 years old, who was without history of any previous

illness beyond an attack of measles in childhood. The present illness commenced six months previous to admission, and began with pain in the chest and abdomen following exposure to severe cold. Three weeks before admission the abdominal swelling was first noticed. There was much free fluid in the abdomen and a diagnosis of cirrhosis of the liver was made. 175 ounces of serous fluid were removed by tapping. The abdomen, however, soon filled again, but just as it was decided to tap once more the fluid began to disappear and the patient returned home. As the fluid quickly re-accumulated he was re-admitted three months later, and the abdomen was tapped on many occasions, but the fluid always reappeared. It was resolved therefore to operate, and silk stitches were placed in the left iliac fossa from above the crest of the ilium to below Poupart's ligament, four or five stitches being made, alternately in and outside the peritoneal cavity. Similar threads were placed in the anterior abdominal wall. There was no rise of temperature after the operation and the patient did well. After the operation some ascitic fluid collected, but more slowly than before; still there was sufficient to warrant the abdomen being tapped once six weeks after the operation. The patient was able to return home and to take part in the ordinary work of the farm, and there was practically no fluid in the abdomen, but he suffered somewhat from shortness of breath.

OBSTETRICS AND GYNÆCOLOGY.

The Follicle Cells in the Ovary.

There is still, although a large amount of work has been done upon this subject, a good deal of divergence of opinion upon the origin of the follicle cells of the ovary or the stratum granulosum. During the past year Dr. A. LOUISE MCILROY has published the results of her researches on this point, and she has shown pretty conclusively that the follicle cells are derived from the primordial germ cells or the oögonia, and have a similar origin to that of the ova. The oögonia form two divisions according to their ultimate functions; the cells of one group go through a complicated process of maturation, ultimately becoming oöcytes or ova within a Graafian follicle. The other group of cells fulfil three functions; one set remain as reserve cells, serving as pabulum for the growing oöcytes, the second set developing further surround the oöcytes and form the stratum granulosum. The remaining cells go to form, according to Miss MCILROY, the interstitial cells of the ovary, which are concerned with its internal secretion. The follicle cells therefore are derived from the oögonia and not from the stroma.

The Uterine Mucosa in Menstruation and Pregnancy: the Action of the Chorionic Cells and the Function of the Decidua.

The changes which occur in the mucous membrane of the uterus both during menstruation and pregnancy are now well known. In the pre-menstrual phase the mucosa is thickened, chiefly by a free œdematous escape into the stroma, with some escape of blood in the proximity of the vessels. This change is usually described as dependent upon congestion and increased intra-vascular pressure. At the June meeting of the Obstetrical and Gynæcological Section of the Royal Society of Medicine Dr. JAMES YOUNG gave a very interesting demonstration of these changes and of what he considered their correct explanation. He maintains that the changes seen in the pre-menstrual mucosa are amenable to only one explanation—namely, that there has been a widespread imbibition of fluid from the blood-vessels in response to some change in the stroma. He believes that this change is to be found in some alteration in the tissue colloids of the stroma as a result of the stimulus of the substance (probably ovarian) which is responsible for the menstrual changes. He further holds that the escape of the blood occurs in the same way as that of the œdema fluid, and that the whole mucosa may be regarded as a potential blood sponge. He maintains that in cases of tubal pregnancy examination of the tubal wall shows that there are occurring protoplasmic changes which lead to an increase in the affinity for fluid of the tissues. These changes explain the widespread œdema and the escape of the blood rather than any direct erosion and destruction of the vessel walls. Changes of the same kind, he believes, explain the marked formation of sinuses in the wall of the pregnant tube, while the same changes can be demonstrated on a study of cases of chorion epithelioma. The ultimate cause of these changes is to be found in the elaboration by the chorionic tissues of some bio-chemical elements, which spread into further and further levels of the maternal tissues. In fact, except in the decidually altered mucosa there is no attempt at any localisation of these changes. In these considerations Dr. YOUNG sees an explanation of the decidua. Were it not for the decidual reaction the uterine mucosa would in response to the ever-widening spread of the extra chorionic influence be torn up by the œdema, blood, and increasing sinuses. Once the decidual change is definitely established these changes are localised and inhibited. The theory is an ingenious one and worthy of careful consideration. He has set out his views fully in his work on Reproduction recently reviewed in these columns.[1]

The Theory of Enzygotic (Mono-chorionic) Twins.

Before the Edinburgh Obstetrical Society, Dr. D. BERRY HART read an interesting paper upon this obscure subject. By enzygotic twins were understood twins developed from one zygote (fertilised ovum). The most striking instance of these was identical twins, where the similarity was complete, even to the finger-prints (Wilder). It was further noteworthy that all twins derived from one zygote were of the same sex. In considering the causation Dr. HART advanced the theory that one must go back to the zygote itself, and looking on it as containing the determinants for the organs of the developed infant he suggested that in enzygotic twins there might be a complete or incomplete doubling of the determinants, and then a complete segregation of these into two groups. In identical twins the doubling and segregation were complete; in the other deformities the doubling was incomplete, and segregation thus gave a complete twin and an incomplete one. Thus if an acephalic twin was present along with a normally developed one the determinants for the head were not doubled, and thus the acephalic result on one side.

The Nature of Hæmatocolpos Fluid.

A very interesting contribution to our knowledge of this matter was made during the past year by Dr. W. BLAIR BELL. In an examination of the fluid from two cases of hæmatocolpos he found that neither fibrin ferment nor fibrinogen was to be detected, and he concludes that this is the cause of the non-coagulability of menstrual blood, which will clot readily if normal blood be added to it. A considerable quantity of lactic acid was present although the fluid was sterile and the vaginal bacillus could not be found. The actual mode of origin of the lactic acid is therefore still unknown, although it is probably derived from the decomposition of mucin by enzymes without the intervention of bacteria. The chemical examination of this fluid also corroborated Dr. BLAIR BELL'S views as to the amount of calcium contained in the uterine excretion during menstruation. The paper was published in THE LANCET.[2]

[1] THE LANCET, Dec. 16th, 1911, p. 1706.
[2] THE LANCET, May 13th, 1911, p. 1269.

The Modern Treatment of Contracted Pelves.

The important question as to the position in obstetric medicine which operations for widening the pelvis will ultimately hold is still under discussion, and it cannot be said that during the past year much progress has been made in this direction. The operation of pubiotomy meets with scant approval in this country although various obstetricians still continue to practise it in a certain limited class of case, and it has an enthusiastic supporter in Dr. E. HASTINGS TWEEDY. At a meeting of the Obstetrical Section of the Royal Academy of Medicine in Ireland he showed six cases of pubiotomy with skiagrams of the pelves. He had performed the operation in nine cases; all the patients walked without limping or discomfort, and all had made uneventful recoveries. Dr. TWEEDY said that the operation was not only successful but it was the easiest operation one could perform, and any well-informed modern general practitioner who could attend a midwifery case in a proper manner was competent to perform it. The trouble that followed it in other cases was due, not to the pubiotomy, but to tearing of the cervix or vagina. No doubt in a certain small class of cases the operation is easy and successful, but when we recall the complications and difficulties which may attend it, we hope that general practitioners, unless their opportunities for obstetric practice have been distinctly special, will not be tempted by the success attending Dr. TWEEDY'S practice to perform this operation in unsuitable surroundings. The question of the modern treatment of cases of labour in contracted pelves was also discussed by Sir HALLIDAY CROOM before the Edinburgh Obstetrical Society. He pointed out that with the the disappearance of puerperal septicæmia in lying-in hospitals confidence in the powers of nature had returned, and labour in a narrow pelvis was allowed now to complete itself spontaneously in a large proportion of the cases. This method of delivery was very successful for the mother and the child. He thought the great difficulty of treatment lay in pelves with a conjugate diameter between 3 and 3¼ inches. In these cases the choice was between the induction of premature labour, high forceps, and one of the operations for enlarging the pelvis. The first was unfortunately accompanied by a very considerable infantile mortality. In high forceps operations in narrow pelves the mortality and morbidity to the mothers were considerable, and the fœtal mortality was between 20 and 40 per cent. The cases in which operations for enlarging the pelvis were useful were those of moderate contraction of the pelvis in which, after ample time had been given to the head to enter the brim, it still remained unengaged. He thought that no high forceps operation should be seriously undertaken unless the operator was prepared to undertake one of these cutting operations if necessary.

Asphyxia Neonatorum.

At the British Medical Association meeting at Birmingham the important question of the Pathology and Treatment of Asphyxia Neonatorum was discussed, the debate being opened by Sir FRANCIS CHAMPNEYS. He recognised two stages of asphyxia—viz., (1) apoplectic, where the child is livid, the muscular tone is not lost, and it responds to reflex stimulation; and (2) syncopal, where the child is pale and flabby, muscular tone is lost, and there is no response to any reflex. These latter are the serious cases and may be due to pressure upon the brain. With regard to treatment, Sir FRANCIS CHAMPNEYS emphasised the important difference that exists between "blue" and "white" asphyxia. He discussed the subject under the following headings: (1) The removal of all foreign bodies from the respiratory tract; (2) means to secure the patency of the air-passages; (3) stimulation of the circulation; and (4) means to procure thorough ventilation of the lungs. To effect the first object he recommended that the child should be placed on its back, the head extended, and the trachea gently stroked upwards, a finger being placed at the orifice of the trachea. Patency of the air-passages may be secured by the passage of a catheter. The circulation may be stimulated by pressure over the præcordium. The importance of friction over the spine was also emphasised. Ventilation of the lungs might be procured by the time-honoured methods of Silvester or Schultze. The speaker asked the members to note that the normal position of rest in the child's thorax was one of expiration. Schultze's method had the disadvantage of possibly causing internal lesions, but it certainly might procure patency of the air-passages when other methods failed. Furthermore, it procured descent of the diaphragm as in normal respiration. The method should be carried out properly if at all, and Sir FRANCIS CHAMPNEYS insisted upon the importance of simply steadying the child's body and *not* grasping it. Of other methods, reference was made to insufflation and rhythmic tongue traction. In conclusion, the speaker urged his hearers: (1) Never to hurry; (2) to employ sound judgment as to whether the case is one of pale asphyxia or true death; and (3) to persist in treatment over a sufficient length of time. In the discussion which followed the majority of the speakers were not in favour of Schultze's method.

Operative Treatment of Cancer of the Cervix Uteri.

The removal of the uterus in such cases by the extended abdominal operation or Wertheim's hysterectomy has undoubtedly made great progress during the last 12 months, and gynæcologists are becoming more and more convinced that all cases of cancer of the cervix, whether early or late, should be treated by an extended operation if good results are to be obtained as regards freedom from recurrence. It is true that some authorities still maintain that such an extensive removal can be carried out equally well and more safely by the vagina, but they are few in number and are not, we think, likely to gain more adherents in the future. Dr. ARCHIBALD LEITCH has published recently the results of some researches on the Pathological Bases of Operations for Cancer of the Uterus, and his work certainly tends to confirm the position taken up by those surgeons who maintain that the extended operation should be performed in all cases and preferably by the abdomen. He pointed out that statistics had shown that 55 per cent. of cases were free from visceral or glandular metastases at the time of death, but these figures only applied to dissemination outside the pelvic cavity. Three lymphatic tracts were described: (1) to the inter-iliac glands; (2) to glands along branches of the internal iliac artery; and (3) to para-rectal glands. The last set were very rarely affected, in spite of the supposed frequency of invasion of the utero-sacral ligaments. The inter-iliac glands were the most important, and were in communication with another set on the outside of the common iliac artery. Both sets should be removed when there was evidence of glandular infection Along the course of the ureter, through the broad ligament, lymphatic infection of the cellular tissue occurred, and by fibrotic contraction, as well as by direct invasion of its walls, the ureter became constricted, and hydronephrosis ensued in no less than 75 per cent. of all cases. Invasion of the vagina by cancer of the cervix occurred in all but 2·5 per cent. of cases; this was explained by the rich anastomosis of lymphatics between the cervix and upper segment of the vagina. Thus the excision of a wide cuff of vagina in Wertheim's operation removed a highly dangerous tissue. The bladder was involved in two-thirds of post-mortem cases, and the rectum in one-quarter of the cases; while vesical perforation occurred in 44 per cent., and rectal perforation in 16 per cent. of cases.

One of the most important publications during the past year has been WERTHEIM'S results in his first 500 cases operated upon for cancer of the cervix uteri. The 500 cases which form the subject of the report correspond to 1096 cases of cancer seen; of these in 519 the disease was too advanced to be operated upon, 55 refused operation, and in 22 vaginal hysterectomy was performed on account of excessive fatness or age, giving an operability rate of 50 per cent. The average mortality rate was 18·6 per cent., varying from 30 per cent. in the first hundred to 9 per cent. in the fourth. In 250 of the cases five years or more have elapsed since the operation, and of these 63 died from the operation, in 78 recurrence has occurred, and 106 are free from recurrence. In determining the absolute percentage of cures among the 250 cases, 3 who died from intercurrent disease and 28 who refused the operation are deducted, leaving 576 patients, of whom 106 are alive and well at the end of five years, or an absolute percentage of cures of 18·4 per cent. and a percentage of cure of those operated upon of 42·9 per cent. In conclusion, WERTHEIM argues very strongly in favour of the extended operation, although he points out that STAUDE has had very excellent results by the vaginal operation—namely, an operation-rate of 72·3 per cent. and an absolute cure-rate of 23 per cent. It is very probable that the immediate death-rate from shock may be considerably lessened by the more extended use of infusion anæsthesia, a method which answers exceedingly well in these women, who are often much debilitated by loss of blood.

The Dangers of Fibroid Tumours

The actual danger entailed to the life of a patient by the possession of a fibroid tumour of the uterus is one of the problems in gynæcology which is yet waiting a solution. That small fibroids can be removed with a minimal amount of risk is now a proved fact, but before we can lay down the dictum that all fibroids should therefore be removed when still small, it is necessary to prove that the risk to any woman the possessor of a fibroid tumour is, or will be in the future, greater than the 1 or 2 per cent. which at present represents the mortality of hysterectomy under the best conditions. It is, of course, an easy matter to collect a certain number of cases of death directly due to the presence of such a tumour, but what proportion these deaths bear to the total number of women who suffer from fibromyomata of the uterus, and how many of these who are at present operated upon to escape future trouble would ever suffer any inconvenience at all, is a question to which no certain answer has as yet been given. The problem is one which can only be answered by the careful collection of a number of cases observed over a sufficient length of time, and the results must be calculated by approved mathematical methods, when such a series of figures is available, before a certain and correct conclusion can be come to. It is, of course, an undoubted fact that a certain percentage of these tumours undoubtedly do cause dangerous symptoms, and may even cause the death of the patient. During the past year Dr. A. H. N. LEWERS has published the notes of three such cases in our columns. In the first of these cases the patient died from hæmorrhage, in the second from pulmonary embolism, and in the third from sudden collapse and heart failure. It would have been interesting if Dr. LEWERS had been able to state whether these were the only spontaneous deaths from fibroid tumours of the uterus which had come under his cognisance, and what numerical relation they bore to the total number of cases of fibroids he had seen. It is only by the accumulation of figures of this kind that we shall ever learn the truth. Unfortunately, or fortunately as it possibly may be for the patients, it is so general a custom at the present time to remove all fibroids which have attained any large size that there will be but little opportunity of determining the truth as regards this question in the future, since the number of patients with fibroids who will be allowed to attain any advanced age without some one having operated upon them will be very small. In the meantime the habit of stating that such tumours relatively frequently produce severe symptoms, without the production of any trustworthy statistical evidence in support of such statements, is much to be deprecated, and will certainly not aid us in our endeavour to attain a more complete knowledge of this subject.

The Suprapubic Transverse Fascial Incision in Gynæcology.

This incision formed the subject of a paper by Dr. THOMAS WILSON, published in THE LANCET of May 6th of this year. He has used it in some 120 operations on the pelvic organs, and is impressed with its advantages. The method advocated by PFANNENTSTIEL is employed—namely, the division of the skin and fascia of the recti muscles transversely, and after the recti have been pulled apart the division of the transversalis fascia and peritoneum vertically. The general direction of the fibres of the fascia forming the anterior layer of the sheath of the recti is transverse, and this incision therefore really divides these fibres longitudinally, while the usual median or extra median incision divides them transversely. The incision heals well, and the occurrence of hernia is very rare. In 198 cases PFANNENSTIEL found only one case of hernia, while KROENIG in 127 cases observed four cases of hernia—3·1 per cent.—two of them occurring after the wound had healed by first intention. The lessened risk of hernia appears to be the most certain benefit to the patient from the use of this incision, while it affords, according to Dr. WILSON, easier access and more ample room than the longitudinal incision, and finally the cosmetic effect may be of some value, the scar being less perceptible.

The Present Position of Vaginal Operations in Relation to the Uterus and its Adnexa.

Professor PAUL STRASSMANN opened a discussion upon this subject at the British Medical Association meeting at Birmingham. He thought that abdominal section for disease of the pelvic viscera had certain well-defined disadvantages; thus peritonitis was more frequent than after a vaginal operation, and was promoted by the interference with the intestines and to some extent by the Trendelenburg position. A further argument against it was the risk of hernia. Fibromyomata should only be removed by the abdominal route when they were the size of the head of a fœtus. Carcinoma of the cervix should in general be treated by the abdomen, but carcinoma corporis uteri by the vagina. In all cases where appendicitis was suspected as a complication laparotomy should be selected. The advantages which the vaginal route afforded were less shock and a smaller mortality, convalescence was more rapid, and after-effects due to adhesions or hernia were avoided. The disadvantages which had been urged against it were lack of sufficient room, the danger of injuries to the bladder and ureters, the failure of primary union in the vaginal cicatrix, and the production of a weak scar and possibly hernia. Professor STRASSMANN thought that early tubal gestations, hæmatoceles, inflammatory exudates, and displacements of the uterus were best treated by the vaginal route. A very full discussion followed the reading of this paper, and the general opinion among those who took part in it was that, except in well-defined cases, abdominal section was, on the whole, the operation most likely to be required, as in most instances offering the greatest benefit to the patient.

OPHTHALMOLOGY.

This year is distinguished from all previous years in that the Nobel Prize for Medicine has been awarded to an ophthalmologist. We cannot number the prize-winner amongst our own compatriots, but we can none the less whole-heartedly approve of the selection which has been made. Dr. GULLSTRAND, of Upsala, is known to ophthalmologists all over the world for his excellent work on the physiological optics and the applied optics of ophthalmology. In the former branch his recent revision, in conjunction with the late Dr. NAGEL and Dr. VON KRIES, of HELMHOLTZ'S treatise on "Physiological Optics" has brought his attainments prominently into the foreground. In the latter, perhaps, his most noteworthy achievement is to be found in the lenses which have been constructed under his supervision at Jena for cataract glasses. These will probably in time become cheaper to construct, and are likely to replace the ordinary heavy lenses which aphakic patients are at present doomed to wear. The award of the prize to one who has made his reputation chiefly by his devotion to optical problems should do much to encourage the study of an aspect of ophthalmology which is unfortunately much neglected in this country.

Publications.

The most noteworthy addition to the ophthalmic surgeon's library during the past year is Dr. J. E. WEEKS'S treatise on "Diseases of the Eye." Of the "International System of Ophthalmic Practice" two volumes have been published, one on therapeutics, already reviewed in our columns, and one on pathology, by Mr. E. TREACHER COLLINS and Mr. M. S. MAYOU. These volumes show a high standard of aim and attainment, and fill gaps in the literature of the subject. Professor RÖMER'S systematic lectures are also worthy of special mention, though for the most part adapted only to the requirements of advanced students, and then only to such as are familiar with German. The periodical literature of ophthalmology, maintaining its high average standard, contains a vast amount of valuable material, of which some of the more important topics may be suitably discussed with greater detail.

Cataract.

The interest awakened in the advocacy of the intracapsular method of cataract extraction by Lieutenant-Colonel HENRY SMITH, of Amritsar (late of Jullundur), shows no signs of abatement. In England a discussion at the meeting of the British Medical Association at Birmingham exemplified the warmth of the advocacy that is forthcoming in the remarks of Lieutenant-Colonel SMITH himself and of his pupils, Captain A. E. J. LISTER and Miss AMY SHEPPARD, and also, it must be admitted, the coolness of its reception. Ophthalmic surgeons in England are conservative in their methods, and perhaps Lieutenant-Colonel SMITH and his pupils do not sufficiently realise the difference in the conditions which obtain here as compared with India. Suffice it to say that few, if any, English surgeons have adopted the method. It has been viewed more favourably in America, where Dr. GREEN and Dr. VAIL, both of whom have worked under Lieutenant-Colonel SMITH'S supervision at Jullundur, have been the pioneers. The majority of American phthalmologists have not, however, been convinced, and in India itself the operation appears to have gained few adherents beyond the immediate sphere of Lieutenant-Colonel SMITH'S influence.

Glaucoma.

The debt which ophthalmology owes to Anglo-Indian surgeons has been greatly increased during the past year or two by the persevering efforts of Lieutenant-Colonel H. HERBERT and Major R. H. ELLIOT to devise a satisfactory operation for the relief of chronic glaucoma. Iridectomy, introduced by VON GRAEFE on what have since been shown to be inaccurate data, has proved remarkably successful in acute glaucoma The use of new and almost untried methods for this purpose as reported recently, is therefore to be deprecated. It is quite otherwise with regard to chronic glaucoma. To say the least, iridectomy often fails to relieve increased tension permanently in these cases. An effectual operation is urgently needed. Lieutenant-Colonel HERBERT'S early attempts to obtain a cystoid cicatrix were inherently objectionable on surgical grounds and proved too uncertain to be of value. His "wedge" operation had technical difficulties which prevented its general employment, and it is doubtful if it would have succeeded in other hands in bringing about the desired result. Meanwhile HEINE'S cyclodialysis was brought forward, but it, too, has not fulfilled the hope with which it was greeted. Reunion between the ciliary body and sclerotic occurs and frustrates the object of the operation. Combined with trephining of the sclerotic, it has been advocated by Dr. A. FREELAND FERGUS. For a considerable time Dr. LAGRANGE'S modification of ordinary glaucoma iridectomy, consisting of the excision of a small portion of the anterior lip of the scleral wound, held the field as the most satisfactory method of obtaining a filtering cicatrix—the object which all these operations with the exception of cyclodialysis aim at. Lieutenant-Colonel HERBERT, however, continued in England the researches commenced in Bombay. His small flap sclerotomy bids fair to meet the requirements of the case. During the past year a number of English surgeons have published the results of their experience of the method, and on the whole they have been favourable. The technique of the operation has been simplified by the use of "twin" scissors, devised by Mr. N. BISHOP HARMAN, but Lieutenant-Colonel HERBERT states that his results have not been so satisfactory when this instrument has been used. Time alone can show what modifications in technique may be desirable, but the operation has already proved that it merits extended trial. It appears to be little known yet on the continent and in America.

Major ELLIOT'S trephining operation is designed to meet the same requirement—the establishment of a permanently filtering cicatrix. He reflects a large flap of conjunctiva, burrowing somewhat into the cornea at the limbus. A disc of sclerotic is then removed so that an opening is made into the anterior chamber near the angle. The opening is then covered by the conjunctival flap. Those who have employed this method have been favourably impressed by the results.

HERBERT'S and ELLIOT'S operations go a very long way to prove the efficacy of a filtering cicatrix for the relief of chronic glaucoma. Whether either ultimately proves the ideal method of bringing about the desired result or not, the present year is signalised by an important step forward, and the credit of the advance is due to the untiring efforts of British ophthalmologists.

The Treatment of Lacrymal Obstruction.

The revolt against the use of probes and styles in the treatment of severe dacryocystitis and lacrymal obstruction has gathered strength of recent years, and probably the majority of surgeons would now endorse the opinion of FUCHS that a permanent result from probing is one of the rarest exceptions. Extirpation of the lacrymal sac efficiently carried out is generally regarded as an eminently satisfactory procedure, followed by the greatest possible relief of the distressing symptoms. The operation, however, is often performed uncompletely—epiphora persists, even in the absence of unusual stimulation, such as cold winds, foreign bodies in the eye, and so on; and faulty operations of this kind are responsible for that relatively small number of surgeons who advocate other methods. TÖRÖK, of New York, for example,

states that he has "never experienced the cessation of the tearing six or eight months after the operation," and has had to resort to total extirpation of the lacrymal gland. He has never seen satisfactory results either from extirpation of the accessory lacrymal gland or from partial extirpation of the main gland. Dissatisfaction with the results of removal of the lacrymal sac has usually led to attempts at securing permanent drainage into the nose, a reversion to the methods of CELSUS, PAULUS of Ægineta, and SAINT YVES. LAGRANGE, AUBARET, and HESS recommend perforation of the lacrymal bone. Rhinologists have attempted to secure better results by attacking the disease by way of the nose. POLYAK removes the anterior third of the inferior turbinated bone and probes the duct from below. KILLIAN adopts the same procedure, but also removes the whole of the inner wall of the lower part of the duct. The importance of due attention to the condition of the nose and its accessory sinuses is too often overlooked by ophthalmologists, and AXENFELD, an ardent advocate of extirpation of the sac, has done well to bring forward cases in which brilliant results have followed operative treatment by this route in suitable cases. In 1904 TOTI, of Florence, described a new operation—dacryocystorhinostomy—in which the lacrymal bone is resected, an opening is made in the nasal mucous membrane, and the mucous membrane of the sac is brought into continuity with that of the nose. SCHIRMER, ELSCHING, HOLTH, and TÖRÖK warmly advocate this method abroad, and Mr. CHARLES HIGGENS has recently reported a successful case in England. TOTI obtained 23 perfect results and 16 with slight epiphora, SCHIRMER 5 perfect and 3 with epiphora, SALUS in ELSCHING'S clinic 6 perfect, 4 with slight epiphora and 1 with a result equalling an extirpation of the sac, and TÖRÖK 6 perfect, 2 with moderate epiphora, and 1 equal to an extirpation of the sac (no secretion, but lacrymation). The operation is a relatively severe one, involving a large semilunar incision commencing about the junction of the middle and inner third of the upper orbital margin, extending to the side of the nose, round and well in front of the insertion of the tendo oculi, and continued to a point a little beyond the junction of the middle and inner thirds of the lower orbital margin. AXENFELD and WESSELY mention two cases in which Toti's operation failed through gradual closure of the opening in the bone.

Salvarsan ("606") in Eye Disease.

The use of salvarsan ("606") in the treatment of syphilitic diseases of the eye has not been neglected by ophthalmologists, and if the somewhat extravagant hopes raised have not been fully substantiated the drug appears to serve a definitely useful purpose. FLEMING bases a report on 180 cases of syphilis of the eye treated in Professor GREEFF'S clinic in Berlin. He concludes that in "606" we have an effective treatment for syphilitic diseases of the eye in which a rapid result is essential or when cases have failed to respond to mercurial or iodide treatment. STUELP collected 457 cases of ocular disease treated with salvarsan; according to the reports 65 per cent. showed rapid improvement, 35 per cent. showing no change. UHTHOFF found the best and most constant response in cases of acute specific and gummatous iritis; only 11 per cent. of cases of interstitial keratitis showed marked improvement, seldom better than under the usual treatment, and affection of the second eye was not prevented by the drugs; choroido-retinal affections and tabetic optic atrophy were not influenced. BENDA records almost identical results from ELSCHING'S clinic, but no improvement occurred in interstitial keratitis. The disappearance of gummatous nodules of the iris after a single injection is little short of magical, but these cases usually respond rapidly to ordinary antisyphilitic treatment. SCHNAUDIGEL, of Frankfort, records the cure of a tarsitis of several months' duration in two days. English ophthalmologists have been disappointed with the result in cases which have failed to respond to the time-honoured treatment of syphilis with mercury and iodides. The ill-effects attributed to the treatment in some of the earlier cases were due mainly to defects in technique, and are rarely met with when due caution is observed.

Mr. S. H. BROWNING, the bacteriologist at Moorfields Eye Hospital, has found that the blood count in cases of sympathetic ophthalmia shows changes indicative of a protozoal infection. The inference that sympathetic ophthalmia might respond to treatment with "606" has met with encouraging results in practice.

Vaccine and Serum Therapy.

Vaccine and serum therapy continues to be employed with unremitting determination in recalcitrant diseases of the eye. Mr. J. B. LAWFORD, in his recent presidential address before the Ophthalmological Society of the United Kingdom, reviewed the subject in an eminently lucid and judicial manner, lacking only in one feature—a more precise expression of so excellent a clinician's own observations and conclusions. In the absence of definitely expressed opinion, however, the general trend of the argument displayed a subtle modulation from the major to the minor key.

DENTAL SURGERY.

A steady progress in the position of dentistry can be recorded during the past year. This progress is shown, not only in the more scientific character of many of the papers published, but also in the increased attention to the question of dental disease on the part of the general body of medical men as well as the general public.

Dental Disease in Children.

During the year considerable attention has been given to the problem of the treatment of the teeth of school children. In these columns we have advanced the view that the best results would be obtained by organising instruction to the parents on the care of the teeth, and then, if funds permit, adopting remedial measures for the children under six years of age before attempting the treatment of those beyond that age. The reverse method is usually adopted by the educational authorities, with the result that the money allocated to dental treatment is not spent to the best advantage. Accounts of the work accomplished by several of the school clinics have been published. We note that the London authorities have instituted lectures to parents on the hygiene of the teeth, but the treatment of the children still seems to centre around the age-period of six to eight years. The Council has sanctioned the employment of anæsthetists, but this step should have been adopted in the initial stages, for it is quite clear to those acquainted with the treatment of children that the extractions which are so often the rational preliminary to conservative operations can only be efficiently carried out under anæsthetics.

Dental Caries.

Under the title of "The Prevention of Dental Caries" two interesting papers have appeared from the pens of Dr. J. SIM WALLACE[1] and Dr. STANLEY W. R. COLYER.[2] The former author maintains that the "only thoroughly reliable method" of preventing dental caries is the natural or physiological one, and that the solution of the problem is to be found in a dietary which leaves the mouth physiologically clean at the end of the meal. He considers that the dissemination of knowledge necessary for the prevention of dental caries must be mainly made through the medium of the general practitioner of medicine. Dr. COLYER, on his part, considers that the

[1] Dental Record, June 1st, 1911.
[2] Ibid., May 1st, 1911.

prevalence of dental caries is due to food changes, the two most important being (1) the increased amount of soluble fermentable carbohydrate; and (2) the constant introduction into the mouth of acid-fermenting organisms.

Several communications have appeared on the relation of bread to dental caries. Mr. T. G. READ [3] considers that the use of the roller-milled flour is mainly responsible for the large amount of caries seen in the present day, while Dr. WALLACE [4] in a thoughtful paper considers that but little caries can be laid at the door of bread. His conclusions are: (1) That no farinaceous foodstuff in general use is less harmful than bread-and-butter; (2) that the varieties of bread make no appreciable difference in inducing caries, beyond the difference which the physical characters of the bread make in their detergent effects on the teeth; and (3) that crust is a long way preferable to crumb in all varieties.

In reference to the treatment of extensive caries so often seen in children, Mr. J. F. COLYER [5] advocates the removal of all functionless deciduous and permanent teeth. He gives records of children of ages varying from four to ten years who have been left without any masticating area and shows that they improve in health and increase in weight as a result of the removal of the sepsis. He shows, too, that the fear so often expressed, that early removal of the deciduous teeth is extremely harmful to the growth of the jaw and the position of the successional teeth, is unfounded.

Periodontal Disease.

The relationship of suppurative conditions of the periodontal membrane to general disease formed the theme of two interesting papers by Dr. W. KNOWSLEY SIBLEY [6] and Mr. C. GOULDEN.[7] The former author drew attention to the frequent presence of periodontal disease with many forms of skin disease, while the latter author quoted some interesting cases, clearly demonstrating that the focus of infection in many intra-ocular conditions were distinctly traceable to the periodontal membrane. Under the title of "Pyorrhœa Alveolaris: its Interpretation," Mr. HOPEWELL-SMITH,[8] from a consideration of microscopical sections of cases, considers that the course of events are as follows: atrophy of the bony socket and shrinkage, followed by a widening of the gingival margin and broadening and deepening of the pockets around the teeth, with hypoplasia of the periodontal membrane. If a pathogenic infection occurs there is a lodgment of pyogenic bacteria in these already suitable pockets, and pyorrhœa results, but may or may not be accompanied by gingivitis and the production of tartar. The author's conclusions differ considerably from those of others who have written on the morbid anatomy of the disease and from many of those possessing an extensive clinical experience.

Irregularities of the Teeth.

Mr. N. G. BENNETT,[9] in a paper on the Etiology and Classification of Abnormal Development of the Jaw, considers that there is a danger at the present time of under-estimating or entirely neglecting factors of inheritance. He emphasises the importance of regarding deformities of the dental arch as a measure of defective bony growth. He states that it is obviously absurd, in conditions depriving the child of the proper incentive to growth, to think that the alveolar process alone will be affected, and he considers that the abnormal position of the permanent teeth and of the form of the enveloping alveolar process should be regarded as secondary results of inhibited growth of the body of the bone itself. In a paper on the Relationship of Nasal Obstruction to Contracted Arches and Dental Irregularities Mr. ROLLESTON WHITTAKER [10] refers to the very important question of thyroid inadequacy, and suggests that there is a relationship between this and dental conditions.

The Histology of the Teeth.

An important advance in our knowledge of the ultimate termination of the nerves of the pulp has been scored by Mr. J. HOWARD MUMMERY.[11] He has shown that from the nerve plexus under the odontoblasts nerve fibrillæ pass direct into the dentinal tube along with the dentinal fibril. This observation must be regarded as one of the greatest importance in the study of the question of the sensitiveness of the dentine. Mr. MUMMERY'S observations were made on sections which had been treated with iron and tannic acid, the procedure being briefly as follows. Sections are cut and stained with a 2 per cent. solution of perchloride of iron, and then thoroughly washed; they are then treated with a 2 per cent. solution of tannic acid and watched under the microscope until they are sufficiently black.

Prosthetic Dentistry.

In connexion with dental prothesis, a valuable paper has been published by Mr. J. H. BADCOCK,[12] in which he condemns the so-called collar crown and advocates dentures designed in a way to leave the gingival margin free. The paper, which was read before the annual meeting of the British Dental Association, evoked a considerable amount of criticism, some of which was based on an inadequate knowledge of pathological processes in the mouth. Two other papers illustrating the scientific standpoint from which the problem of dental mechanics is being approached have been written, the one by Mr. H. J. MORRIS [13] on the Comparative Elasticity and Internal Structure of Cast and Rolled Gold Plates, and the other by Mr. D. M. SHAW [14] on the Causes of Platinum Fractures in Porcelain Teeth.

Miscellanea.

Amongst communications of interest may be noted a series of articles on dental radiography which have appeared in Items of Interest; a paper by M. H. CRYER [15] on Pathological Changes in the Jaw; and a suggestive article by W. RUSHTON [16] on a Possible Cause of Facial Asymmetry.

Obituary.

Amongst those who have passed away we notice the names of F. EWBANK, H. N. GODDARD, A. F. HARE, T. HEADRIDGE, W. W. CADWALADR JONES, G. A. PEDLEY, W. H. PIDGEON, T. W. THEW, W. WADE, and W. WHITEHOUSE.

New Publications.

"The Royal Dental Hospital of London: Annual Reports" "Modern Dental Materia Medica," third edition, by J. P. BUCKLEY; "Dental Materia Medica, Pharmacology, and Therapeutics," second edition, by C. W. GLASSINGTON; "The American Text-book of Operative Dentistry," fourth edition, edited by E. C. KIRK; "A Manual of Dental Prosthetics," by G. H. WILSON; "Notes on Dental Anatomy," second edition, by T. W. WIDDOWSON; and "Dental Metallurgy," by W. BRUCE HEPBURN. We also have to note the excellent alterations in the *Dental Record*.

[3] Dental Record, Sept. 1st, p. 514, and Aug. 1st, p. 452.
[4] Experiments and Observations on Bread, with Special Reference to the Causation and Prevention of Dental Caries, Proceedings of the Royal Society of Medicine, Odontological Section, vol. iv., p. 90.
[5] Royal Dental Hospital of London, Annual Reports.
[6] The Relation between the Teeth and Certain Diseases of the Skin and Mucous Membrane, THE LANCET, May 6th, 1911.
[7] Some Inflammatory Eye Conditions due to Oral Sepsis, Proceedings of the Royal Society of Medicine, Odontological Section, vol. iv., p. 27.
[8] Dental Cosmos, April, p. 937, and September, p. 981.
[9] Royal Dental Hospital of London, Annual Reports, 1910, p. 76.
[10] Dental Record, July, p. 425.
[11] Proceedings of the Royal Society of Medicine, Odontological Section, vol. iv., p. 51.
[12] Sepsis and Prosthesis, British Dental Journal, Nov. 15th, p. 1069.
[13] Proceedings of the Royal Society of Medicine, Odontological Section, vol. iv., p. 57.
[14] Dental Record, September, p. 507.
[15] British Dental Journal, vol. xxxii., p. 922.
[16] Proceedings of the Royal Society of Medicine, Odontological Section, vol. iv., p. 105.

ANÆSTHETICS.

An exceptional number of valuable papers have been published during the year dealing with practically new departures in the methods in use. The lessened value attached by many workers to spinal analgesia has stimulated investigation in other directions, resulting in an improved technique in intratracheal etherisation, intravascular infusion, and the use of nitrous oxide with oxygen in major surgery, as well as the wide extension of the employment of alkaloidal bodies to produce a "predomitium."

Intratracheal Ether Insufflation.

Some two years ago Dr. S. J. MELTZER and Dr. AUER published their paper on Continuous Respiration without Respiratory Movements. Since then they have continued their experiments. The former points out[1] that the essentials of the method are (1) the introduction into the trachea to near its bifurcation of a flexible tube the diameter of which is smaller than the lumen of the trachea, and (2) a continuous stream of air driven through this and returning by the side of the tube. This obviates all "dead space" and forces out all vitiated air. This procedure eliminates all the complex problems involved in the normal respiratory mechanism and maintains any desired pressure within the lungs. This method has, at Dr. MELTZER'S suggestion,[2] been adopted for the administration of ether, and with the happiest results. Anæsthesia can be maintained with impunity for hours provided the strength of the ether vapour is adjusted to the requirements of the patient and sufficient, but not excessive, pressure is maintained. The respiration if slowed and rendered shallow indicates excessive etherisation. The use of chloroform vapour by this method appears to be more dangerous. It is at present in an experimental stage.

Dr. C. A. ELSBERG[3] has designed an apparatus for this method, and his experience with it is wholly satisfactory. The patient is anæsthetised by ordinary methods; a catheter is then passed into the trachea, a laryngoscope being used, and is then fixed by a clamp and connected up with the ether supply. His apparatus is more complicated than that of Dr. A. EHRENFRIED,[4] who, in the course of his papers, refers to the pioneer work of TUFFIER, QUÉRIN, VOLHARD, HIRSCH, SOLLMAN, L. ROBINSON, MATAS, BLOOM, PARHAM, SAUERBRUCH, and BRAUER.

Dr. EHRENFRIED'S apparatus consists of a Woolfe's bottle, with three necks, surrounded by a copper water-jacket, and supplied with air by a foot-bellows. A motor can replace the bellows which drives air through the hot water over the ether in the bottle, or actually through the ether if a strong vapour is required. Air can be mixed with ether-vapour of any desired strength and in any proportion. Connected with the delivery tube is a safety valve and pressure-regulator—a bottle of Hg into which a tube is plunged. Any sudden rise of pressure—e.g., such as that caused by laryngeal spasm—will cause the valve to blow off automatically and so safeguard against the risk of interstitial emphysema. The temperature of the air-ether mixture is maintained 10° above that of the room. The air is moistened and filtered before entering the catheter which intubates the trachea. There appear to be no unpleasant after-effects, no hoarseness, laryngeal catarrh, and no excess of mucus. Scopolamine and morphine are used by Dr. EHRENFRIED as a preliminary injection. The method is of the utmost value in thoracic operations, as 20 mm. Hg pressure will maintain a moderate distension of the lungs, even when the thorax has been opened. Aspiration of blood, pus, vomitus, or mucus is, we are assured, completely prevented by the back rush of air which passes by the side of the catheter. The apparatus possesses the advantage of being much more simple than others.

Mr. H. MORRISTON DAVIES,[5] in describing his hyper-atmospheric apparatus, criticises MELTZER'S method adversely, as he considers it defective in that the pressure of the air in the tube is never known with exactitude. His own method involves complete plugging of the larynx. He uses chloroform from a dosimetric inhaler through which the anæsthetic is driven into the lungs. Dr. H. FISCHER,[6] referring to the intratracheal insufflation of ether, emphasises the importance of obtaining an accurate idea of the diameter of the trachea. He states that he can do this by means of callipers at the suprasternal notch. If the space between the tube and the trachea is too great the escape of CO_2 is excessive, so that apnœa occurs, while if the catheter used is too small the lungs cannot be sufficiently expanded. He deprecates the use of a motor to propel the air in, as he regards intermittency in ether supply an advantage.

Intravascular Anæsthetisation.

Although FLOURENS introduced ether into the crural artery of the dog, the method has only recently been revived, probably because C. BERNARD'S experiments led him to pronounce it highly dangerous. JEREMISCH,[7] working in KRAWKOFF'S laboratory, was led to employ hedonal in physiological saline intravenously. As the results were favourable he adopted it for patients in FEDOROFF'S clinic. 1 per cent. hedonal and 5 per cent. urethane in 200 c.c. saline were used. No serious effects followed in 65 cases, although a too rapid introduction led to respiratory difficulty. One case was under operation for 2 hours 52 minutes. Relaxation took place in from 5 to 8 minutes. The injection was made peripherally in order to avoid clotting. The return to consciousness was rapid or delayed according to the quantity of the drugs used. Injection into the saphenous vein necessitated a much larger quantity of the drug, and one case had to be completed under chloroform. PAUL W. HARRISON[8] injected 2 gr. cocaine (2 per cent.) into the vein of his own hand. He found analgesia was slight, but his mental condition was affected and he believes the plan is unsafe.

SCHMITZ-PFEIFFER[9] deals with intravenous injection of ether and is unfavourably disposed towards the use of the method. He admits that BURKHARDT'S cases were favourable, but points out that WITZEL as well as his pupils have been led to regard the proceeding as dangerous. KÜTTNER, after an experience of 23 cases, in which he met with two serious complications—one of pulmonary embolism and one of clotting at the seat of injection—has relinquished the method, since he regards it as too open to peril. SCHMITZ-PFEIFFER claims that his observation of his 40 cases justifies his statement that intravenous diffusion of ether is justifiable only in such cases as are unsuitable for other methods. He prefers the Roth-Dräger inhaler as being safer. He employed as a preliminary the injection of scopolamine and morphine and injected 200 c.c. to 300 c.c. of saline with 5 per cent. ether into the median vein after local infiltration of the tissues. The longest operation took 2 hours 20 minutes. He met with cyanosis, one case of asphyxia, and some thickening and thrombosis at the site of injection. Necropsies made on 11 patients whose death was due to the disease from which they were suffering showed no marked effects resulting from the infusion except occasional thrombosis in the arm. R. HAGEMANN[10] is more favourably impressed by the method,

[1] Journal of the American Medical Association, August 12th, 1911.
[2] Medical Record, New York, vol. lxxvii., p. 477.
[3] Annals of Surgery, February, 1911.
[4] Boston Medical and Surgical Journal, April 13th, 1911.
[5] Brit. Med. Jour., July 8th, 1911.
[6] Surgery, Gynæcology, and Obstetrics, November, 1911.
[7] Deutsche Zeitschrift für Chirurgie, Band cviii., Hefte 5 and 6.
[8] Boston Medical and Surgical Journal, Feb. 2nd, 1911.
[9] Beiträge zur Klinischen Chirurgie, Band xcvi., Heft 3.
[10] Münchener Medizinische Wochenschrift, July 11th, 1911.

which he has adopted for head operations as well as for those on the jaws. He points out the advantage of copious injections of saline solutions in cases of extreme debility.

Dr. W. W. BABCOCK[11] reviews the whole subject. He deprecates BURKHARDT'S method with chloroform; it is, he thinks, too dangerous, although still employed by some Russian surgeons. He mentions 100 cases, which included one death and several instances of embolism. Subcutaneous injection of narcotics, such as hyoscine, morphine, apomorphine, except in the cases of young children, appeals to him as safer. Although only 10 per cent. of cases treated in this latter way lost reflex excitability, operative procedure was not impracticable. He associates rectal injections of decinormal saline containing alcohol with the hypodermic injection. The latter is repeated if necessary in 15 minutes. Although not satisfactory for abdominal cases, the plan answers well for mouth and jaw operations, but involves the drawback that as the drugs employed paralyse the emunctories elimination is often unduly delayed. It is therefore essential that the respiration should be watched until the patient is fully conscious.

Mr. F. ROOD[12] gives an encouraging account of his experience of ether given by intravenous infusion, and describes a simple and efficient apparatus which appears to safeguard the patient against some of the dangers of the method. The infusion is continuous, not intermittent, 5 per cent. ether or less is employed, and a warming chamber, as well as an air or ether bubble-trap, is interposed between the supply and the patient.

Professor H. KÜMMEL,[13] following Professor BURKHARDT'S present method, continuous infusion, reports 90 cases; the patients, being feeble, were regarded as unfit for other methods. There was no nausea or vomiting. He points out that the dangers of embolism, thrombosis, and hæmatolysis, although frequent with the intermittent method, have been practically eliminated by continuous infusion. BURKHARDT has met with none in 250 cases, and KÜMMEL'S 90 cases were without incident. He considers KÜTTNER'S case, referred to above, as explicable independently of the method of anæsthesia. KÜMMEL has two supply vessels, one containing ether (5 per cent.) in normal saline solution, and one only normal saline solution, which are connected with the infusion apparatus by a Y-shaped piece. When anæsthesia is induced, and this occurs in from five to ten minutes, usually without any stage of excitement, he runs in saline solution only, supplying more ether when necessary. The amount infused varies in individual cases; one lasting 140 minutes took 1700 c.c. of the solution.

BARTELEMAN'S[14] reference to the dangers of copious intravenous infusion appears germane to this subject. KOENIG had two deaths which he considered were hastened by this cause. The view adopted is that the bactericidal properties of blood are lessened by dilution, and so not only is the method fraught with peril when the heart is feeble, but also when septic peritonitis or other septic serious inflammation exists. Air embolism is dealt with by V. P. BLAIR and H. MCGUIGAN.[15] They suggest as a means of combating the accident the introduction by a fine needle of 2 c.c. of 1 in 1000 solution of adrenal solution in 40 c.c. of normal saline solution into the right ventricle with the view of stimulating it to violent contraction.

Intravenous anæsthesic infusion was discussed at the recent Congress of the German Surgical Association. Professor V. FEDOROFF reported 530 cases in which hedonal (0·75 per cent.) was employed without complication. Professor KÜMMEL reported 100 cases of the use of ether by this method, stating that if adrenal or digalen was added thrombosis resulted. F. M. PIKIN, H. SCHLIMPERT, A. BRÜNING, CLAIRMONT, and W. DEUK, the last two named from experimental evidence, have pronounced against the method. Their experience, however, appears to have been a restricted one. R. VOGELMANN cautions against its employment in patients suffering from advanced degenerations affecting the vascular system.[16]

Rectal Ether Narcosis.

ARND[17] regards the method of introducing into the rectum a 5 per cent. ether solution in normal saline solution as safer than the older method of rectal etherisation by vapour. Anæsthesia appears in five or ten minutes. After the operation is completed all fluid is withdrawn. Diarrhœa without blood or mucus may follow, but does not appear to be of any importance. ARND gives a preliminary hypodermic injection of scopolamorphine.

Nitrous-oxide Gas in Major Operations.

The growing preference for this anæsthetic among American surgeons has called forth a number of useful articles addressed to this subject. Dr. CRILE,[18] an enthusiastic exponent of the method, gives his patients scopolamorphine before the gas, and mixes the latter with oxygen according to the requirements of the case. He has done a large number of major operations in this way, and, as he reminds us, Dr. TETER has recorded some 20,448 inhalations, mostly for cases lasting 15 minutes or less, but including 346 which lasted from 30 to 60 minutes, 228 lasting from 1 to 2 hours, 22 lasting from 2 to 3 hours, and 2 lasting from 3 to 4 hours. CRILE lays great stress upon the avoiding psychic shock, as well as the injury—"insult to tissue"—which, even when the patient is unconscious, acts prejudicially upon the central nervous system. This, he affirms, can be avoided, by gentle handling of the tissues under operation and the avoidance of displacement of, or dragging upon, organs or serous membranes when these possess a complex nerve-supply.

Besides Dr. TETER'S apparatus, one has been designed by Dr. E. I. MCKESSON,[19] who, influenced by Dr. YANDELL HENDERSON'S brilliant research on acapnia, advocates within limitations the advantage of allowing re-breathing and so maintaining the CO_2 content of the blood. Dr. W. D. GATCH[20] advances similar arguments, and points out that an enormous saving of the anæsthetic is thus effected without detriment to the patient. E. D. MARTIN[21] regards the anæsthesia of nitrous oxide *plus* oxygen *plus* carbonic dioxide as less provocative of post-operative shock or other after-effects than is ether. These and many other writers admit that there are drawbacks to this use of nitrous oxide, of which some may be avoided by skilled administration, but others, such as muscular rigidity, cyanosis, and tendency to an irregular grade of anæsthesia, are hardly to be eliminated, even by expert anæsthetists. In this country re-breathing has been discountenanced because unless the expired gas is filtered not only CO_2 is re-introduced but material exhalations from the lungs, and these can hardly be without an appreciably bad effect upon the patients.

That the most serious surgical procedure can be done under N_2O+O_2 is now proved. Dr. F. J. COTTON[22] and Dr. W. M. BOOTHBY report the excision of the rectum done under this mixture of gases introduced by intratracheal insufflation and

[11] Medical Record, New York, July 15th, 1911.
[12] Brit. Med. Jour., Oct. 31st, 1911.
[13] Archiv für Klinische Chirurgie, Band v., p. 95.
[14] Zeitschrift für Chirurgie, Band xxxvii., p. 1417.
[15] Annals of Surgery, vol. liii., p. 471.
[16] See Proceedings of the Congress.
[17] Archiv für Klinische Chirurgie, p. 95.
[18] Surgery, Gynæcology, and Obstetrics, August, 1911, p. 170.
[19] Ibid., October, 1911, p. 456.
[20] Ibid., August, 1911, p. 219.
[21] Journal of the American Medical Association, Sept. 30th, 1911.
[22] Ibid., Nov. 18th, 1911.

with excellent results. A. L. FLEMMING,[23] influenced by CRILE'S strong advocacy of N_2O, has devised a method of alternating nitrous oxide gas and ether. His experience leads him to believe that after some experience an equable anæsthesia can be ensured and immunity from the after-effects associated with ether and the rigidity so inconvenient a symptom of N_2O given by itself. The method is less costly than N_2O and oxygen used continuously.

Scopolamine and Morphine.

J. R. FREELAND and B. A. H. SOLOMONS have employed injections for 100 primaparæ, with only 13 failures.[24] The injections were given only when labour was imminent, and scopolamine but not morphine was, if necessary, repeated. They regard the ritual of GAUSS, the darkened room and so on, as quite unnecessary. In some cases the drugs were given by the mouth and with equal success. They met with no untoward symptoms, but they emphasise, as, indeed, do all those who have used these methods during parturition, that the women require the most sedulous watching. On the other hand, the editor of the *Therapeutic Gazette*, in reviewing the subject, states that experience has shown, so far as surgical procedure is concerned, that this combination is of no use except to produce what Dr. WEIR MITCHELL has felicitously termed the "predomitium," and must be followed by some general anæsthetic.

The value of these alkaloids before general anæsthetics formed the subject of a discussion held at the Royal Society of Medicine, which was opened by Dr. DUDLEY BUXTON. He stated that his experience was satisfactory, and gave his reasons for preferring the addition of atropine (gr. 1/100) to the scopolamorphine injections. This preference is based upon the fact that there is a mutual antagonism and adjuvancy between the drugs in various directions. Mr. ROOD[25] recorded 400 cases in which this plan had proved valuable. Dr. J. S. DARLING[26] adopts the method, but supplements it by doses of trional or sulphonal given over-night.

Mr. DUDLEY CORBETT has advanced arguments from his personal experience to show that the scopolamorphine method is of greatest value in the first stage of labour, especially in the case of hysterical patients. He has seen no bad effects following repeated injections, but points out that asphyxial apnœa may be provoked in some infants, a condition due, he thinks, to the morphine, and is best met by immersion in a hot bath. Strychnine he asserts may be advantageously added to the injection since it does not lessen the analgesia.

A full discussion of the subject of alkaloids employed as adjuvants to general anæsthetics is presented by Dr. DUDLEY BUXTON in a clinical lecture published in the *Clinical Journal* of June 14th. Some writers in America do not accept so favourable a view, and deprecate the use of scopolamorphine since, they contend, it obscures the symptoms which guide the anæsthetist, while it increases the patient's sense of misery and prevents the lungs being cleared by coughing. J. ROBERTSON[27] expresses a favourable opinion of omnopon when given before "open ether."

Omnopon.

Some useful papers have appeared dealing with Dr. SAHLI'S valuable suggestion that the standardised chlorides of the alkaloidal bodies of opium should be employed before general anæsthetics instead of morphine. As is commonly recognised, the chief perils associated with the joint employment of alkaloids and chloroform or ether arise through the uncertain effect of morphine and the variations in the strength of the preparations which are injected. H. M. W. GRAY[28] has employed omnopon largely both with local analgesics and in association with scopolamine. He regards this method as "ideal," for it extends the range of utility of local analgesia, since the patient is practically asleep and so protected from psychic shock. In old patients and in heart and lung diseases he regards the procedure as being free from danger. In renal disease his experience with omnopon is not wide enough to allow of the expression of a definite opinion. Mr. C. L. LEIPOLDT'S report[29] on omnopon gives an interesting and a fairly exhaustive account of the subject as well as his clinical experience, which appears to be quite favourable both as regards the use of omnopon alone and in conjunction with scopolamine.

Spinal Analgesia.

The *Therapeutic Gazette* (June), in reviewing the current views of surgeons concerning the various methods for compassing painless surgery, emphasises that, although some enthusiastic advocates for intradural injection retain their faith in its pre-eminence, yet most of those who have tried it have come to regard it as too dangerous for routine employment. Admitting its value in individual cases they accept ether or nitrous oxide given by modern methods as being safer and more under control. There appears to be reason to believe that in the case of some of the deaths chromatolytic changes were seen in the ganglia throughout the nervous system and degenerative changes in the large polygonal cells of the anterior cornua of the cord. It is stated that similar changes can be produced experimentally with stovaine injected into dogs. Dr. W. F. LORENZ[30] narrates an experience. By the sudden extension of his spine a patient broke the needle during an intradural injection. Failing to find it at the time, the patient was subsequently X rayed and the needle removed *secundum artem* under a general anæsthetic.

Dr. LUSK,[31] besides giving a detailed account of special dissections of the spinal column, has explained the way in which many of the accidents due to the method arise and how some may be avoided. His view is wholly constructive and of great value, both because it is original and because it evinces scientific caution expressed with a judicial fairness. The danger of the method is illustrated by a reported case[32] of an apparently healthy woman who developed meningitis after lumbar puncture. The Wassermann test being applied later, syphilis was discovered and salvarsan administered.

H. E. S. STIVEN[33] records his experience of intrathecal analgesia in Egypt. It has proved satisfactory in his cases. The careful research undertaken by LAWEN and VON GAZA[34] into the effects of extra-dural injection of novocaine can only be mentioned. Their main conclusion is that the rapidity with which fatal results follow depends upon the rapid absorption and high pressure in the extra-dural space. Very slow injection obviated the dangers. Clinical records made at Leipsic confirm this statement. Dr. W. J. MCCARDIE[35] has made a comprehensive collection of the statistics and experiences of continental, of British, and of American surgeons, and he places spinal analgesia among the less safe methods. He gives the mortality as 1 in 826, but HOCHMEIER and KOENIG'S figures record a higher rate of fatality—viz., 1 in 200. Whatever may be the merits of the method for exceptional cases, it seems clear that it cannot be reckoned upon as providing a lessened risk to life. The after-effects, according to most authorities, are of a graver and more persistent type than accrue in the case of

[23] Proceedings of the Royal Society of Medicine, vol. iv., p. 1.
[24] Brit. Med. Jour., Jan. 28th, 1911.
[25] Ibid., Oct. 14th, 1911.
[26] Dublin Journal of Medical Science, July, 1911.
[27] THE LANCET, Oct. 7th, 1911, p. 1010.
[28] THE LANCET, Sept. 2nd, 1911, p. 672.
[29] THE LANCET, Feb. 11th, 1911, p. 368.
[30] Journal of the American Medical Association, Oct. 14th, 1911; also THE LANCET, Nov. 25th, 1911, p. 1500.
[31] Annals of Surgery, October, 1911.
[32] Zentralblatt für Gynäkologie, Leipsic, July, 1911, No. 30.
[33] THE LANCET, Oct. 21st, 1911, p. 1135.
[34] Deutsche Zeitschrift für Chirurgie, 1911.
[35] Birmingham Medical Review, September and October.

general anæsthetics. Dr. SCHLIMPERT and Dr. SCHNEIDER [36] describe the technique of injection into the sacral canal, which, although difficult in stout persons, is, they consider, valuable in gynæcology and obstetrics. They employed scopolamorphine antecedently.

The increased range of choice, both as regards the agents to be employed and the method of their employment, which has become necessary in order to facilitate the performance of the complicated operations of surgery now carried out, has formed the subject of a paper by Dr. DUDLEY BUXTON in the *British Medical Journal*.

Local Analgesia.

Quinine hydrochloride has been extensively used, especially in America, for local injection. Dr. A. E. COX [37] extols its value. Dr. W. GREEN [38] uses quinine and the hydrochloride of urea, which appear to be not only analgesic but slightly hæmostatic; 1 to 4 per cent. is used. Dr. W. A. BOYD [39] reports a wide experience. He points out that strong solutions of these analgesics cause fibrous induration and retard or prevent union by first intention. HERTZLER finds that a 0·5 per cent. solution will make tissues insensitive for four or five days, while the effect of 1 per cent. may persist for weeks. A 0·25 per cent. solution is usually sufficient and may be boiled, but according to GRAHAM should not be introduced intravenously. The analgesia appears in from 10 to 20 minutes. GAUDIER, of Paris, regards this compound of analgesics as equal in effect to cocaine, while it is free from danger.

A. LAEWEN [40] narrates successful attempts at the performance of extensive operations upon the kidneys with the use of local analgesics. These included pyelotomy and operations for nephrolithiasis. He injects adrenalin and novocaine superficially, and then using various strengths of novocaine seeks for and blocks the first, second, and third lumbar and twelfth intercostal nerves.

Regional analgesia by nerve trunk blocking is one of the great difficulties in local infiltration. Dr. HIRSCHEL [41] contributes useful details of his elaborate technique for infiltrating the brachial plexus for operations upon the arm. He uses 2 per cent. solution of novocaine.

Post-anæsthetic Complications.

Many really valuable papers have appeared dealing with this important subject, the general tendency appearing to regard such complications as due less to the anæsthetic than to the operation, or the pre-existing condition of the patient. Dr. W. PASTEUR [42] in the course of a closely reasoned article, advances arguments which appear to demonstrate that many or most cases of "pneumonia" following prolonged anæsthetisation for abdominal operations are, in fact, instances of massive collapse of the lung the result of traumatic "insult" to tissues and not a pneumonia at all. Some further observations on the matter will be found under Medicine.

The causation of glycosuria following ether has been investigated by Dr. J. H. KING, Dr. B. S. CHAFFEE, Dr. D. B. ANDERSON, and Dr. L. H. REDELINGS.[43] As is well known, RUSCHHAUFT, GEIS, WHITE, P. B. HAWK, and SEELIG had all found that glycosuria occurred after ether, and in the research referred to this finding was confirmed, and a causal relation was suggested between the extent of the hyperglycæmia and the concentration of the ether, as well as the length of time during which it was administered. It had been pointed out by previous workers, such as EDIE, MACLEOD, MOORE and ROAF, LEPINE and SEELIG, that excess of CO_2 or deficiency of oxygen, or splanchnic nerve interaction, may be the agency by which the result comes about. These possibilities were experimentally dealt with, healthy dogs being deeply anæsthetised with ether and the following conclusions come to. The reducing agent in the urine is dextrose and there is definite hyperglycæmia. The liver is the organ which furnishes the increase in the blood sugar, as is proved by the fact that when the liver is removed from the circulation by an Eck fistula both the hyperglycæmia and glycosuria disappear, while section of the splanchnic nerve fibres going from the cœliac axis to the liver does not prevent hyperglycæmia and glycosuria when ether is given.

An interesting paper is contributed by Dr. J. W. BOVÉE [44] on the effect of the Trendelenburg position on the excretion of urine. In the case of chloroform 82 per cent. and under ether 58 per cent. showed lessened secretion, a diminution which was slowly recovered from when the horizontal posture was resumed. This he considers should prove that great caution is needed in using this position for persons suffering from renal inefficiency and arterial or cardiac lesions. Dr. G. CHANDLER [45] is so impressed by the importance of posture in checking vomiting after ether that he has his patients sitting up to avoid the congestion of the medullary centres, as this in his view is the cause of vomiting. He points out that as persons suffering from heart disease cannot breathe when supine there can be little danger in the sitting position, at all events from the side of circulatory failure.

In the course of a discussion [46] on Post-operation Psychoses Dr. WEIR MITCHELL stated that his experience led him to believe that in nervous persons and those whose mental balance was unstable there was a great liability to nerve collapse after operations. This was peculiarly liable to occur where local analgesia was practised and the patient, even if free from pain, suffered psychic shock. One-third of the cases evincing psychic shock were males, two-thirds females; the severity of the operation appears to be no factor in producing the result. One of the gravest effects, because often persistent, is the supervention of delusions.

Treatment of Respiratory Failure During Anæsthesia.

It has been pointed out by Dr. WOOD and others that the common methods of producing respiration by manual arm movements fail to effect full pulmonary ventilation. ROTH [47] in considering the subject extols mechanical perflation, and Dr. J. O'DWYER in describing the O'Dwyer-Fell apparatus has recorded its efficacy, especially in children, although care has to be taken to avoid excessive force lest traumatic emphysema occur. It is also necessary to render the air warm and moist before it is perflated into the air passages.

Effects Produced by Ether.

Dr. GRAHAM [48] has studied the influence exerted by inhaled ether upon bacteriolysis, agglutination, and phagocytosis. He finds the first two processes are unaffected by ether, while in rabbits, as also, he believes, in man, the phagocytosis of streptococcus, pneumococcus, and staphylococcus is diminished. This effect may persist for some time, but this varies in individual cases. It is due, Dr. GRAHAM judges, not to serum conditions but to the actual destruction of the phagocytes. He advances the opinion that the solvent power of ether over fatty material is the prime factor at work, since although his experiments did not actually demonstrate this to be so, yet enemata of olive oil or subcutaneous injection of lecithin diminished in a marked degree the loss of phagocytic

[36] Münchener Medizinische Wochenschrift, J. 57, No. 41.
[37] New York Medical Journal, Feb. 4th, 1911.
[38] Ibid., May 6th, 1911.
[39] Medical Record, New York, Oct. 14th.
[40] Münchener Medizinische Wochenschrift, No. 26.
[41] Ibid., July 11th and 18th, 1911.
[42] THE LANCET, May 20th, 1911, p. 1329.
[43] Johns Hopkins Hospital Bulletin, November, 1911.
[44] American Journal of Medical Sciences, Jan. 11th, 1911.
[45] Journal of the American Medical Association, Nov. 18th, 1911.
[46] New York Medical Journal, Jan. 7th, 1911.
[47] Berliner Klinische Wochenschrift, Sept. 18th, 1911.
[48] Journal of Infectious Diseases, March 6th, 1911.

action. Air forced through blood containing ether appears also to check the effect of ether upon phagocytosis.

Dr. W. P. GRAVES[49] records post-operative effects in 2000 cases, with the following results: 1089 were laparotomies with "open ether." 20 had pulmonary effects —8 bronchial pneumonia, 3 pleurisy, 9 bronchitis. In 911 cases—not laparotomies—there were 2 pulmonary affections, 1 bronchitis. The length of the anæsthesia did not appear to be a determining factor. He concludes that such complications are most liable to occur and prove fatal in septic cases and in patients desperately ill, aged, or feeble. Post-operative pneumonia does not, he believes, occur especially after severe shock, or when the anæsthetic is "taken badly." The colder months cause more cases; pre-existing foci of infection are roused into recrudescence. He points out that many cases can be avoided if a more careful examination of the patient is made before the operation and on succeeding days, while the condition is promptly treated so soon as recognised. KNECKE holds similar views and has suggested that in the case of abdominal operations the patients should be made to sit up the day after operation.

Dr. YANDELL HENDERSON[50] treats upon primary heart failure in normal subjects under ether. This valuable paper records the author's well-known views on acapnia, and asserts that such deaths as occur are due to the acapnic state brought about by hyperpnœa, itself the result of pain, alternating light anæsthesia and other causes. He regards LEVY'S experiments, referred to below, as examples, in cats, of acapnic states resulting in death through hypersusceptibility of the medullary centres engendered by that condition.

Effects Produced by Chloroform.

Dr. G. H. CLARK[51] has reinvestigated the effect of repeated doses of chloroform given to the lower animals. The point he believes that his research makes is that frequently repeated small doses lead to a more deleterious result than does a single massive dose. The drug was given: (1) by injection; (2) by the stomach; (3) by inhalation. The visceral changes noted were similar to those with which we are now familiar as arising in chloroform toxæmia. The question of dosing, however, really depends less upon the actual bulk of drug employed than upon the degree of its dilution at the moment of introduction. This has been overlooked by many of those who have studied the subject. That chloroform is a tissue poison acting lethally, either at once or after chronic toxæmia, has been proved, but we yet have to learn whether in a sufficiently diluted form chloroform ever leads to tissue changes of any serious import. The analogy with phosphorus will readily spring to the mind.

Dr. A. G. LEVY has contributed several valuable papers during the year. In "The Action of Chloroform when Intercurrent Asphyxia is Present"[52] the conclusions arrived at are interesting, as they limit the importance attached by some authorities to the dangers of heightened CO_2 content during chloroform narcosis, and thus corroborate the acapnia theory so strongly insisted upon by YANDELL HENDERSON and others. LEVY'S experiments, he believes, demonstrate that under chloroform cardio-inhibition is obscured or suppressed by complete asphyxia, but is variable during partial asphyxia. His results with ether are less definite, although somewhat similar. The paper should be carefully studied. Working with Dr. THOMAS LEWIS,[53] LEVY has investigated the curious effects upon the mammalian heart produced by low percentages of chloroform vapour. He connects the irregularities evinced with ventricular fibrillation, and finds that under full, but not excessive, dosage the conditions referred to do not occur. A similar communication appears in the *Journal of Physiology* (Vol. XIII.) and should be collated with Dr. G. C. MATHISON'S research in the same journal on the effects of asphyxia on the vaso-motor and other medullary centres. The CO_2 is apparently not a specific but a normal stimulus when the oxygen-lack fails to elicit a response.

Comparing the behaviour of ether and chloroform as regards the blood pressure, Dr. H. P. FAIRLIE considers that although depression is common to the two agents, recovery is more rapid in the case of chloroform. The probable explanation appears to be that in the case of ether no fall occurs until a very severe degree of nerve exhaustion due to excessive stimulation has been brought about; whereas chloroform acting as a vaso-depressor, so soon as its influence is withdrawn the centres resume their normal control.

The grave post-operative condition sometimes classed under the head of acidosis and sometimes as delayed chloroform poisoning has elicited several valuable papers giving the results of researches undertaken to elucidate the pathogenesis of the symptoms. Dr. CATES[54] examined 400 patients who went into the Boston City Hospital: 17 cases had acidosis on admission; 12 after an anæsthetic—viz., 10 after ether, 2 after N_2O; 17 developed it during their stay in the hospital but took no anæsthetic; 6 patients died. One patient who had acidosis on admission recovered under treatment and subsequently underwent a serious operation under ether without developing acidosis. Dr. E. MELLANBY[55] contributes a suggestive paper on cyclic vomiting, acidosis, and creatinuria in children. The cases occurred wholly independently of anæsthetics or operation. Most authorities concur in the valuelessness of the alkaline treatment. BALINI[56] has found rectal injections of glucose most useful. As the bowel speedily grows intolerant of glucose, he uses small doses and feeds the patient with bouillon and cheese, given by the mouth. BERENDES[57] prefers introducing the glucose into the tissues or by the mouth. He employs 5 per cent. or 7·5 per cent. in normal saline and infiltrates 1 to 2 pints.

Dr. P. B. HAWK,[58] after reference to the past work undertaken to elucidate post-anæsthetic glycosuria, details his experiments. He found that dogs subjected to different degrees of fasting upon being given ether showed that the greatest amount of dextrose appeared in the first urine and decreased subsequently. In fed dogs no uniformity of decrease was noticeable, nor in either case was there a regular relation between the specific gravity and the amount of sugar. He also observed that different animals reacted variously even though subject to similar narcosis. He came to the conclusion that the glycosuria was due primarily to the effect of ether in the direction of its stimulating effect in promoting the transformation of glycogen into dextrose. He believes that a certain amount of glycogen remains unchanged, stored, as he puts it, to meet such emergencies as starvation, and this the ether does not affect. That asphyxial dyspnœa may be a factor in causing the result he is ready to admit. Dr. D. J. M. SWAN[59] undertook an examination of patients, following Dr. HAWK'S line of research, and found in 16 cases that 10 showed no glycosuria either before or after ether; 1 revealed none before but some afterwards, but in this case there was a history of previous glycosuria; 2 had glycosuria both before and after; 1 unexamined before showed the condition after; and 2 having none before

[49] Boston Medical and Surgical Journal, Sept. 29th, 1911.
[50] Surgery, Gynæcology, and Obstetrics, August, 1911, p. 161.
[51] THE LANCET, Jan. 21st, 1911, p. 158.
THE LANCET, March 4th, 1911, p. 582.
[52] Heart, vol. iii., p. 1.
[54] Surgery, Gynæcology, and Obstetrics, November, 1911.
[55] THE LANCET, July 1st, 1911, p. 8.
[56] Berliner Klinische Wochenschrift, August 21st, 1911.
[57] Centralblatt für Chirurgie, September, 1911.
[58] Archives of Internal Medicine, vol. viii., p. 1.
[59] Ibid.

developed a high degree afterwards—these patients were aged 60 and 80, and one died.

The Anæsthetics Bill.

The attention of Parliament has been so completely preoccupied that no steps have as yet been taken to bring before it the legislative proposals relating to the administration of anæsthetics desired by the medical profession, but the General Medical Council intends to press upon the Government the urgency of this among other medical matters.

PUBLIC HEALTH.

Plague and Cholera.

In our review of 1910, which for convenience began with notes on special features characterising the prevalence of infectious diseases in this country during the year, we gave the first place to plague, as in the autumn of 1910 this disease had been found to have caused a considerable epizootic among rats and other rodents in certain parts of Suffolk, and had occasioned a few cases in man of the pneumonic type.

During 1911 only one instance of human plague arising in this country came to notice, and this occurred in October in the area where plague infection had been demonstrated the year before. The case also was of the pneumonic type. Local efforts were made during the year to destroy rats in the invaded areas, and plague-infected rats have in a few cases been found among the large numbers which have been destroyed. The work has been undertaken by the local sanitary authorities under the direction of the Local Government Board, which undertakes the bacteriological examination of all suspected rodents. While the history of plague-infection in Suffolk has been reassuring, vigilance is still needed in order that the rat population of the affected localities may be exterminated, or at least reduced to the lowest limits by systematic destruction and prevention of their access to food.[1] The reports of the medical officers of health of the port sanitary authorities[2] show that rat destruction is still carried out vigorously at the principal ports, and no new instance of the introduction of plague infection has been brought to light. The general progress of plague outside these islands, and particularly its appearance in Siberia and Northern China as a serious epidemic of the pneumonic variety, is referred to in the section on exotic disease below.

The extensive prevalence of cholera in Mediterranean ports, particularly in Italy, gave rise to some fear of the importation of this disease during the autumn, but no case of cholera has been known to have occurred in the United Kingdom during the year. At the time of writing an International Sanitary Conference, attended by official delegates from all parts of the world, is in session at Paris, to consider international agreements for the control of cholera, yellow fever, and plague.

Measles and Whooping-cough.

The prevention of measles has been much discussed during the year. The striking reduction which has been effected in the incidence of many of the more common infectious diseases during the past half-century makes more conspicuous the fact that measles is not materially diminishing either in its incidence or in its mortality. In London the position has already been alluded to briefly. During the five years 1905-09, measles caused 9301 deaths, while all the infectious diseases at present compulsorily notifiable caused 8585 deaths, and when it is remembered that recovery may be followed by retarded growth, development of latent tuberculosis, deafness, and other serious consequences, it is obvious that the mortality from measles is not a complete index of the mischief wrought by it. In the early months of 1911 measles was exceptionally prevalent in several parts of the country, but especially so in London, where for some weeks the number of deaths was between one and two hundred every week. London medical officers of health found that their means of coping with the outbreak were in many ways inadequate. The disease seemed to have been widely spread through infant schools which ought to have been closed, while school teachers and school attendance officers failed to inform the medical officers of health of cases of measles until it was too late to arrange for the class to be temporarily suspended during the critical days or for other precautions to be taken. Cases frequently came to light in tenement dwellings where family to family infection might have been prevented by knowledge of the first case, and many medical officers pressed for at least a partial notification of measles, limited to the first case in a household. Home visiting in many cases revealed the great need for institutional treatment in the interests of the patient. The outbreak also caused stress to be laid on the need for the amendment of the Children Act, 1908, so to enable Section 12 to be utilised by sanitary authorities to induce parents to provide medical aid for cases of measles. As a result of representations made to the London County Council and Government departments concerned, some useful changes were introduced. Although measles was not made notifiable generally, special instructions were given to secure the better notification of school cases, and arrangements were made by the Metropolitan Asylums Board[3] for the reception of a number of cases of measles (in the first instance limited to those for whom orders were obtained through the Poor-law authorities) on the recommendation of the medical officer of health. An official memorandum on measles prevention generally, by the medical officer of the Local Government Board, was issued to sanitary authorities in March last.

The arrangements of the Metropolitan Asylums Board for the reception of measles extended to whooping cough, and it may be observed that in the country generally the use of the isolation hospitals for selected cases of both whooping-cough and measles is increasing. A useful report by Dr. A. K. CHALMERS[4] on the practice of Glasgow in this respect was issued during the year.

Scarlet Fever.

Although much careful research has in past years been undertaken with the object of differentiating classes of streptococci and separating a variety which is specially associated with scarlet fever, the promise of the discovery of a true streptococcus scarlatinæ has not been fulfilled. The last report of Dr. M. H. GORDON,[5] who has made this subject specially his own, shows that the scarlatinal variety of streptococcus may be found in the normal throat and in the throat during diphtheria. The negative result of these thorough investigations should give important stimulus to the further study of the bacteriology of the disease, which is greatly needed. A valuable discussion on scarlatinal and other sore throat caused by infected milk took place at the Epidemiological Section of the Royal Society of Medicine in February on a paper by Dr. W. G. SAVAGE. While accepting as demonstrated the fact that outbreaks of scarlet fever have repeatedly been caused by milk from particular cows presenting sores on the udder, and not by direct infection of the milk from a human source, Dr. SAVAGE put forward the hypothesis that the cow has

[1] Annual Report of the Medical Officer of the Local Government Board, 1910-11.
[2] THE LANCET, March 18th (p. 779) and Sept. 23rd (p. 909), 1911.
[3] THE LANCET, March 4th, 1911, p. 602.
[4] THE LANCET, Oct. 14th, p. 1089.
[5] Annual Report of the Medical Officer of the Local Government Board, 1910-11, p. 302.

probably received a past infection from a human case, and in certain circumstances continues to furnish infected milk without herself suffering from any specific disease.

Small-pox.

Mild outbreaks of small-pox were reported during the year in a few English counties. In London about 70 cases have been notified and some 200 in the rest of England. It remains to be seen whether the reappearance of epidemic small-pox, which has generally been anticipated during 1910–12 will only be manifested on this quite limited scale.

Enteric Fever and Diarrhœa: Some Effects of the Hot and Dry Summer.

Some important official reports were issued during the year bearing upon the prevention of enteric fever. The importance of attention being paid to sewage pollution of cockles, mussels, and other shell-fish, in addition to oysters, has been recognised for some time, and there is now no doubt that consumption of these molluscs may be responsible not only for sporadic but sometimes also for epidemic occurrence of the disease. The late Dr. BULSTRODE was for some years engaged in a survey of the conditions of all the gathering-grounds round the English littoral in regard to risk of sewage pollution of cockles and mussels on the lines of his well-known inquiry into oyster layings. His report on this survey showed the various places round the coast at which dangerous pollution exists, and will be invaluable as a basis of preventive measures and for reference when shell-fish are suspected of carrying infection. A report on inquiries into the sudden outbreak in Eccles in 1910, which affected 142 cases, was made by Dr. S. M. COPEMAN during the year under review, and showed beyond question that its cause was the consumption of ice-cream sold in the streets. The ice cream had been made in a tenement house in Manchester and apparently had been infected by an unrecognised case of enteric fever, or by a carrier, in the course of its preparation. Dr. W. H. HAMER, in an analysis of local prevalence of enteric fever in London,[6] has adduced strong circumstantial evidence that its distribution was determined by the consumption of fried fish from particular shops, the fish specially suspected being ungutted and presumably having reached the market in an infectious condition.

The prolonged and in many respects welcome dry summer gave rise to considerable shortage of many local water-supplies. London, owing in large measure to the additional storage now available for Thames water and to inter-communication of the trunk mains of the different systems escaped any water famine, but larger provincial towns, including Manchester, were put on a restricted service, and some smaller towns and villages suffered severely from shortage. The break-up of the prolonged drought was happily not attended by any large water-borne epidemic. But although the returns are not yet available, it appears probable that the climatic conditions have been favourable to the increase of endemic enteric fever in several places especially in those northern towns where middens and pail, privies are still largely in use.

As regards infantile diarrhœa, there is no doubt that the customary effect of a hot summer and autumn, through flies or otherwise, has been exercised; the Registrar-General's returns for the third quarter of 1911 show a total infant mortality in England and Wales equal to 201 per 1000 births, a proportion which is 60 per 1000 above the average in the ten preceding third quarters, and higher than that in any corresponding quarter since 1901, when the proportion was 208 per 1000. The London increase was, however, comparatively low. The figures will no doubt disturb the favourable statistics of recent years in towns where special efforts have been made to reduce infantile mortality, but they should not in any way be made the reason of relaxing these efforts, which are at no time of more value than in years when the climate is favourable to diarrhœa mortality.

As a mere matter of record, and especially as the industrial unrest of the summer was so frequently connected with the weather, we may here allude to the heavy strain placed on the sanitary staff of many of the chief towns by the accumulation of perishable foodstuffs during the strikes at the docks and in the carrying trades.

Epidemic Poliomyelitis.

General recognition of poliomyelitis as an epidemic and presumably infectious disease has come tardily in this country, which has not hitherto experienced such outbreaks on a large scale such as those which have occurred in New York, Scandinavia, and Northern Germany, and consequently the disease has received less attention from public health authorities than cerebro-spinal meningitis, with which it is not infrequently confused. The subject has been dealt with in a previous section of this report, but its public health bearing is obvious.

Tuberculosis: Final Report of the Royal Commission; Compulsory Notification of Pulmonary Tuberculosis.

The Royal Commission on Human and Animal Tuberculosis issued its final report in July.[7] The essential identity of tuberculosis in man and cattle, and their intercommunicability under certain conditions, had been established in interim reports, based on a large amount of experimental work, which had already been generally accepted as finally disposing of the contention that the risk to man of infection from bovine sources is non-existent or of a very minor importance. The final report reviewed the results of the whole of the work of the Commission at the experimental farms at Stansted during the nine years of the inquiry. It has shown that a large part of the tuberculosis of early life must be attributed to infection of the bovine type and of bovine origin, and that exceptionally pulmonary tuberculosis in man is also to be attributed to bovine infection. The differential characters of tuberculosis in man, various mammalia, and birds; the stability of different varieties of tubercle bacilli in their cultural characteristics and virulence; the different susceptibility of different species to tuberculosis of the same animal origin; the peculiar bacteriology of lupus, and many other matters have been investigated with a thoroughness which is beyond praise, and the report of Sir W. H. POWER and his colleagues, together with the supplementary volumes which are now appearing, have placed a really great achievement to the credit of British scientific research. The fifth volume of the appendix to the final report, written by Dr. ARTHUR EASTWOOD, appeared just before Christmas, and in it the author observes that underlying all the mammalian viruses investigated by himself there is an essential unity of characteristics.

We have already dealt with the question of notification.

Among the many notable contributions to the literature or policy of prevention of tuberculosis which have appeared during the year we may refer here to the proceedings of the National Association for the Prevention of Consumption, opened by Mr. JOHN BURNS; the statements as to the uses of sanatoriums, prepared by Sir CLIFFORD ALLBUTT, SIR L. BRUNTON, Dr. A. LATHAM, and Sir W. OSLER on behalf of the Welsh National Memorial;[8] and the observations of Dr. A. NEWSHOLME in the annual report of the medical officer of the Local Government Board for 1910–11. The importance of the factor of heredity in phthisis was the subject of a useful discussion at the Royal Society of Medicine in April,

[6] Annual Report of the Medical Officer of the London County Council for 1909.

[7] THE LANCET, July 15th, 1911, p. 166.

[8] THE LANCET, July 15th, 1911, p. 180.

and a paper was contributed by Dr. W. BULLOCH and Mr. M. GREENWOOD, jun.

Industrial Hygiene; Effect of Humidity on Health; Industrial Cancer and Lead Poisoning.

The report of the Home Office Departmental Committee on Humidity and Ventilation in Cotton-weaving Sheds,[9] issued early in the year, gave the results of inquiries as to the physiological condition of weavers working in warm and artificially humidified atmospheres. As a class these weavers are found to be in generally weak physical condition, with poor appetite and frequent indigestion. These conditions are to be attributed to the special conditions of their work. The influence of warm moist atmosphere is to diminish the difference between the internal temperature of the body and that of the peripheral parts, thus establishing a more uniform temperature of the body as a whole and throwing a tax upon the powers of accommodation, which is indicated by the low blood pressure, notwithstanding the rapid pulse-rate. Prolonged exposure to a hot and humid atmosphere appears to be more injurious than exposure to an even higher wet bulb temperature for a short time. The general view of the physiologists consulted by the Committee was that the health and comfort of the workers are dependent rather on the wet bulb temperature than on the dry bulb temperature, or the relative humidity, or the absolute humidity. The Committee found it impracticable to recommend that artificially humidifying the air of cotton weaving sheds should be abolished, but made numerous recommendations for preventing its most serious effects upon health, including the ultimate prescription of a wet bulb temperature above which the humidifying must cease. Other noteworthy observations, such as those on the differences in the conductivity of the packing of steam-pipes, were contained in the report. A Bill empowering regulations to be made was enacted during the session, and regulations on the lines of the report are now being prepared. Among the dangerous trades specially dealt with during the year in the department of the Chief Inspector of Factories, mention may here be made of the manufacture of briquettes from coal-dust by the addition of pitch, in which damage is caused to the eyes by the pitch-dust, and "pitch-warts" are often formed in the skin which may lead to carcinoma. Draft regulations have also been issued to supersede existing special rules for the manufacture and decoration of earthenware and china and for the making of transfers, and will give effect to the main recommendations of the Departmental Committee of 1910. Their object is to secure more stringent precautions for the prevention of lead poisoning and lung mischief—especially by the suppression of dust.

The Housing Acts.

The duties of medical officers of health have been very considerably increased by the work of reporting houses as unfit for habitation, and of advising as to closing orders for insanitary property, which is entailed on them by the Act of 1909, and where a reactionary local council is concerned these duties are often particularly thankless. A recent official return shows that there has been a large total increase in the number of insanitary houses and areas dealt with by local authorities in 1910–11, as compared with previous years, but that only a minority of these authorities have so far shown any activity in applying the Acts or acting on the advice of their medical officers.

Medical Inspection of School Children.

The accounts of the reports of school medical officers which appear almost weekly in THE LANCET make it nearly unnecessary to refer to the progress that continues to be made in the organisation of medical inspection of children on entry and on leaving the public elementary schools, as a consequence of the Education (Administrative Provisions) Act, 1907. The extent and consequences of this inspection have quite lately been fully described by Sir GEORGE NEWMAN in the annual report of the chief medical officer of the Board of Education for 1910, reviewed in our issue of Nov. 4th. Here we would merely refer to the fact that according to that report school medical officers, working under schemes approved by the Board of Education, have been recognised by that department in 305 of the 322 local education areas in England and Wales, and that the rapid progress which has been made in the organisation of the complex system comprised in "school medical inspection" has been one of the most striking features of the year.

A substantial advance has already been made in this work in London, which was notoriously behind the rest of the country in efficiency, and this, we believe, will be accelerated by the impending reorganisation of the medical department of the London County Council, which will place the educational medical work under the direction of the county medical officer of health.

During the year the Board of Education issued a memorandum by Sir GEORGE NEWMAN on physical training in secondary schools,[10] in which the importance of exercises based on the "Swedish system" coupled with control by the school medical officer was insisted upon, while a further circular, issued in the autumn,[11] emphasised the need for control by the school medical officer over the arrangements made by education authorities under the Education (Provision of Meals) Act, 1906.

Milk- and Food-supply.

Dairy farmers' associations in the North of England have been actively agitating during the year against the present system of controlling the adulteration and impoverishment of milk by the application of the so-called "presumptive" chemical limits laid down in the official milk regulations, contending that the farmer who supplies unadulterated milk from a herd or a cow which yields a poor quality milk, under 3 per cent. of milk fat, is at present unduly penalised. Sanitary authorities, who know that milk with a much higher yield of fat can be supplied if it is insisted on, naturally oppose these views, but for different reasons would welcome the disappearance of the present unworkable system. The solution to the matter, which causes infinite trouble to all concerned, will probably be found in the prescription of "absolute standards" and their control by simplified administrative methods.

The question of the declarations which should be required to be made on tins of condensed milk was dealt with in a report by Dr. F. J. H. COUTTS to the Local Government Board,[12] which showed that condensed skim-milk is still frequently used to a dangerous extent for infant feeding. Other notable reports in the same series have related to the nutritive value of different kinds of bread,[13] and to the practice of bleaching flour by nitrogen peroxide and increasing its water-absorbing capacity by the addition of various chemical substances known in the trade as "improvers." These very objectionable practices have been widely adopted in the trade, and unfortunately have not hitherto been sufficiently brought under the control of the Adulteration Acts.

The Census: Registrar-General's Reports.

The tenth decennial Census was taken on April 3rd, and the preliminary tables were issued in June. The total population of England and Wales was 36,075,269, of Scotland 4,759,445,

[9] Second Report, 1911, Cd. 5566.

[10] THE LANCET, July 22nd, 1911, p. 235.
[11] THE LANCET, Sept. 2nd, 1911, p. 696.
[12] THE LANCET, Sept. 16th, 1911, p. 833.
[13] THE LANCET, Sept. 9th, 1911, p. 773.

and of Ireland 4,381,951. The increase of population which had taken place since the Census of 1901 was much below that which was estimated by calculation from the previous intercensal periods.[14] An actual fall of population had taken place in many rural areas, notably in Scotland. Nearly all the larger towns showed a conspicuous diminution of the population in their central parts; in some cases, where municipal boundaries enclose a minimum of "suburb," the population of the town as a whole had diminished.

In London, the population of the administrative county was 4,522,961, less by 13,306 than that in 1901. In so-called "Greater London," however, there were 7,252,963 inhabitants, over half a million more than at the previous Census.

The publication of the Census figures has shown that many estimated death-rates throughout the country have been seriously understated during the last few years. In the interest of accurate statistical work it may be hoped that the usual official objection to an intermediate Census may be overcome before 1916.

During the year the Registrar-General has announced important changes in the tabulation of vital statistics, which include the substitution of local government administrative areas for registration districts in his annual report, adoption of the recently revised international classification of causes of death, and distribution of "transferable" deaths on a recognised system to the districts to which they properly belong. These changes, which are being adopted in the preparation of the report for 1911, will be of the greatest advantage to medical officers of health and to statisticians generally.

Sanitary Legislation.

Besides the National Insurance and various local Bills, few measures bearing on public health administration have passed through Parliament during the session. The Milk Bill, as stated above, was not introduced, and the Health Visitors and Midwives Act Amendment Bills were dropped. In view of our own share in directing attention to the subject, we are glad to record that Mr. BURNS'S useful little Bill providing for the washing and cleansing of rag flock passed through all its stages and will take effect after October, 1912.

Conferences and Exhibitions.

We have already referred to the meeting of the National Association for the Prevention of Consumption held in London in July, and may also recall the Congress on the Prevention of Destitution, the opening meeting of which, at the Albert Hall, was the occasion of a noteworthy speech by Mr. A. J. BALFOUR. The International Congress on the Prevention of Infant Mortality, held at Berlin in September, was attended by numerous delegates from Great Britain. The Seventh International Congress on Tuberculosis, which was to have been held in Rome in September, was postponed till 1912. Although the British Government was not represented at the International Exhibition of Hygiene at Dresden, an excellent British section was organised by voluntary effort and subscription.

The Coronation Celebrations.

We may note that while many of the events of the year, such as the Census, the Insurance Act, the hot summer, or the compulsory notification of tuberculosis, will help to make 1911 memorable in public health records, the central national event, the coronation of His Majesty King GEORGE V., was happily without any public health history, notwithstanding the exceptional movements and aggregations of population which marked the celebration of that great ceremony.

[14] THE LANCET, July 15th, 1911, p. 174.

TROPICAL AND EXOTIC DISEASES.

Bureaux and Bulletins.

The year 1911 has been one of marked activity and enterprise in the department of tropical medicine, evidence of this being afforded by the establishment of bureaux devoted to the investigation of special infections, and the publication of bulletins relating to work done at home and abroad in connexion with special diseases. The Central Malaria Bureau in India has now started a periodical, under the title of *Paludism*, for the assistance of those engaged in the campaign against malaria in India and elsewhere. Three very instructive numbers have already appeared, the joint editors being Major S. B. JAMES, I.M.S., and Major S. R. CHRISTOPHERS, I.M.S. The newly founded Yellow Fever Bureau, which the Liverpool School of Tropical Medicine has established, began the issue of a monthly journal, under the name of the *Yellow Fever Bureau Bulletin*, last May, its editor being Dr. HARALD SEIDELIN. By arrangement with the honorary managing committee of the Sleeping Sickness Bureau a new bulletin, on the model of the *Sleeping Sickness Bureau Bulletin*, has just published its first number, dealing with the forms of disease caused by leishmania, and under the title of the *Kala-Azar Bulletin*. It will appear quarterly, under the editorship of Dr. C. M. WENYON, protozoologist of the London School of Tropical Medicine, who has quite recently returned from Bagdad and Aleppo, where he has been studying the way in which "Oriental sore" is spread. It is intended that this new periodical will do for leishmaniosis what the *Sleeping Sickness Bureau Bulletin* has already done for the study of trypanosomiasis.

Commissions and Investigations.

Admirable work continues to be done by the Committee for the Study of Malaria in India. The Government of India have given 5 lacs of rupees to endow an Indian Research Fund with a view to assist in defraying the cost of research work in connexion with public health and hygiene. A Sanitary Conference was held in Bombay in November, at which the Minister of Education urged wealthy Indians to contribute to the funds for carrying out a much needed sanitary campaign in India. Mr. ANDREW CARNEGIE has promised £1000 a year for three years to endow entomological scholarships to enable three suitably qualified young men being sent to America to study the practical application of entomology, so that they may in time be able to proceed to Africa, where the services of trained entomologists are so much needed. The reconstituted Sleeping Sickness Commission appointed by the Royal Society returned to Central Africa in November to continue their investigations under the leadership of Colonel Sir DAVID BRUCE, C.B., F.R.S., his colleagues being Captain A. E. HAMERTON, D.S.O., and Major DAVID HARVEY, R.A.M.C., along with Professor R. NEWSTEAD, the eminent medical entomologist of Liverpool. Lady BRUCE again accompanied the Commission to Africa to share in their labours. A Sleeping Sickness Commission appointed by the British South Africa Company proceeded in 1911 to Rhodesia to investigate the disease there, the members being Dr. A. W. MAY, principal medical officer of Northern Rhodesia; Dr. A. KINGHORN, of the Liverpool School of Tropical Medicine; and Dr. J. R. LEECH, of the Rhodesian Medical Staff; they were accompanied by a trained entomologist and a bacteriologist. An expedition despatched by the Liverpool School of Tropical Medicine, including Dr. JOHN L. TODD and Dr. S. B. WOLBACH, visited the West African Colony of the Gambia to make further inquiry into the value of gland puncture in the diagnosis of sleeping sickness. In German East Africa Professor F. K. KLEINE and Dr. M. TAUTE of the German Sleeping Sickness Commission demonstrated experimentally

that the virus of human trypanosomiasis can be transmitted by the agency of glossina morsitans; and in Rhodesia Dr. KINGHORN also succeeded in transmitting T. gambiense by means of G. morsitans, a circumstance which will help to explain the occurrence of sleeping sickness in regions where G. palpalis is not found. The progress of our knowledge of this disease up to the present time was summarised by Dr. C. A. BAGSHAWE, director of the Sleeping Sickness Bureau, in a paper read before the Society of Tropical Medicine in October.

Considerable advance in our knowledge of kala-azar has taken place in 1911, contributions to it having been made by Dr. C. NICOLLE (Tunis), Dr. G. PIANESE, Dr. C. BASILE, and Professor G. FRANCHINI. A Commission in the Anglo-Egyptian Soudan has been investigating the subject of kala-azar in that region. An excellent summary of what is known concerning kala-azar in its various forms was published in the October number of the *Quarterly Journal of Medicine* by Lieutenant-Colonel Sir W. B. LEISHMAN, F.R.S. A second Pellagra Field Commission, consisting of Dr. L. SAMBON and Dr. J. CHALMERS, left London in August for Hungary to study the disease there, and afterwards to continue their investigations in other parts of Europe. They were subsequently joined by three American investigators—viz, Professor M. HAASE, Dr. H. P. COLE, and Dr. J. MARTINEZ. The etiology and treatment of leprosy have received considerable attention during the year, contributions to the literature of the subject having been made by Major E. ROST, I.M.S., Captain T. S. B. WILLIAMS, I.M.S., Dr. H. BAYON, Craggs Investigator of the London School of Tropical Medicine; Dr. LINDSAY SANDES, Robben Island Leper Colony; Mr. E. C. LONG, Basutoland; and Dr. K. S. WISE, British Guiana.

The causation of beri-beri has been freely discussed during 1911, among others by a group of investigators in the Philippine Islands, including Major WESTON P. CHAMBERLAIN and Major HORACE D. BLOOMBERG, along with Captain EDWARD D. KILBOURNE and Captain EDWARD B. VEDDER, all of whom are officers in the Medical Corps of the United States army, and Dr. VICTOR G. HEISER, Director of Public Health in the Philippines. At home Dr. G. C. E. SIMPSON and Mr. E. S. EDIE, B.Sc., of the Liverpool School of Tropical Medicine, and Messrs. E. A. COOPER and CASIMIR FUNK of the Lister Institute have also published the results of their investigations. Major E. D. W. GREIG, I.M.S., inquired into the prevalence of beri-beri in Calcutta and presented an official report on the subject. At the November meeting of the Society of Tropical Medicine and Hygiene the etiology of beri-beri was very thoroughly thrashed out in a discussion in which, along with others, the following high authorities took part—viz.: Professor H. SCHAUMANN, of Hamburg; Professor AXEL HOLST, of Christiania; Dr. H. FRASER, of Kuala Lumpur; and Dr. C. J. MARTIN, F.R.S., Director of the Lister Institute. The subject of sprue is to be investigated in Ceylon by an expedition about to be sent thither under the charge of Dr. P. H. BAHR, of the London School of Tropical Medicine.

The Incidence of Exotic Disease.

Following our practice of former years we give below a short sketch of the incidence throughout the world in 1911 of the three principal exotic diseases which concern this country, its colonies and its dependencies—viz., cholera, plague, and yellow fever. We also give a short summary of what is known regarding the behaviour of small-pox abroad during the year, this disease being a constant menace and one that grows more serious day by day owing to the increasing neglect of vaccination and revaccination.

Cholera in Europe.

Cholera, which had been ravaging Russia since 1907, and which had attacked in that empire during 1910 no fewer than 230,000 persons, of whom about 110,000 died, showed a greatly diminished incidence in 1911; up to the end of October rather less than 3500 cases and 1600 deaths had been reported in the whole of Russia. The governments situated in the basin of the Volga, particularly Samara, supplied nearly the whole of the cases—that is, about 3000 out of the total 3500—leaving only 500 cases to be distributed over 24 other governments and provinces. Cholera was reported in small amount in Greece, Montenegro, Bulgaria, Servia, and Roumania; and there were localised groups of cases in Austria, at Vienna, Trieste, Capodistria, Torre, Arbe, Cattaro, and other places, though the total cases altogether did not quite reach a hundred. Eleven counties in Hungary were invaded by cholera during the year, but up to the beginning of November only about 200 cases altogether came under observation; while in Croatia-Slavonia, including the port of Fiume, about 26 others were notified.

The worst sufferer from cholera in Europe during 1911 was the kingdom of Italy, in which, up to the end of October, 15,459 cases and 5757 deaths had been officially reported; these were distributed over 49 provinces, including some in the islands of Sicily and Sardinia. The provinces which contributed the largest number of cases were Naples, Palermo, Caserta, and Salerno. It will be remembered that the disease broke out in Southern Italy in the summer of the previous year, and that it had subsided by the end of December. The recrudescence of 1911 began in June, the epidemic reaching its height in August; by November it had practically ceased. Some regrettable outbursts of violence on the part of the mob against municipal authorities, doctors, and nurses occurred during the course of the cholera prevalence. In one instance which occurred not far from Rome, the rioters overpowered the military guard and stormed the cholera hospital, shouting, "Death to the doctors and nurses," and ultimately carried away the sick to their homes. The mob were under the impression that the cholera patients were being purposely poisoned in the hospital. The same mob wrecked the town-hall, threatening to kill the mayor and his staff, who, however, escaped.

Cholera broke out at Malta in November, and up to the end of the month about 120 cases and 70 deaths had been recorded. From Italy the infection was carried to Marseilles, but detailed information as to this outbreak is not easy to obtain. It is, however, stated that in one of the lunatic asylums in the town some 80 cases and 51 deaths were certified, as well as a number of other cases among the general population. Up to mid-November scattered cases were still occurring in Marseilles. The French fleet stationed off Toulon suffered from an outbreak of cholera in November, 70 sailors being attacked. It is said that previous to this two cases had occurred in the town of Toulon. In Spain, at Barcelona, and in the province of Catalonia, near Taragones, there was an outbreak of cholera, over 800 persons being attacked during August and September, Vendrell and La Riera districts being special sufferers.

Cholera in North Africa.

Cholera appeared in Tunisia early in August, and up to October some 200 cases had been reported, the chief places invaded being the town of Tunis and the districts of Bizerta and Medjez-el-Bab. The prevalence of cholera in Tripolitania was also notified in October, but owing to the military operations little definite information has been published. It is known, however, that the disease existed at Tripoli, not only among the invading Italians, but also among the Turkish troops and their Arab auxiliaries. The

infection was brought to Algiers and also to Port Said by ship, but did not spread in either instance. As already mentioned, the infection was conveyed by refugees to Malta from Tripoli. The epidemic of cholera in the island of Madeira which was prevailing at the end of 1910 continued during the early weeks of 1911, during which period 327 additional cases and 98 deaths were certified, raising the total attacks in the winter epidemic of 1910–11 to 1774 and the deaths to 555.

Cholera in the Near East.

The disease was epidemic in Turkish territory during the whole of 1911. At Constantinople more than 2600 cases were notified, and of these nearly 1500 proved fatal. Cholera was also prevalent in the following towns with their surrounding districts—namely, Adrianople, Salonica, Monastir, and Uskub. In Arabia the provinces of Hedjaz, Yemen, and Asir were invaded, and outbreaks occurred in several towns, including Mecca, Medina, Jeddah, Janbo, and Hodeidah. A few cases also were discovered at the station on the island of Perim among the pilgrims, and at the quarantine station on the island of Camaran nearly 100 cases were detected among the many pilgrims detained there under observation. In Mesopotamia many districts were affected, and among others may be mentioned Bagdad and Basra. In Asia Minor the disease was widely diffused, a number of the vilayets being affected, including Diarbekir, Erzeroum, Trebizonde, Sivas, Angora, Kastamouni, Brousse, Konia, and Aïdine. In the city and port of Smyrna more than 1200 cases were reported, of which over 700 terminated fatally. In Syria a number of towns and districts were invaded, and epidemics occurred at Damascus, Jaffa, and Tripoli (in Syria). In Persia during the summer months of 1911 cholera was specially prevalent near the Turkish frontier, at Mohemmerah on the Shatt-el-Arab, Ahwaz, Abadan, Schouster, as well as at some other places situated along the banks of the river Karun, and in the region at the head of the Persian Gulf. Late in November a cholera outbreak was reported in the Bahrein Islands off the Arabian coast in the Persian Gulf.

Cholera in India and the Far East.

In India cholera was, as usual, very prevalent during the year, and so far as can be gathered from the provincial returns, which, however, only in most instances bring the figures up to the beginning of August, there were in that period nearly 200,000 deaths certified as due to this cause. The United Provinces of Agra and Oudh seem to have suffered the most, for about 77,000 of the total deaths from cholera in India were referred to that administrative area. In the Bengal Presidency, which came next, there were up to August more than 53,000 deaths, in Eastern Bengal and Assam nearly 30,000, and in the Presidency of Madras over 25,000, so that these four provinces accounted for 185,000 of the total 200,000 cholera deaths reported in India up to August.

An explosive outburst of cholera occurred in November at Benares in the United Provinces in the military cantonment occupied by the Royal Scots (Lothian) Regiment, but it was quickly subdued. In Ceylon cholera was somewhat prevalent from May to July in the coolie station at Ragama and at Colombo, altogether about 360 cases coming under official cognisance. At Singapore in the Straits Settlements the disease was epidemic from March to October, and also in the province of Perak and on the island of Penang. From January to June cholera was seriously prevalent in the kingdom of Siam and especially at Bangkok, where nearly 1600 fatal cases were recorded. In French Indo-China numerous outbreaks occurred in Annam, Cambodge, Cochin-China, Laos, and Tonkin. Cholera was acutely epidemic during the year in the Dutch East Indies, and especially in the island of Java at Batavia, where over 1400 cases were notified, at Samarung, with about 800 attacks, and also in less amount at Soerabaya, Passoeroean and a number of other places. Outbreaks, too, occurred in the island of Sumatra, at Palembang, and along the east coast, where over 700 cases came under notice. The disease also appeared in the islands of Borneo, Celebes, and the Moluccas, as well as in some of the smaller islands of the Malayan Archipelago.

There was comparatively little cholera during 1911 in the Philippine Islands, only about 220 cases being notified up to October; the city of Manila practically escaped from the disease during the year. Only a few cases were detected in Japan, and these were reported at Osaka and Kobe; isolated ship-borne cases were also notified at the ports of Nagasaki and Yokohama. China seems to have suffered from a quite trivial invasion by cholera in 1911, as only sporadic cases came under observation at Hong-Kong, Amoy, Swatow, Hoihow, Nanking, and Hankow. In Manchuria there was a limited outbreak in August and September at Dalny (or Dairen), where about 100 cases were reported, and also some others at Kinchow. In the Hawaiian Islands the infection was imported into Honolulu, where early in the year about 40 cases and 28 deaths were recorded.

Cholera in America.

During the summer months of 1911 a number of ships carrying emigrants from Mediterranean ports, and chiefly from Naples and Palermo, arrived at New York. In six of these steam vessels 25 cases of cholera were reported at the quarantine station, two of which occurred in persons who had undergone five days' observation and had proceeded to their destinations outside New York. In addition, a number of other persons were found to be cholera-bacilli carriers. A single shipborne case occurred at Boston. These instances led the United States authorities to increase the restrictions placed upon arrivals from infected ports. A carrier of cholera bacilli was found at the Canadian quarantine station at Grosse Isle, and in response to a request from the United States Government Canada agreed to impose further restrictions so as to exclude infection by Canada.

Plague in Asia and Oceania.

Plague continued its ravages in India during 1911, nearly 800,000 deaths being ascribed to this cause up to the end of October—that is, in a period of 10 months. The plague deaths in India in 1910 were 512,605, and in 1909 178,808, so that it is certain that when the returns for 1911 are completed they will show a considerable increase in the amount of the disease as compared with the two previous years. Among the Indian provinces which suffered most were the United Provinces of Agra and Oudh with over 320,000 fatal cases, the Punjab with more than 200,000, Bengal with about 70,000, and the Presidency of Bombay with more than 96,000. Most of the other provinces showed a decreased mortality from plague. Eastern Bengal and Assam still maintained its remarkable immunity from epidemic plague, only 22 deaths from this cause being certified in 1911 in its population of about 34,000,000. The Madras Presidency, too, continued to show its previous comparative immunity from the disease, for only about 11,000 plague deaths occurred among its population of over 41,000,000.

In the Straits Settlements a few scattered cases of the disease were reported at Singapore. A somewhat severe outbreak occurred in the Dutch East Indies, on the Island of Java, affecting seriously a number of districts, especially Malang, where about 1600 cases were notified, and in a less degree Batavia, Kediri, and Soerabaya. About 100 cases of plague were reported in Bangkok, the capital of Siam. The disease was widely disseminated throughout Indo-China, about 1230 cases being notified in Annam during the first seven months of the year, about 600 in Cochin-China, nearly 400 in

Cambodge, but only a few cases in Tonkin. In the Quang-Tcheou-Wan territory, leased by China to France, nearly 2000 deaths from plague were certified. In Asiatic Russia sporadic cases were reported in a number of localities as in previous years.

In the Chinese Empire the main manifestation of the disease was the disastrous epidemic of pneumonic plague which swept across Manchuria from west to east, beginning in the winter months of 1910 and extending into the early part of 1911, killing practically all whom it attacked, the death-roll reaching about 50,000. The infection was carried across the Gulf of Pechili into the province of Shantung, in which, at Cheefoo and other places, about 3000 further deaths occurred, and into the province of Pechili, where a number of fatal cases were recorded at Tientsin, Peking, and elsewhere. The disease was also prevalent during part of the year at Hong-Kong, Canton, Swatow, Shanghai, Pakhoi, and Lien-Tcheou-Fu. Virulent epidemics were reported at Chau-Chow-Fu, when about 6000 fatal cases occurred, and at Chao-Yang, where some 2000 perished during the epidemic. In Japan a few cases were certified in Osaka, and in the island of Formosa, chiefly in the Kagi prefecture, where nearly 400 cases were notified. A single ship-borne case from Amoy was landed at Merivales in the Philippine Islands. There was little plague in Oceania; the only cases reported were several in New Zealand, at Auckland and Onehunga, where infected rats also were found, and in the Hawaiian Islands at Honokaa and Kapulena. Rat plague was reported in these islands at Hilo and Aiea.

Plague in America.

Plague appears to have become endemic in most of the South American States. In Brazil it appeared during 1911 at Rio de Janeiro, Para, Pernambuco, Sao Paulo, and San Conçalo, though apparently in no very great amount. At Asonçion and in its vicinity in Paraguay the occurrence of some virulent pneumonic cases was reported in August and September. Among the victims were two young Paraguayan medical men and a priest. At Villa Concepcion about the same time a number of suspicious deaths occurred certified either as gastric fever, typhoid fever, or typhus fever; they developed pneumonia and also had buboes. In Peru plague was widely prevalent during the year, ten departments being affected, of which Libertad suffered most. There are grounds for believing that the ravages of plague in Peru have been far worse than are shown in the official returns. The appearance of the disease in a number of places in Chili was reported, including, among others, the towns of Iquique, Pisagua, and Arica. One of the States in which plague was epidemic in 1911 was Ecuador, the capital of which is Guayaquil, where, up to August, about 650 cases had been notified; other places in Ecuador attacked by plague during the year were Babahoyo, Milagro, and Duran. Venezuela was also invaded, cases being reported at Caracas, Santa Rosalia, and Baruta; information from this State is always difficult to obtain, but it is asserted, apparently on good authority, that the disease was very prevalent, though the fact was purposely concealed by the officials at Caracas. A single case imported from Guayaquil was reported in the Panama Canal Zone in October.

In the island of Trinidad a few plague cases came under notice in the early part of 1911. For some years there has existed an epizootic of plague among the ground squirrels over a wide area in California in the United States. Week by week cases are reported, particularly in Contra Costa county, among these rodents by the officials engaged in searching for them; but only three human cases of plague were notified during the year in that State. In each of these instances it is believed that the infection was derived from ground squirrels. At Seattle, in the State of Washington, where plague was prevalent some years ago, three infected rats were discovered in August and September, the last infected rodent previous to this having been reported in February, 1910.

Plague in Europe.

In Russian Europe, at Odessa, the outbreak of 1910 was continued by a number of scattered cases throughout 1911, and in the province of Astrachan, where there is an endemic centre of plague in the Kirghiz Steppes, the disease was reported though in no great amount. During the year a commission, comprising Professor E. METCHNIKOFF, Dr. A. T. SALIMBINI, Dr. E. BURNET, and Dr. T. JAMANUCHI, has been investigating plague, as it continued to appear in the Kirghiz Steppes. The endemicity of the disease in that region is believed to be associated with a species of marmot smaller in size than the tarabagan which is found in Siberia, Mongolia, and Manchuria. A ship from Odessa landed a single case at the lazaret at Doel in the port of Antwerp. A single case was also reported at Glasgow on a vessel which had come from the port of Karachi. At Shotley, in East Suffolk, in October, an isolated case of plague was discovered, and in the country around, which was systematically searched for infected rats; a few plague-stricken animals were found among the many thousands examined by experts. Some infected rats were found at Wapping in the port of London in June, but none since then. At Lisbon a suspected case of plague was mentioned by the Spanish Consul on the bills of health, but the Lisbon authorities denied that any such case had occurred.

Plague in Africa.

Plague is now regarded as being endemic in Egypt, notwithstanding the well-directed efforts of the Egyptian Public Health Department. During 1911 up to the beginning of October over 1600 cases had been notified, and of these about 1000 proved fatal. Of the 13 provinces invaded by the disease the largest number of cases were referred to Keneh and Assouan, in each of which about 500 attacks were certified. Among the towns affected Alexandria had 52 cases, and Port Said 41 in the same period. A few cases were reported also in Cairo and Ismailia. In Algeria some persons were attacked by plague in Philippeville during November. In the hinterland of Mazagan in Southern Morocco, over an area of more than 1000 square miles, plague raged from the middle of 1910 till the autumn of 1911. It is estimated that at least 10,000 deaths were caused by the epidemic, more women than men being attacked; the reason assigned for this is the fact that females remain in their tents or houses most of the day and are therefore more liable than men to be bitten by infected fleas. The districts invaded were mostly in the Dukali province, but the epidemic extended also to the hinterland of Saffi and Mogador. The infection is supposed to have been introduced by a caravan from the south. Plague was reported in British East Africa at Nairobi, Kisumu, and Port Florence; also in German and Portuguese East Africa as well as at Zanzibar, though not in any great amount. Mauritius had its annual epidemic, which was, however, smaller than usual, only about 200 cases, the majority of them at Port Louis, being notified.

Plague in the Near East.

In Persia plague was prevalent in the port of Bushire; some ship-borne cases also occurred at the lazaret of Lingah, the patients having been brought across the Persian Gulf from Debai, which is on the opposite coast of Arabia. The Bahrein Islands suffered severely, for in about three months no fewer than 1750 persons died from plague in Manana and other places on these islands. The disease occurred also along the Arabian shore of the Persian Gulf in a number

of localities, including Mascat; and cases were likewise reported at Basra. Plague appeared in the port of Jeddah in the Red Sea early in the year but did not become acutely epidemic. The occurrence of the disease was also notified at Beirut, Adalia, and Smyrna, including the lazaret of Clazomenes, some of the instances being ship-borne.

Yellow Fever in South America and the West Indies.

In 1911, as in former years, the chief localities affected by yellow fever were situated in South and Central America, the West Indies, and the West coast of Africa. In Brazil the place that suffered most was Manaos, where the disease is endemic, and where up to October more than 200 persons had lost their lives from this malady. Cases also occurred on board two ships shortly after their departure from the port of Manaos for Liverpool. Para, too, experienced its annual outbreak of yellow fever during the year, and among other places in Brazil in which the disease was reported in 1911 were Bahia, Ceara, Marcos, and Pernambuco.

At Rio de Janeiro, where formerly yellow fever was very prevalent year by year, and where, since the carrying out of important sanitary works and the institution of anti-stegomyia measures, the disease had completely disappeared, three cases were notified in 1911, one of them imported from Bahia. Unfortunately, the funds which should have been expended on the anti-stegomyia measures and other preventive work have been largely diverted during 1910 and 1911 to other purposes, and fear is now expressed by thoughtful observers that yellow fever is likely to return to Rio de Janeiro. It has even been asserted that this has already occurred, and that deaths from yellow fever have recently been certified in Rio de Janeiro as due to the "grippe," the mortality from which has arisen in a very marked manner both in 1910 and 1911. Whether this be true or not, it is undeniable that following the relaxation of the measures a great increase in the number of stegomyia has been observed in the city, and this itself may be regarded as ominous.

Another South American State which suffered somewhat severely from yellow fever in 1911 was Ecuador, the majority of the cases being referred to Guayaquil, the capital of the country. Among 220 cases reported in this city 14 were notified on board a coaling vessel in the docks. Among other places in Ecuador in which yellow fever was present during 1911 may be mentioned Milagro, Naranjito, Yaguachi, Calaroma, Bobohoya, Bucay, Duran, and San Antonio. In Venezuela there was an outbreak at Caracas, the capital of the State, cases being also notified at La Guaira, La Pastora, Mayquetia, and San Juan. In Honduras the presence of the disease was suspected at Puerto Cortez, but there was no definite confirmation of the diagnosis.

In Mexico, after a complete absence of the disease of some months' duration, yellow fever reappeared in August at Merida in the province of Yucatan, where up to the end of October more than 40 cases had been reported. It has been suggested that this recrudescence might have been connected with an influx of non-immunes into the locality owing to the operations of the Mexican revolutionaries and the subsequent presence of the military brought from distant districts where yellow fever is not endemic. It is understood than an official investigation into the outbreak is being made by Dr. C. M. GARCIA on behalf of the Mexican Government. Other localities in which cases appeared in Mexico during 1911 included Frontera and Salina Cruz; at the latter place the infection was stated to have been brought from Guatemala, where, however, there is no official mention of the occurrence of the disease. At Bogota, in the State of Colombia, an epidemic, suspected to be yellow fever, was reported during the year, but no confirmation of the diagnosis has been officially announced. At Victoria, in Grenada, and at Bridgetown, in Barbados sporadic cases of yellow fever were certified.

Yellow Fever in West Africa and Elsewhere.

On the west coast of Africa, in the first half of 1911, scattered cases of yellow fever were notified, some of them in May at Accra in the Gold Coast Colony, others at Bathurst in the Gambia Colony from May to July. A fatal case occurred on a ship from Bathurst bound for a French port and the body was buried at sea. The presence of yellow fever at Sierra Leone in April was also reported. At Bissao and at Boulam in Portuguese Guinea the disease was stated to be present in May and June, but no particulars of the outbreak have been as yet published. The late Sir RUBERT BOYCE, F.R.S., for some time before his death, maintained with great ability and persistence, before the Society of Tropical Medicine, as well as in his published papers, that yellow fever was endemic in West Africa; that it occurred in all its forms from a mere "embarras gastrique" to the typical black vomit; that it passed often unrecognised and was wrongly diagnosed as something else; and that the only remedy was systematic destruction of the stegomyiæ which abound in that part of Africa. His views, however, did not altogether meet with general acceptance.

In the Hawaiian Islands at Honolulu a Japanese ship arrived on Oct. 21st having on board a patient who was convalescent from yellow fever which had been contracted in Mexico. He was detained at the quarantine station, and about seven days later one of the men employed in guarding the ship in Honolulu, pending disinfection, sickened of the disease. The occurrence of yellow fever in Asia is greatly feared by some epidemiologists as likely to result from the opening of the Panama Canal in about two years' time, and such an instance as the above may, perhaps, be regarded as some confirmation of the possible extension in the near future of the disease to Japan, China, Malaya, the Dutch East Indies, Straits Settlements, Ceylon, and India unless care be taken to prevent infective stegomyiæ hiding themselves on board ships and travelling to Asiatic ports. As far back as 1903 this particular danger likely to arise in connexion with the opening of the Panama Canal was pointed out by Sir PATRICK MANSON in a paper read before the London Epidemiological Society. In order, however, to investigate this danger and study means of prevention Major S. P. JAMES, I.M.S., is visiting the endemic areas of infection.

The Alleged Specific Organism of Yellow Fever.

In the early part of 1911 a yellow fever bureau was founded in connexion with the Liverpool School of Tropical Medicine, and in association with it a monthly bulletin, as has already been stated, was started in May, the late Sir RUBERT BOYCE, F.R.S., being appointed its editor. His much regretted and untimely death in June, just after the first issue of the Bulletin, necessitated the appointment of a new editor, and Dr. HAROLD SEIDELIN was chosen. This new bureau undertakes the identification of mosquitoes sent to Liverpool, and it also carries out the examination of blood smears and tissues.

Search continues to be made for the specific organism of yellow fever, and some evidence has been brought forward in support of the claim made by Dr. SEIDELIN that the protozoon-like bodies found by him in the blood and tissues of patients are the actual organisms which cause the disease. It is worth mentioning that during the recent yellow fever outbreak in Mexico at Merida, to which allusion has already been made, two local medical men, Dr. DIEGO HERNANDEZ and Dr. HIRCANO AYUSO, both of whom were formerly assistants to Dr. SEIDELIN when he was professor of pathology at Merida, have sent specimens of blood smears and portions of tissue to the bureau for examination, and that in the smears in nearly every instance the "yellow

fever bodies" were found. Dr. HERNANDEZ also reports that he found the same "bodies" in blood smears taken from patients under his care, in which there had been doubt as to the diagnosis, the finding of the "bodies" enabling him at once to make a positive diagnosis. If this be confirmed by independent observations the results must prove of the greatest value. In view of the importance of the subject, the Liverpool School of Tropical Medicine has despatched Dr. SEIDELIN to Mexico to make use of the opportunities afforded by the epidemic at Merida in furthering the identification of the specific organisms of yellow fever. He sailed on Dec. 9th.

The Paris International Sanitary Conference of 1911 on Cholera, Plague, and Yellow Fever.

The International Sanitary Conference, which was originally planned to meet at Paris in April last, and to which the delegates had been summoned to assemble in October, did not meet, owing to various reasons, including the cholera epidemic in Italy and elsewhere, until the middle of November. The Conference was called to decide what changes, if any, should be made in the existing convention, which was agreed to at Paris in 1903. Fears were expressed by some persons in this country that the more timid representatives from some other countries would seek to increase the restrictions placed upon shipping, and thus impose further burdens upon British trade and commerce. We trust these fears will not be realised. It is not, we understand, likely that the decisions of the Conference will be available for publication for some time.

The British delegates nominated to the Conference were: the Hon. L. D. CARNEGIE, Minister Plenipotentiary, Councillor of the British Embassy at Paris; Dr. THEODORE THOMSON, C.M.G., Assistant Medical Officer, Local Government Board; Dr. F. G. CLEMOW, British Delegate on the Constantinople Board of Health; Dr. A. A. MORRISON, British Representative on the Egyptian International Quarantine Board; and Dr. R. W. JOHNSTONE, Medical Inspector to the Local Government Board. Mr. O. G. SARGEANT, of the British Embassy at Paris, acted as secretary for the English delegation. Surgeon-General Sir BENJAMIN FRANKLIN, K.C.I.E., I.M.S. (retired), represented the Government of India. The Egyptian delegates were ISMAIL PACHA SIDKI, Under-Secretary of State to the Ministry of the Interior, and Dr. M. A. RUFFER, C.M.G., President of the Egyptian International Quarantine Board. The following European countries were represented at the Conference—viz., France, England, Germany, Holland, Austria-Hungary, Belgium, Bulgaria, Denmark, Sweden, Norway, Russia, Servia, Turkey, Portugal, Spain, Roumania, Switzerland, Luxemburg, Italy, and Greece. The Western hemisphere sent delegates from the United States, Argentina, Brazil, Bolivia, Chili, Costa Rica, Cuba, Ecuador, Guatemala, Haiti, Honduras, Mexico, Panama, Paraguay, Salvador, and Uruguay. Asia sent representatives from India, Persia, Siam, and China.

Owing to the importance which bacteriology has assumed of late years in the diagnosis of plague and cholera, the Conference at one of its early meetings appointed a Bacteriological Commission to consider a number of points in connexion with this important branch of the subject. This commission comprised the following experts: Dr. RUFFER (Egypt), Professor G. GAFFKY (Germany), Dr. A. CALMETTE (France), Dr. H. D. GEDDINGS (United States of America), Dr. F. MURILLO (Spain), and Dr. A. PRAUM (Luxemburg), with Dr. H. POTTEVIN, of the International Health Bureau, as secretary and reporter. We learn with regret that owing to illness Dr. THEODORE THOMSON was unable to proceed to Paris to act as one of the British delegates at the Conference.

Small-pox on the Continent of Europe.

Russia was the country which suffered most from small-pox on the continent of Europe during 1911, the disease being epidemic in many towns and districts, including St. Petersburg, Moscow, Warsaw, Odessa, Riga, and Libau, and was also epidemic in Vladivostock. In Austria-Hungary the occurrence of small-pox was reported in the provinces of Bohemia, Galicia, and Carinthia, as well as at the port of Trieste. There were outbreaks in Turkey, at Beirut, Kharput, and other places; and in Greece the disease occurred at Athens and in the adjoining districts, as also in the Island of Corfu. A few attacks were notified in Malta. In Italy there were serious epidemics, more particularly at Palermo and Naples; while smaller outbreaks were reported from Genoa, Turin, and other places. The prevalence of small-pox in Spain, to which reference was made in 1910, was continued during 1911, the chief towns affected being Madrid, Barcelona, Valladolid, Seville, Santandar, Valencia, and Malaga. Some cases also occurred in Gibraltar, while in Portugal there was a sharp epidemic at Lisbon. Little information is obtainable as to epidemics in France, but it is known that over 100 cases of small-pox occurred in Paris, and a considerable number in Marseilles. Early in the year there was an outbreak of the disease in the Swiss cantons of Argau, Bern, and Basel. Although Germany is a well-vaccinated country, and though anti-vaccination has not as yet made much progress among its people, notwithstanding the noisy demonstrations of a few fanatics, it is unable to prevent the importation of the infection from time to time across its frontiers from the unvaccinated neighbouring states, and particularly from Russia. In 1911 up to the beginning of November 183 cases had been notified in Germany, of which 88 were foreigners, mostly Russians. Only a few attacks were notified in Holland at Rotterdam; and in Belgium at Antwerp.

So far as can be discovered there was no small-pox during 1911 in the well-vaccinated countries of Denmark, Norway, and Sweden, in which in past years little has been heard of the disease beyond occasional imported ship-borne cases which were easily dealt with.

Small-pox in Africa and the Near East.

In Egypt small-pox was somewhat widely epidemic, and up to September more than 2200 cases had been reported with 617 deaths, giving a case mortality-rate of 27·9 per cent. The chief Egyptian towns affected were Cairo, Alexandria, and Port Said. The disease was prevalent in Algeria, especially at Constantine, and some cases occurred in the town of Algiers. There was also an epidemic in Morocco, and some cases were reported at Tangier. The West African Colony of Gambia experienced a localised outbreak at Bathurst lasting from April to June. In Cape Colony in the Herschel district, and in the Transvaal at Johannesburg, as also at some places in the Orange Free State, the occurrence of small-pox was certified during the year, and some cases came under observation in East Africa at Lorenzo Marques. The epidemic, which had begun in 1910 at Zanzibar, continued during part of 1911; and in the same way the prevalence of small-pox observed in Abyssinia and Berbera in the previous year persisted in the early months of 1911. At several places in Arabia small-pox appeared, and a sharp outbreak was referred to Aden, where up to July as many as 330 cases had been treated.

Small-pox in Asia and Oceania.

Small-pox was very prevalent in many of the Indian provinces during 1911, and epidemics occurred in a number of cities, including Madras, Bombay, Karachi, Rangoon, and Moulmein. In Ceylon an outbreak was reported at Colombo, and in the Straits Settlements at Singapore and Penang. There was an epidemic of small-pox at Bangkok,

the capital of Siam, as also at the seaport town of Saigon in Indo-China. In many towns and districts in the Chinese empire small-pox occurred in epidemic form, and among other places outbreaks were reported at Hong-Kong, Shanghai, Hankow, Nanking, Chunking, Tientsin, Swatow, and Amoy. Some cases were notified in Japan at Kobe and in other towns, as also in the island of Formosa. The disease was also reported to have occurred in the Dutch East Indies, particularly at Batavia. Small-pox was prevalent in the Philippine Islands during the first half of 1911, and some cases came under observation at Honolulu, Hilo, and other places in the Hawaiian Islands.

Small-pox in America.

In the United States small-pox was widely prevalent, but continued to be, as of late years, of an extremely mild form. Up to November over 21,000 cases were notified, with only about 100 deaths. The States which suffered most included North Carolina, Florida, Kansas, Colorado, Utah, and Oklahoma. In Canada the disease was spread over a wide area, the provinces that were the worse sufferers being Quebec, Prince Edward Island, and British Columbia. In Quebec, though the cases numbered some thousands, the mortality was very small, the type being the same as that met with in the United States.

In South and Central America the disease was present in many localities in a more virulent form. In Brazil there were some epidemics, especially at Pernambuco, where nearly 650 deaths were reported in seven months, and cases also occurred in Rio de Janeiro, Para, and Bahia. A suggestion has been made by Dr. ZEFERINO MEIRELLES that small-pox may be spread in Brazilian towns by the agency of fleas. In Argentina the disease was epidemic in Buenos Aires and Rosario, more than 250 fatal cases occurring in the latter city in six months, and in Uruguay at Montevideo. Small-pox continued to be prevalent in Chili at Valparaiso, and raged in a very virulent form in the province of Coquimbo. The presence of the disease at Salaverry, Truxillo, and elsewhere in Peru was reported during the year. Cases were notified in Ecuador at Guayaquil; in Colombo at Carthagena; in Guatemala at Estoria and Guirgua; and in British Guiana at Georgetown. Small-pox was widely diffused over Mexico during 1911, and outbreaks were reported, among other places, at Tampico, San Luis Potosi, the city of Mexico, Aguascallientes, Inuris, Juarez, Mazatlan, Tulcahana, and at San Juan Bautista, the capital of the province of Tabasco. So far as is known, small-pox was absent from the West Indies during the year, save that a single case, imported from Rio de Janeiro, was notified at Bridgetown in the island of Barbados.

FORENSIC MEDICINE.

ACTS OF PARLIAMENT.

Mr. LLOYD GEORGE'S measure of National Insurance has occupied the attention of the Legislature and the public with questions of vital importance to the medical profession during the past year, and has been fully discussed in these columns. The Bill was read for a third time in the House of Commons on Dec. 6th and in the House of Lords on Dec. 15th.

Among other legislation achieved during the earlier part of the year, and in most cases of indirect rather than of direct interest to the medical profession, may be mentioned 1 & 2 Geo. V. Ch. 6, to be cited as the Perjury Act, 1911. This deals with other offences of untruthfulness besides false statements made on oath in judicial proceedings and in other matters, for it codifies and consolidates the law with reference to statements made not on oath but in matters of public importance, where, for example, an Act of Parliament orders answers to be made to questions and information to be supplied for the purpose of making the statute in question effective. To speak generally, it repeals existing statutes or sections and imposes penalties which take the place of pre-existing ones. Notably it repeals section 39 of the Medical Act, 1858. The offence of obtaining or seeking to obtain registration by means of false representations now comes under a general section (section 6) in the new Act relating to all public registers or rolls kept in pursuance of Acts of Parliament. Section 4 of the Act deals expressly with false statements and answers made in connexion with the registration of births and deaths, parts of the Registration Act, 1874, being repealed with necessary alterations in the corresponding Act of 1880 for Ireland. Section 2 of the Midwives Act (for the punishment of midwives seeking to obtain enrolment by means of false declarations or certificates) is also repealed, and the declarations made under the Cremation Act of the same year (1902) are also apparently brought under the new law.

1 & 2 Geo. V. Ch. 5, The Geneva Convention Act, 1911, prohibits the use of the emblem of a red cross on a white ground or the words "Red Cross" or "Geneva Cross" by "any person for the purposes of his trade or for any purpose whatsoever" without the authority of the Army Council, providing penalties for breaches of the law in this respect. Existing trade-marks which would otherwise be illegal are to be allowed to be used for four years from the passing of the Act (August 11th, 1911).

1 & 2 Geo. V. Ch. 21, Factory and Workshops (Cotton Cloth Factories) Act, 1911, empowers the Home Secretary to make regulations for the protection of health in cotton factories.

1 & 2 Geo. V. Ch. 27, Protection of Animals Act, 1911, repeals several existing Acts or parts of Acts relating to cruelty to animals and kindred subjects, and codifies the law relating to this subject, increasing substantially the penalties which magistrates may inflict for cruelty. Acts lawfully done under 39 & 40 Vict. Ch. 77, the statute which regulates experiments upon animals for scientific purposes, are expressly exempted from the operation of this new law.

The Copyright Act, 1911, confers important advantages upon the authors of books and upon artists, which medical men will share with their fellow citizens.

REGULATIONS AS TO THE SALE OF POISONS.

New regulations were issued by the Privy Council under Section 5 of the Poisons and Pharmacy Act, 1908, and came into force on Oct. 1st. One affects the sale of all substances to which the section applies, and orders the additional words "not to be taken" to be printed distinctly on the box, bottle, wrapper, vessel, or cover in which the substance is contained; and another obliges the delivery of liquid substances in bottles or containers distinguishable by touch. Both refer to sale by retail.

WORKMEN'S COMPENSATION ACT, 1906.

For the sake of convenience cases of medical interest connected with workmen's compensation are here grouped together, whether appeals to the House of Lords or Court of Appeal, or the decisions of county court judges upon the questions of law and fact as to which they are arbitrators. The enormous increase in litigation for which medical evidence is essential, due to the law of workmen's compensation, is strikingly illustrated.

IN THE HOUSE OF LORDS.

Morgan v. *William Dixon, Limited.*—This was a Scottish case. The applicant, a workman, claimed compensation for alleged injuries by an accident, and the employers required him to submit himself for examination by their medical man. The workman expressed himself willing to do this, but stipulated that his own medical attendant should be present

at the examination. The employers refused to accede to this and applied to the Sheriff Substitute, contending that the workman had refused to submit to examination and that his claim should be sisted. The Sheriff Substitute adopted this view and the application for compensation was sisted accordingly, the Second Division of the Court of Session on appeal upholding the decision of the Sheriff Substitute. The case accordingly, on further appeal by the workman, came before the House of Lords, when the Lord Chancellor, Lord ATKINSON, and Lord GORELL (Lord SHAW dissenting) upheld the decision of the Court of Session. The House of Lords declined to formulate a rule of law that as an abstract unconditional right the workman might have his medical adviser present when examined on behalf of the employers. Whether it might be a reasonable condition for the workman to impose was a question of fact for the arbitrator to decide. He might decide that it was a reasonable condition or not, as a matter of fact; but the House of Lords did not decide as to facts, they laid down as a matter of law that there was no absolute right in the workman to insist on the presence of his own medical adviser. This and the two following cases, decided earlier in the year, throw light upon important points which arise under Schedule I., section 4, of the Workmen's Compensation Act.

IN THE COURT OF APPEAL.

Warby v. *Plaistowe and Co.*—The applicant, a workman receiving weekly compensation after being injured in an accident, was required by his employers to submit himself to examination by their medical man, Dr. R. J. COLLIE, either at the house of Dr. COLLIE, in Porchester-terrace, Bayswater, or at the workman's house, Eden-grove, Holloway. The workman, on the advice of his solicitors, refused to be examined except at their office and in the presence of a member of their firm. The employers, treating this as a refusal to submit to medical examination, discontinued their weekly payments to the workman, who applied to the county court judge asking him to order their continuance. The county court judge took into consideration all the facts of the case, including allegations against Dr. COLLIE that his conduct towards workmen examined by him was such as to justify the imposing of the above conditions, and held that even supposing these allegations to be true the conditions proposed would not protect the workman more efficiently than the presence of his own medical adviser. He further expressed himself satisfied that the allegations against Dr. COLLIE were not true, and held that on either assumption the conditions sought to be imposed were not reasonable, and that therefore there was a refusal on the part of the workman to submit himself to examination, and that the workman's application to have his weekly payments renewed must fail. The workman appealed, and the Court of Appeal upheld this decision, expressing disapproval of a solicitor's office for such examinations and of the imposing of conditions upon the employers by the workman's solicitors. The court pointed out that the Workmen's Compensation Act gave the employers the right to select their own medical man, and gave no right to the workman to impose conditions.

Harding v. *Royal Mail Steam Packet Company.*—The applicant, a workman receiving weekly compensation after being injured in an accident, was required by his employers to submit himself to examination by their medical man, Dr. R. J. COLLIE, at his house in Porchester-terrace, Bayswater. The workman refused to submit to examination except at the office of his solicitors in the City or at the surgery of his own medical attendant. The county court judge held that this did not amount to a refusal to submit to medical examination so as to justify discontinuance of weekly payments by the employers. The Court of Appeal upheld this decision, the Master of the Rolls saying that the question to be decided was one of fact: "Was the refusal to go to the employers' doctor's surgery so unreasonable as to amount to a refusal to submit to examination or to be obstruction?"

Hawkins v. *Powell's Tillery Steam Coal Company.*—An elderly man engaged in a colliery helped to handle some trucks and afterwards did other work. While engaged on the second work he became ill and died shortly afterwards at home, post-mortem examination showing that death was probably due to angina pectoris. The county court judge came to the conclusion that death was due to over-exertion in pushing the trucks. The Court of Appeal held that there was no evidence to support the finding of the county court judge, and the appeal of the employers was allowed. The court distinguished this case from Glover, Clayton, and Co., Limited, *v.* Hughes (1910, A.C. 242) (the case of a man who died from an aneurysm while tightening a nut with a spanner), laying down that it must be established by direct evidence or legitimate inference from proved facts that death arose out of, as well as in the course of, the employment.

Warner v. *Couchman.*—A journeyman baker, whose right hand and arm had been injured by frost-bite while he was delivering bread, claimed compensation for an injury arising out of his employment. The county court judge refused compensation and the Court of Appeal upheld this view, being of opinion that there was no special danger affecting the claimant beyond what other drivers and persons working out of doors encountered, and that consequently his injuries did not arise out of his employment. From this Lord Justice FLETCHER MOULTON dissented.

Ball v. *William Hunt and Sons, Limited.*—A workman, who had long lost the sight of his left eye, met with an accident which made it necessary to remove the eyeball, and claimed compensation on the ground that his pre-existing blindness in one eye being made manifest deprived him of the power to obtain work. The county court judge held that the applicant was not incapacitated by the accident, and the Court of Appeal upheld this view, holding that the accident which only made apparent the pre-existing incapacity did not entitle the claimant to compensation. From this judgment Lord Justice FLETCHER MOULTON dissented.

Carolan v. *Harrington and Son.*—In this case a county court judge had had to deal with a case where a workman was dead and where there was considerable conflict of medical evidence as to whether death was due to an accident which had in fact befallen the deceased. He accordingly referred the question to a medical referee, who decided against the applicants for compensation. They appealed on the ground that upon the construction of the Workmen's Compensation Act and Regulations the medical referee could only be resorted to when the workman was alive and not when he was dead. The Court of Appeal held that the judge's power to refer the case to a medical referee under Schedule II., par. 15, of the Act extends to a case where death has occurred as the alleged result of an accident.

Roles v. *Pascall and Sons.*—A workman met with an accident in July, 1909, but did not enter a hospital for treatment for the injuries then sustained until April, 1910. In July, 1910, he claimed compensation under the Workmen's Compensation Act, 1906, having only become aware of the existence of the Act and of his having probably the right to compensation when in the hospital. Consequently, he had exceeded the time allowed by claiming more than six months after the occurrence of the accident. The county court judge held that there was "reasonable cause" within the meaning of the Act for the failure to give notice in time, but the Court of Appeal held that the workman's ignorance of the law was neither a "mistake" nor "reasonable cause"

either of which might have entitled him to be excused in respect of the delay.

Proctor and Sons v. *Robinson, and Cardiff Corporation* v. *Hall.*—Two cases argued in the Court of Appeal were concerned with the question of discontinuing an award of compensation to a workman to the extent justified by his capacity to do light work. In HALL'S case a medical referee had reported him "quite able to do any form of light work, more particularly such as would require principally the use of the right hand." It was held by the court of appeal that this was a finding of capacity for work such as that described, and that the fact that the man had tried to obtain light work and failed did not affect the question. In ROBINSON'S case the county court judge, after some conflicting medical evidence as to the man's incapacity, decided that he could do light work if he could get it, but made no order to reduce the compensation as no evidence was before him that such light work as the man could do was obtainable. The Court of Appeal upheld this decision, laying down that it was for the employers to show what kind of light work the workman could do, and that there was some chance of his obtaining it.

Claim by a House Surgeon.—The house surgeon of a charitable institution, to which an X ray apparatus had been presented, voluntarily offered his arm for the testing of the length of exposure to the rays, and having sustained a burn claimed against the infirmary committee under the Workmen's Compensation Act. The county court judge, whose decision was afterwards upheld by the Court of Appeal, held that the claimant was not entitled to compensation on the ground that it was no part of his duties to offer himself for experiments, and that consequently the accident did not arise out of and in the course of his employment.

IN THE COUNTY COURT.

Scarlet Fever as an Accident.—In the Manchester county court an award was made in favour of a workman as for an accident in respect of infection with scarlet fever, the claimant being a mortuary porter whose duty it was to clean the mortuary at the Monsall Fever Hospital. The county court judge found that the disease was contracted in the mortuary and that it amounted to an accident within the meaning of the Act.

IN THE DIVISIONAL COURT.

Pharmaceutical Society v. *Jacks.*—A defendant, not being a registered pharmaceutical chemist but a tradesman licensed to sell poisonous substances for agricultural and horticultural purposes, sold a bottle containing a poisonous compound without complying with the regulations for such sales in that he had not labelled the bottle with his name and address. The Pharmaceutical Society sued the defendant for a penalty under section 15 of the Pharmacy Act, 1868. The county court judge held that the proper course would have been to report the defendant to the local authority which licensed him, or to prosecute him under section 17 of the Act of 1868 for the offence of selling a poison without a label, and gave judgment for the defendant. The divisional court held that the defendant might be sued for a penalty by the Pharmaceutical Society under section 15, and none the less so because the facts showed that he had also committed an offence under section 17.

Dodd v. *Pearson.*—Section 253 of the Public Health Act, 1875, provides that except in certain cases for which express provision is made proceedings for the recovery of a penalty shall not be taken by any person other than the local authority or the person aggrieved without the consent of the Attorney-General. A district council refused to prosecute in a case relating to diseased meat, and the police took the matter up and secured a conviction. The meat had been destroyed without reaching the public, so there was no person aggrieved. As the police had not obtained the Attorney-General's consent and were not persons aggrieved the Divisional Court held that the conviction could not stand.

IN THE HIGH COURT.

Thomas v. *Barker.*—Before Mr. Justice DARLING and a special jury an action brought against Mr. H. A. BARKER, carrying on business as a "bone-setter," had as its result a verdict for the plaintiff for 20 guineas damages. Mr. THOMAS had sustained an injury to his knee ten years before his treatment by the defendant from which he had not recovered, and before he went to Mr. BARKER it was the seat of tubercle. The defendant caused gas to be administered, and on two occasions, according to the plaintiff's case, moved the joint to an extent and in a manner which were matters of dispute at the trial. Subsequently to the treatment by Mr. BARKER amputation of the limb had to be performed, and the action was based upon the allegation that the conduct of the defendant in treating a tuberculous joint as described was responsible for this result. Judgment was given for the above-mentioned amount with costs on the High Court scale and a certificate for a special jury.

Action Against a School.—An action was brought against the governors, the headmaster, and a housemaster of Sherborne School on behalf of a boy on the ground that through negligent treatment of a whitlow at the school he had lost his arm. The whitlow, which was on the thumb, was treated by the school medical officer and matron and disappeared in a few days, but after the boy returned home septic poisoning, followed by necrosis, necessitated the amputation of the right arm, and a micro-organism common in whitlows was found in the pus. Medical evidence on both sides was given, that for the defence ascribing the disease in the right arm to the presence of the micro-organism which caused the whitlow, but not to the whitlow or to any neglect in treating it. A verdict was found for the defendants, with which the Lord Chief Justice expressed his full concurrence.

Corbin v. *Stewart.*—Mr. Justice SCRUTTON, sitting without a jury, tried a case in which the value of a medical practice sold by the plaintiff to the defendant was an issue in dispute, and also whether a contract to introduce to patients had been properly carried out. A point of law was raised as to whether the plaintiff, the widow of a medical man, could dispose of the goodwill and receive payment for it. A counterclaim by the defendant for medical attendance on the plaintiff's children was also met by a defence alleging a binding custom to treat the families of medical men without charge. The judge held that the plaintiff could sell the right to carry on the practice of the deceased in the same house, as it belonged to her, and that she could contract as she had done to introduce him to the practice, but suggested that the estate might have a claim against her for money received in respect of the latter part of the transaction. On the question of medical attendance on the plaintiff's family, he held that it was not necessary to establish the existence of a binding custom: it was enough to prove a general practice, which had been done. If the defendant did not intend to conform to that practice he should have informed the widow at the outset, who might then have sought medical attendance from another practitioner. Judgment was given for the plaintiff on claim and counterclaim.

Actions Arising out of Nuisances.—Among actions for nuisances which succeeded may be mentioned one brought in the Chancery Division by the Plymouth corporation against the Plymouth Fish Guano and Oil Company, to restrain the defendants from carrying on their manufacture of fish guano and manures from fish offal and refuse so as to cause a nuisance. An injunction was granted. Another action was also successfully brought in the Chancery

Division by Mr. H. O. BECKER, an artist, who obtained an injunction and £25 damages against Earl's Court Exhibition, Limited, in respect of a nuisance caused to him and his family in their home near the Earl's Court Exhibition, by the noise of certain side-shows and other noises in connexion with amusements at the exhibition.

Rayner v. *Corporation of Stepney.*—In the Chancery Division an injunction was obtained against a local authority restraining them from enforcing a closing order in respect of certain insanitary dwellings under the Housing, Town Planning, &c , Act, 1909, on the ground that the prescribed form had not been followed in the order served upon the owner. The statutory form has at the foot a note setting out the section of the Act which gives an owner the right of appeal to the Local Government Board, and this had been omitted.

Browning v. *Browning.*—In the Divorce Court the President laid down, after reviewing a number of earlier decisions tending to the contrary doctrine, that the wife establishes a *prima facie* case of cruelty when she proves that her husband has communicated to her a venereal disease, and that the burden would then lie upon him to prove that he was innocent, or ignorant, or otherwise not guilty of the legal cruelty charged against him.

IN THE COUNTY COURTS.

Action against the Medical Officer of an Isolation Hospital.—An action was brought in the Hanley county court against Dr. C. H. PHILLIPS, medical superintendent to the Stoke-on-Trent and Stoke Rural Joint Hospital Board, by the father of a boy treated for scarlet fever in the Bucknall Infectious Diseases Hospital and the Bagnall Convalescent Hospital. The patient had been kept in the hospital after recovery in other respects owing to a slight sore inside the nose, and when removed by his parents was taken away in a taxicab. He afterwards developed scarlet fever again and his father also suffered from it. The medical officer was sued for alleged negligence in discharging the boy, upon whom his mother found some slight desquamation proceeding after the father had developed the disease. The case for the defence was to the effect that through the removal in a taxicab catarrh of the nostrils afterwards observed might have been brought on, and that fresh infectivity might have been the result. Evidence as to the precautions taken before discharge was given, and the county court judge, who tried the case without a jury, having found that there had been no negligence, gave judgment for the defendant.

IN THE CORONERS' COURTS.

Urgent Operations in Hospitals.—At an inquest at Southwark the evidence showed that a little boy had died in Guy's Hospital after being run over and after an operation to which assent had been refused by the father. Assent was given later, but there was delay in rendering aid recommended by the surgeons of the hospital. The matter was discussed at the inquest and a suggestion made that in such cases a committee of surgeons should be empowered to decide upon an operation and to have it performed either without parental consent or in the teeth of parental opposition. It was pointed out in THE LANCET that an urgent operation to save life must be performed, without waiting for parents to be consulted, upon the responsibility of the surgeon, and that the Children Act, 1908, already renders it punishable in a parent not to provide medical aid for his child, although he can apparently decline to allow that aid to be effective by refusing consent to an operation.

Inquest following a case of "Healing" by "Christian Science."—In the Chelsea coroner's court an inquest was held upon the body of Miss NORA BOHM (the daughter of a Norwegian gentleman) who had suffered from disease of the heart, and had at one time had medical advice with regard to it. She had been recommended by a friend to try "Christian Science," and was attended by a female "healer," who offered prayers daily, and who one evening found her patient dead. The verdict was in accordance with medical evidence based on post-mortem examination that death was due to heart disease and accelerated by dilatation of the stomach, the opinion being expressed by Dr. B. H. SPILSBURY, who made the examination, that suitable care and diet might have prolonged life for a short time.

Death from Drinking Carbolic Acid.—At an inquest upon a young stockbroker who had died from carbolic acid poisoning it was proved that he with four other persons went on board a French vessel in the Thames and was invited to drink port wine by the captain, who, by mistake, brought out a bottle of carbolic acid supplied to his ship for disinfecting purposes. Glasses were filled and a toast was drunk simultaneously by those present, with the result that five were rendered extremely ill, of whom one, the subject of the inquest, died.

A Mysterious Burning Fatality.—An inquest was held at Marlborough upon the body of a little girl who was observed to be in flames immediately after the passing of a motor-car, which had been backed out of a garage near her. It was suggested that a spark from the exhaust caused the fire and the incident was "reconstructed," with negative results, an open verdict being returned so far as the cause of the ignition of the child's clothing was concerned.

An Alleged Murderous Assault Disproved.—A maiden lady, aged 54 years, left alone in her flat, was found by her servant lying on the floor with cuts on her head, and verbally and in writing to her medical attendant, told a story of having been murderously assaulted by two men, whom she described. She became very ill and died. At the inquest the police were unable to bring forward corroborative evidence of the above story. There was evidence that no men could have reached the flat as alleged without being observed, and relatives deposed that the deceased suffered from hallucinations. Medical evidence showed that the injuries were consistent with a fall, and that death was due to heart failure and accelerated by alcoholism. The jury found a verdict accordingly, ignoring the story of an assault.

ANATOMY.

It is becoming more and more manifest every year that anatomical research and progress are becoming specialised along two quite distinct paths. The study of the developing embryo by the modern methods of wax-plate reconstruction is claiming an increasing number of workers year by year. On the other hand, the study of the adult human body is always being undertaken afresh as new surgical procedures demand fresh knowledge, or new pathological findings necessitate a more accurate acquaintance with the normal tissues. But it must be owned that a very large measure of the new knowledge of the human body is being accumulated, not at the hands of professed anatomists, but rather as the result of the labours of pathologists and clinicians. Outside the study of the central nervous system there are but few anatomical investigations which are undertaken to-day as pure research; and the stimulus for the study of comparative anatomy called forth by the doctrines of evolution shows signs of dying down, at any rate among English anatomists. So far as the study of the human body is concerned, there is, and can be, no end to the progress of research while each of the sister subjects of the science of medicine continues to make progress, for the advances in adult human anatomy are largely indexes of new methods employed in the kindred sciences of surgery, medicine, and pathology. With such advances we will deal first.

Anatomy of the Head and Neck.

A more precise knowledge of the anatomical relations of the fifth cranial nerve has been demanded by the increasing importance and frequency of surgical procedures directed to the relief of trigeminal neuralgia. The widely-employed method of injecting the main trunks near their exits from the skull has led Professor J. SYMINGTON to reinvestigate the relations of the structures traversed by a hypodermic needle thrust inwards from the cheek for the purpose of injecting the nerves. It is at once apparent from this study that such injections should not be undertaken without an intimate knowledge of the many important structures likely to be encountered in the neighbourhood of the nerve trunks. Another piece of work which deals with normal anatomy, and is of clinical interest, is that of Mr. F. G. PARSONS on the form of the parotid gland. Professor ARTHUR THOMSON has made studies in the "filtration angle" and other structures of the globe of the eye; and Dr. S. E. WHITNALL has produced a series of papers dealing with the normal anatomy of the orbit and some of its vestigeal muscles. Dr. WHITNALL'S description of the tubercle on the malar bone, for the attachment of the ligamentous structures of the outer side of the orbit, furnishes another instance of the late appreciation by anatomists of a very fairly well-developed bony feature. Mr. J. E. S. FRAZER has continued his studies of the development of the upper respiratory passages. He has dealt especially with the pharyngeal end of Rathe's pouch, which, according to his investigations, becomes involved in the downgrowth of the nasal chambers and takes up its final position upon the hinder end of the nasal septum immediately above the palate; such a fate would well explain the occasional presence of pituitary remnants in this situation. He has also reinvestigated the formation of the primitive mouth and the development of the adult nasal chambers, and in his account of the process a large share of the formation is assigned to the maxillary processes, a finding which well accords with the adult nerve-supply of the parts.

Professor E. FAWCETT has made further contributions towards our knowledge of the development of the skull bones. His studies have been mostly concerned with the maxilla and the vomer, both of them bones the development of which is of direct importance in the study of surgical malformations of the face. Professor FAWCETT'S work rings true in that it tends to simplify the processes of development and not to complicate them, and it is satisfactory to learn that the view of CAMPER, and more lately of HUMPHRY, that the maxilla is derived from a single centre of ossification, is so definitely confirmed by these most recent researches.

Dr. J. W. JENKINSON has left the study of the morphology of the ossicles of the ear in a more definite position by his researches on their development in the mouse. He has shown that both the incus and the malleus are derivatives of the upper part of the blastema of the mandibular or first branchial arch, and that the stapes is derived from the dorsal median portion of the hyoid or second branchial arch. These conclusions he has arrived at by the study of embryos at a very early stage of development. The pituitary gland has come in for a more than usual amount of attention. Its blood-supply has been minutely studied by W. E. DANDY and EMIL GOETSCH, and its abnormal fossa in the skull has been investigated by Dr. W. L. H. DUCKWORTH in a case which showed other osseous anomalies. Acromegaly has absorbed the attention of many workers, and we may mention the papers by Professor ARTHUR KEITH which appeared in our pages.[1] Professor KEITH has made a study of the skeletal remains of many well-known acromegalic giants, among which O'BRIEN must be ranked, and he has been fortunate enough to secure for the museum of the Royal College of Surgeons of England a very remarkable series of specimens to illustrate the pathological changes which are met with not only in the bones but in the viscera of persons suffering from this strange disease.

Another important contribution to this subject has been made by Professor A. C. GEDDES, who has given a detailed account of the skeleton of a woman who had suffered from this disease for 25 years, during the greater part of which time she had been under close observation. In this study of acromegaly the anatomist has made strides into the domain of the pathologist, and all that is best in anatomy is likely to be awakened by such an excursion. Another research of practical interest in the study of the changes taking place in bone is that of Dr. DUCKWORTH on the repair of fractures as seen in the anthropoid apes. This opens up the whole subject of the natural repair processes of bones, a subject which has received a recent addition of knowledge from the findings of the anatomists engaged on the Survey of Nubia. Dr. F. WOOD JONES has drawn attention to the close relationship between the posterior divisions of the cervical nerves and the corresponding cervical vertebræ, an association which may possibly have a clinical bearing in cases of obscure neuritis affecting these cervical roots.

Anatomy of the Abdomen.

Dr. D. G. REID has made a series of studies of the peritoneal relations of the fœtus, and Professor SYMINGTON and Dr. WOOD JONES have continued investigations on the anatomy of the rectum. Dr. MAURICE GÉRARD has given a minute description of the arterial supply of the kidney, and with Dr. GEORGES has also conducted an investigation into the form and situation of the suprarenal glands. The structure of the pancreas has been exhaustively treated by Dr. GELLÉ, who has followed up his study of the diabetic pancreas by a systematic examination of the non-diabetic gland. Professor A. F. DIXON has put on record the dissection of a case of additional kidney, a rare condition, but one which, nevertheless, has at times been recognised in the course of operation. Dr. J. LEWIS BREMER has made an elaborate study of the minute structure of the tubules of the testicle and epididymis; and a contribution of more practical interest dealing with the genital organs is that of Professor E. J. EVATT, which deals with the prostate gland in the female. This paper is an important contribution towards the study of the development and homologies of the urethra and vagina in the two sexes, and it is reasonable to hope that the teaching of gynæcological text-books will soon fall into line with modern work instead of repeating the findings of the early days of embryological investigation, which are well known to every embryologist to be untrue.

The subject of intra-abdominal pressure has again engaged the attention of Dr. R. H. PARAMORE, who chose that subject for the Hunterian lectures.

Anatomy of the Chest and other Regions.

A very detailed account of the structure of the mammary gland has been given by Dr. E. RETTERER and Dr. A. LELIEVRE. The study has for its object the precise recognition of normal and abnormal phases in the changing histological appearances of the gland tissue. In a similar way the structure of the thymus gland has been exhaustively studied by Dr. R. PIGACHE and Dr. H. BECLERE. Professor KEITH has continued the study of the abnormal heart, and Professor FRANKLIN P. MALL has given a minutely detailed account of the musculature of the ventricles, which, however, possesses academic rather than practical interest.

Dr. T. WINGATE TODD has added a great amount of new knowledge to the study of cervical ribs, and the subject of the pressure exerted by normal and abnormal nerve trunks

[1] THE LANCET, April 15th, 1911.

upon the ribs. This is a question to which an increasing importance has become attached, since it has the most direct bearing upon the interpretation of not uncommon and very distressing clinical conditions.

Embryology and Anthropology.

A large contribution has been made to pure embryology, but since at present it has not all fitted into the greater scheme of useful knowledge—the knowledge which must be placed at the disposal of the man who intends to treat the diseases of the human body—it is difficult to appraise it at its proper value here.

Anthropology has claimed the work of many anatomists; Professor KEITH has done much to follow the traces of early man, and the year has been especially marked as an epoch in the study of the mummy and the ancient Egyptian, for since the Survey of Nubia has completed its labours and Professor G. ELLIOT SMITH has examined the vast amount of human material, the mummy has lived in a clearer light than he has ever known since the day he was wrapped.

Obituary.

Anatomy has suffered a heavy loss, and progress made seems trivial, when death has claimed two such men as THOMAS DWIGHT, Parkman Professor of Anatomy at Harvard, and PAUL POIRIER, Professor of Anatomy at Paris.

THE NAVAL, MILITARY, AND INDIAN MEDICAL SERVICES.

ROYAL NAVAL MEDICAL SERVICE.

On introducing the Naval Estimates last March the First Lord of the Admiralty stated that effect had already been given to many of the recommendations of the Committee of Inquiry on the Medical Service, and that others connected with financial questions were in process of settlement. The new regulations were promulgated in September and fully dealt with in our issues of that month. As Admiral DURNFORD'S committee had reported in July, 1909, it would seem that great deliberation had been exercised in dealing with its recommendations. The reforms have been received, on the whole, with satisfaction, and we trust will result in the establishment of the Naval Medical Service as one of equal attraction and popularity with that of the army.

The chief points are: an improvement of pay all round, the establishment of a new naval medical school for the training of young officers and for post-graduate instruction, and the recognition of the status of the medical officer of the senior flagship of a fleet. This officer will now be principal medical officer of the fleet, and will be on the staff of the Commander-in-Chief. A step has thus been taken in breaking down the complete independence (and isolation) of individual ships and their medical officers which has distinguished the past. More important than this is the increase of pay; it is only slight, but is accompanied by a grant of charge pay in many more instances than heretofore, and the increased rates are given after short intervals of service. Allowances, however, have not been increased, and are not equal to those of executive officers of corresponding rank. A change of title from the unwieldy Inspector or Deputy Inspector-General of Hospitals and Fleets has been made to Surgeon-General and Deputy Surgeon-General. There are probably good reasons why the distinctive appellation of Admiral was not found to be suitable for use in conjunction with a professional designation.

The most important advance, however, is the establishment of a Naval Medical College at Greenwich. This step is frankly on the lines of the evolution of the medical service of the army. Haslar will still be retained for certain purposes, such as instruction in hospital administration and physical training, just as Aldershot, *mutatis mutandis*, supplies part of the course for army medical officers; while the laboratory courses will be carried out at Greenwich, where also there exist ample facilities for the study of clinical tropical medicine and of hygiene. The *genius loci* of the Royal Hospital, and the fact that laboratories and college accommodation already exist there, also the proximity of the Seamen's Hospital, will, we feel sure, unite to make this new institution a keen rival of the Army Medical College at Millbank.

The executive control of the sick berth staff has, however, not been committed to the naval medical officer; nor has the vexed question of allotment of cabins according to the relative rank of the surgeon been dealt with. To the general public these matters may appear trifles, but such is not the case; we think they will have to be settled before the service can become as attractive as it should be to the best type of medical candidate. It was admitted by Mr. MACNAMARA in the House of Commons in November that the deficiency of medical officers was 60.

A commencement has been made in the formation of a medical reserve for the navy, and the result so far is said to be satisfactory. Also, arrangements have been made with civil hospitals for the supply of additional trained nurses in the event of war; this new force is to be known as Queen Alexandra's Royal Naval Nursing Service Reserve, a sesquipedalian designation which, as an example of unwieldiness, takes the place of the now disused title of Deputy Inspector-General of Hospitals and Fleets.

As Coronation honours, the K.C.B. was bestowed on Inspector-General D. M. SHAW and Inspector-General T. D. GIMLETTE; and the C.B. on Inspector-General C. GODDING, Inspector-General A. W. MAY, and Inspector-General H. J. TODD, and on Fleet-Surgeon P. W. BASSETT-SMITH; also the C.V.O. was conferred on Fleet-Surgeon A. R. BANKART.

THE ARMY MEDICAL SERVICE.

Scientific Research Work.

The publication of the work of the Sleeping Sickness Commission under Sir DAVID BRUCE has been continued during the past year, the latest results tending to increase the complexity of the problem of effective prevention of this disease. It has been established by experiment that cattle may act as a reservoir for the virus, and that healthy animals may be infected from them by means of Glossina palpalis, also that in the fly area they naturally harbour Trypanosoma gambiense. It is possible therefore that cattle and antelope within this area may act as a reservoir and so keep up the infectivity of G. palpalis for an indefinite period, though up to the present there is no proof that this actually occurs. Trypanosome diseases of cattle were investigated, and T. pecorum found to be the organism responsible, the carrier, however, not being definitely ascertained. From the ox in Uganda a trypanosome was recovered, which on investigation proved to be identical with T. brucei, the organism originally discovered by BRUCE in Zululand in 1894, and proved by him to be the cause of nagana, the tsetse fly disease. In the latest (eleventh) report it has been shown that the tsetse flies can remain infective for 96 days. Amongst the results of the work of this Commission may be noted the discovery of the existence of Mediterranean fever, under the name of *muhinyo*, in Uganda, where the principal focus of the disease is found along the eastern shore of Lake Albert Edward. M. melitensis was isolated. The disease was limited in its distribution, and there was no evidence to show how it originated.

The final report of the Sudan Sleeping Sickness Commission, by Captain R. G. ANDERSON, contains particulars as to the distribution of the two species of glossina

in the Southern Sudan, but it appears that there is no evidence of the existence of human trypanosomiasis in these regions, though cases occur in the Lado *enclave*, which may be a menace to the Bahr el Ghazal province. Active steps are being taken to limit the spread of the disease from the Congo State towards Lado and the Sudan. As previously mentioned, a further Commission to study Sleeping Sickness in Nyassaland has been appointed, and is already at work.

An important research has been carried out by Lieutenant Colonel W. H. HORROCKS on the viability and variation of B. typhosus. As to the former point, the conclusion come to is that the duration of life of this organism outside the body is, under natural conditions, very short. This harmonises very well with the result of practical experience, but is not to be taken as warranting any relaxation of sanitary precautions. The question of the variability or mutability of B. typhosus is one of extreme interest. The typhoid bacillus, under the influence of toxins formed in a mixture of the urine of a typhoid carrier with water (1 part in 9) appeared to become changed into a form closely resembling B. fæcalis alkaligenes; after intraperitoneal passage through a series of guinea-pigs the bacillus possessed many of the characters of B. coli. Moreover, a gradual mutation from a bacillus of typhoid type, derived from the urine of a typhoid carrier and subjected to intraperitoneal passage, was observed into a Gram-positive streptococcus. These researches are of great value and have led to considerable discussion.

Major H. W. GRATTAN and Captain J. L. WOOD have investigated the occurrence of paratyphoid fever in India, and consider that a considerable proportion of cases returned as "pyrexia of uncertain origin" are really due to infection by B. paratyphosus A; this has, of course, an important bearing on prophylaxis. A series of observations by Captain P J. MARETT on the life history of the phlebotomus fly in Malta, three species of which were studied, led to the formulation of preventive measures which are likely to be of considerable benefit, not only in Malta, but in other countries also, where it is now becoming recognised that "sandfly fever" is prevalent.

Experimental scientific work in quite another direction was carried out by a committee of the Advisory Board on the food requirements of men engaged on active service. Lieutenant-Colonel C. H. MELVILLE, Major W. W. O. BEVERIDGE, and other officers took part. Very careful observations were made and some valuable results arrived at, which will bear fruit in due season.

Military Medical Organisation.

The progress of Territorial medical organisation has not been as rapid, nor has it been marked with as much spirit, as was anticipated by the War Office authorities, and hoped for by ourselves. It was stated in the House of Commons in November that the shortage of medical officers was 283, and of other ranks 1759. In January Lord CHEYLESMORE presided over a meeting held for the purpose of starting a voluntary aid ambulance scheme in connexion with the Middlesex Territorial Force, and a general committee was formed. In the same month it was reported that 23 detachments of the Red Cross Society had been formed in Essex, and that a branch had been started at Bristol. A second ambulance section was added to the Dublin University contingent of the Officers' Training Corps in February. In the Scottish Lowland Division Sir GEORGE BEATSON stated in February that all the units but two had been provided for, and the field ambulances were at full strength; voluntary aid detachments had been formed, and the arrangements for general hospitals were complete. In spite of the excellent spirit thus displayed there seems to have been some delay in providing the necessary building accommodation in Glasgow. We understand, however, that the chief engineer of the command has taken up the matter. Three field ambulances are now organised in the (Liverpool) West Lancashire Division. An excellent precedent was afforded in August, when the Voluntary Aid detachments of the 2nd London Division, under Colonel A. CLARK, during their period of training in Kent coöperated with local detachments of the Red Cross Society and St. John Ambulance Association to carry out field medical arrangements on a considerable scale; this is the first occasion, as far as we know, that these local bodies and the Territorial Force have worked together in connexion with actual manœuvres.

The sanitary officers of the Territorial Force, whose services will be available on mobilisation, are as a body keenly alive to the importance of their duties and anxious to carry them out efficiently, but there is some want of clearness in the minds of many as to what these duties actually are. Lieutenant-Colonel MELVILLE, R.A M.C., addressed a largely attended meeting of the Society of Medical Officers of Health on this subject in February, the lecture being followed by a vigorous discussion. One speaker mentioned that in certain divisions the sanitary staff officers were consulted respecting the choice of sites for annual encampments and sources of water-supply, while in other places this was not the case. Mr. F. E. FREMANTLE thought that the Territorial Force would ultimately have to depend for sanitation on the civi sanitary administration. There can be little doubt that this would be the case, and there seems even now some need for closer intercommunication and coördination between the military authorities and the local health officers of districts to ensure that the knowledge possessed by the latter should be at the disposal of the former. If the local medical officer of health, or the county health officer, being also a member of the Territorial Force, were always to be on duty in his own area, there would be no difficulty; but obviously this could not always be the case. The Loamshire Territorials might have to serve in Downshire. The expert knowledge of the local health officer should certainly be at the disposal of the military medical authority at the earliest possible moment, and some speedy method of intercommunication appears to be a desideratum.

With developments in the fighting efficiency of armies, increased range of fire, and lengthened duration of engagements (some battles in the Manchurian war having lasted as long as ten days or more), alterations will have to be made in the arrangements for ambulance work. This subject was considered by Lieutenant-Colonel M. W. RUSSELL at a meeting of the United Services Medical Society early in the year, and the discussion that followed showed that much careful consideration will be required by the responsible staff at headquarters to ensure that the medical arrangements of our army are kept fully up to the mark in relation to those of the other great Powers. The manœuvres on Salisbury Plain during the summer and autumn of the past year were carried out on an extensive scale, and the medical and sanitary arrangements were more systematised than heretofore. It was evident that great progress had been made in the direction of efficiency, both in the Regular and in the Territorial units. The health of the troops was good, but owing to the scarcity of water some manœuvres had to be abandoned.

A modification has been made in the terms of appointment to the more important hospitals; the officers appointed will still be nominated by the Director-General, but the length of tenure will not be for a fixed period (generally three years) as heretofore. This rule is rendered necessary in order to ensure an equitable working of the roster for field officers. A most welcome departure from the official procedure of former

years is the publication in the corps journal of the list of officers required to proceed abroad during the ensuing trooping season, which gives fair warning to everyone when they are likely to have to leave home and where their destination is to be. At the same time it is notified that exchanges may be made by mutual consent, and, as regards India, that every effort will be made to meet the wishes of officers in regard to their being posted to any particular division. These evidences of courtesy and consideration on the part of headquarter authorities go a long way towards maintaining the spirit of contentment that is becoming general throughout the medical service of the army. In connexion with this we would commend to anyone interested in the service a capital speech delivered by the Director-General at the Army Medical College prize-giving on April 28th, and reported in the corps journal for June; this contains excellent advice and conveys a most attractive, yet not in the least exaggerated, idea of the actualities of the service.

Personnel.

On the occasion of the Coronation the Director-General received the honour of a K.C.B., and Companionships of the Bath were bestowed on Surgeon-General J. G. MACNEECE, Surgeon-General G. W. ROBINSON, and Colonel H. E. R. JAMES. Colonel P. B. GILES and Colonel G. S. ELLISTON of the Territorial Force received the same honour. In February Colonel E. J. E. RISK was appointed Commandant of the Royal Army Medical College, in succession to Colonel D. WARDROP, retired; the latter officer has since been appointed to the charge of the Officers' Convalescent Home at Osborne.

The retirement of Sir T. GALLWEY, K.C.M.G., C.B., after a career of great distinction, requires notice. This officer served in the Afghan war of 1879, the Egyptian expedition of 1882, the Nile expedition of 1884–85, the operations in Dongola in 1896, and in the later Nile operations of 1897 and 1898, being then Principal Medical Officer of the Egyptian Army. He was a divisional P.M.O. in the South African war, where his energy and resource, when P.M.O. of the force under Sir REDVERS BULLER, were strikingly manifested on several occasions.

The obituary list includes Surgeon-General J. A. MARSTON, C.B., a valued contributor to our columns for many years; Colonel T. LIGERTWOOD, C.B., formerly medical officer to the Royal Hospital, Chelsea; Surgeon-General R. W. MEADOWS, a Crimean veteran; and Colonel G. S. NICKERSON, at the early age of 40, formerly an officer of the corps, but who had latterly been in the service of the Egyptian Government, and at the time of his death was Governor of the Province of Sennaar.

THE INDIAN MEDICAL SERVICE.

With regard to the medical service in India we regret that we are unable to chronicle either a condition of contentment such as prevails in the Army Medical Corps, or of hope, such as animates the Naval Service in the possession of its new Warrant. Whether the prevailing sentiment can be described as one of resignation or of discontent is, perhaps, doubtful; we fear the latter state of mind is nearest the truth. Certain alterations have, however, been made in the Indian Medical Service regulations during the past year which indicate a desire on the part of the ruling authorities to meet the wishes of their officers. Revised rules have been issued as to the fees that may be claimed by medical officers when called in to act professionally outside their ordinary sphere of duty; the ill-advised rules that had been promulgated in 1907 and which were universally condemned have been rescinded, and an equitable and reasonable code issued in substitution. Unfortunately, some harm had already been done in diminishing the attractiveness of the Service, as shown by the reduction in number of the candidates for commissions.

A concession has been made in regard to acceleration of promotion; if an officer has not been able to obtain study leave in order to go through special courses, or to take special diplomas, and so has been prevented from qualifying for promotion while in the rank of captain, this acceleration is now open to him for four years after his promotion in the ordinary course. It has been pointed out, however, that there are difficulties, as it is, in the way of getting leave now that so much more leave is applied for by the younger officers than used formerly to be the case; it may result in a larger number being allowed to be absent at one time; or possibly study leave men might be placed on a different roster, so as not to interfere with the leave due to officers in the ordinary way. For officers who have entered since April of the present year permission will no longer be granted to remain in the service beyond 55 years of age, in the rank of lieutenant-colonel, in order to qualify for the 30 years' pension.

The appointments of honorary physician and honorary surgeon to the KING will in future only be held by officers on the active list; this alteration follows the recent change of the same kind in the Royal Army Medical Corps; and, as in that case, if the officer is a lieutenant-colonel, the appointment carries a brevet colonelcy only. Since the lamented death of Lieutenant-Colonel LESLIE last March the duties of Sanitary Commissioner with the Government of India have been carried on by the Director-General, I.M.S.; with a view to economy in administration several official appointments have recently been abolished, but up to the present no definite decision has been come to regarding that of the Sanitary Commissioner. The Secretary of State, in replying to Lord CURZON in the House of Lords in November, stated that, contrary to the proposal of the Government of India but in agreement with the views of the Indian Council, he considered that it was desirable to retain the appointment. We feel that Lord CREWE has come to the right decision in this matter; there is no doubt, and no one denies, that economy must be practised and that appointments which are not necessary must be abolished; but over and over again it has been shown that expenditure on prevention of disease really results in economy, and unless this department of administration and research is directly represented at headquarters of Government there is danger that due consideration will not be given to its requirements. It is possible that some improvement may be made in the mutual administrative relations of the work of the Director-General and of the Sanitary Commissioner.

A word of congratulation must be given to medical officers of both British and Indian Services who have given so much time and labour to ambulance work in India in connexion with the St. John Association; many ruling princes have supported the movement, and it has now taken root in the country and publishes an official gazette.

Scientific Work.

The research work of officers of the Indian Service during 1911 has included investigations on the Destruction of Fleas by Exposure to Sun (in connexion with plague prevention) by Captain J. CUNNINGHAM; on the Solubility and Absorbability of Quinine and its Salts, by Captain A. A. MACGILCHRIST; on the Cultivation of the Leprosy Bacillus, by Captain T. S. B. WILLIAMS; and on the Cultivation of the same and Treatment by means of a Vaccine prepared therefrom, by Major E. R. ROST. Sir D. SEMPLE, Director of the Kasauli Institute, has issued memoirs on the "Relation of Tetanus to the Hypodermic or Intramuscular Injection of Quinine," and on the "Preparation of a Safe and Efficient Antirabic Vaccine." This last-mentioned research is likely to prove of far-reaching importance for the inhabitants of India and other countries where rabies is prevalent. Captain WILLIAMS concludes that the organism of leprosy is

to be considered, not as an acid-fast bacillus only, but as a pleomorphic streptothrix, and consequently that the study of the mode of spread of the disease must be approached in a broader spirit than hitherto. (Colonel HORROCKS'S researches on B. typhosus, already referred to, lead to a similar conclusion in regard to typhoid.)

Captain R. MCCARRISON has made experimental studies on goitre at Gilgit; he believes the disease to be caused by presence in the blood stream of certain toxic substances of metabolic, bacterial, or putrefactive origin; the toxic agent is conveyed to the body in drinking-water, to which it gains access from the soil; it can be removed by filtration; the suspended matter of a goitrigenous water, separated by a Berkefeld filter, causes the disease. Further, it is a living organism, because it can be destroyed by boiling. The dose of infection is an important factor. Lastly, prevention consists in the provision of a pure water-supply.

The researches here noted constitute a fine record for one year by the small number of officers that have facilities for work of this nature. A contribution to practical sanitation has been made by Major W. W. CLEMESHA in his work on "Sewage Disposal in the Tropics," as to which he has had considerable experience. Major LEONARD ROGERS has written a standard work on "Cholera and Its Treatment," which will take the place of MACNAMARA'S treatise, admirable as that was in its own day.

Personal.

The honours bestowed in connexion with the Crowning of HIS MAJESTY the KING as EMPEROR of INDIA will be found recorded under "Honours to Medical Men," as well as other honours conferred. We have to record the retirement of Surgeon-General P. H. BENSON, the head of the Madras Medical Service; also of Surgeon-General H. HAMILTON, C.B., and of Colonel J. SHEARER, C.B., D.S.O., an officer who has held important appointments at headquarters, and has served in six campaigns.

The obituary list is a long one. Two officers of very high ability have been lost in the prime of life. Lieutenant-Colonel J. T. W. LESLIE, C.I.E., after having acted as professor of chemistry at Calcutta and secretary to the Director-General at headquarters, was at the time of his death Sanitary Commissioner with the Government of India. Major GEORGE LAMB was Director of the Pasteur Institute at Kasauli, and had done good research work on Mediterranean fever, snake venom, plague, and rabies. Colonel J. A. CUNNINGHAM, who died in Calcutta from cholera, had just been appointed Inspector-General of Hospitals in the Central Provinces. Colonel I. B. LYON, professor of chemistry and jurisprudence at Bombay, was well known as the author of "Medical Jurisprudence in India."

Of retired officers who have joined the majority Colonel W. P. WARBURTON, C.S.I., had filled the office of superintendent of the Edinburgh Royal Infirmary since his retirement from the service in 1899 until the present year. Surgeon-General W. B. BEATSON qualified as far back as 1846 and retired from the Indian army in 1883. Surgeon-General W. P. PARTRIDGE was a Mutiny veteran, and before that had seen active service in Persia. Sir HENRI BLANC, K.C.V.O., served in the Crimea and in the Chinese war of 1857–60. He was a member of the mission to King THEODORE of Abyssinia in 1867, and underwent great sufferings during his captivity. On release, and at the conclusion of the Abyssinian campaign, he returned to India, and became professor of surgery in Bombay. After retirement he settled at Cannes, where he soon found a large practice. His striking character, professional skill, and romantic career made him a most interesting personality.

The Civil Medical Profession in India.

No further decisive action has been taken by Government towards the establishment of an independent medical profession—that is, of a body of medical men apart from the Indian Medical Service, belonging to and educated in the country. At the Indian National Congress held in December, 1910, Sir BALCHANDRA KRISHNA moved a resolution requesting the Government of India to take early action as to the employment of independent practitioners in the higher posts of the civil branch of the Indian Medical Service. In the House of Commons, in February, Mr. E. KELLY put a question to the Secretary of State on the matter, and received a non-committal reply. In November, however, to Dr. C. ADDISON'S inquiry whether it was intended to appoint Indian medical men as professors in the medical colleges, Mr. MONTAGU replied in the affirmative, and said that the Secretary of State's decision to allow no further increase in the civil side of the Indian Medical Service was intended to have among its results the appointment of Indian medical men to professorships of the first rank. It does not appear, however, that during the year any concrete proposal has been made, or official action taken, in the direction of radical reform. We understand indeed that the difficulties have been found to be so great that any such extensive measure is regarded as impracticable. Nevertheless, the subject has been ventilated in various ways. A movement has been commenced to bring about the union of existing "unrecognised" medical schools in Calcutta and to improve their status. In connexion with a similar movement in Bombay, the system of limiting the teaching appointments to members of the Indian Medical Service was deprecated; but the Bombay Government considered that it was in this service that the best men for these appointments were to be found. At Lucknow two lectureships at the new Medical College (which was to be opened in October)—viz., those of forensic medicine and materia medica—are to be given to military assistant surgeons; these gentlemen, though often of wide experience and extensive practical knowledge, do not possess technically registrable qualifications.

Surgeon-General LUKIS, speaking at the Imperial Council, has specified three disabilities of the independent Indian practitioners under present conditions: (1) as private students they are debarred from the appointments of house physician and house surgeon at the large Government hospitals; (2) they have no facilities for post-graduate study; (3) they cannot obtain professorships at the medical colleges under Government. He acknowledged that these colleges cannot provide for nearly all the candidates for admission. He held that, in addition to the existing official institutions, there is ample room for unofficial colleges, staffed by unofficial professors; and considered this to be a case for the cordial coöperation of the public with the Government; by which, we presume, is meant the endowment of these institutions from private (that is, unofficial) sources. Two points occur to us in regard to this proposal: (1) Is there a sufficiency of properly qualified "non-official" professors, who *ex necessitate rei* would not be Europeans, to staff these colleges? (2) Will the large numbers of native practitioners who become qualified in this manner succeed in obtaining a living wage? Or will they not rather swell the ranks of that unemployed educated class, the existence of which is responsible for so much of the discontent in the country?

PHARMACY.

Scientific Work.

Although the attention of pharmacists has been mainly absorbed by legislative proposals and matters affecting their organisation, scientific pharmacy has not been neglected and some useful work has been accomplished. The progress of

pharmacy depends chiefly upon a comparatively small body of men, the results of whose work are usually communicated at the annual meetings of the British Pharmaceutical Conference or at evening meetings of the Pharmaceutical Society held during the autumn and winter months in London and Edinburgh.

The papers which were communicated at this year's Conference meeting at Portsmouth were, on the whole, of a useful character and of practical interest to the rank and file of pharmacists. A communication which attracted especial attention was that in which Mr. F. W. F. ARNAUD, the public analyst for Portsmouth, showed the urgent need for some control over the sale of so-called diabetic foods. He demonstrated the worthlessness of many of the foods which are claimed to meet the special requirements of diabetic subjects, showing that of 12 different samples examined the products of one manufacturer alone could be called satisfactory. The facts disclosed seemed to be of such importance that the executive of the Conference recently decided to draw the attention of the medical profession to what is undoubtedly a very unsatisfactory state of affairs. In another communication Mr. R. R. BENNETT showed that the widespread belief among clinicians that the commercial thyroid preparations vary considerably in their degree of physiological activity was due to the absence of an officially recognised standardisation process, and he suggested that an iodine standard should be fixed. Other papers of considerable value were read, but it will suffice to refer to these two in order to show that pharmacists in their endeavour to contribute to the advancement of pharmaceutical science are lending real assistance in the progress of therapeutics.

The communications read before meetings of the Pharmaceutical Society have, for the most part, been of an advanced type, indicating that in spite of the attention absorbed by matters of a trading character some pharmacists still find time to devote attention to the higher branches of their calling.

Much of the research work has been conducted with the object of assisting in the revision of the British Pharmacopœia, and the final report of the Committee of Reference in Pharmacy of the Pharmacopœia Committee of the General Medical Council was issued in the late summer. This report has formed the subject of further discussions, and the editors, Dr. NESTOR TIRARD and Professor H. G. GREENISH, will have before them a mass of valuable suggestions on which to base the monographs of the forthcoming edition. The report was of a lengthy and detailed character, and while subsequent criticism has shown that it would be inexpedient to adopt some of the recommendations, much praise is due to the committeee for the thorough and capable manner in which they have accomplished a difficult task.

British Pharmaceutical Codex.

The British Pharmaceutical Codex, which was published in November, affords further evidence of the steady work of those pharmacists whose labours are in the scientific field. Four years have gone by since the British Pharmaceutical Codex, 1907, was issued, and during that period the committee appointed by the council of the Pharmaceutical Society has been engaged in the task of revision. The new work bears witness to the assiduity and judgment of the committee, all of whom are pharmacists with the exception of Professor W. E. DIXON, who occupied the position of consulting pharmacologist. The plan of the book has been modified in several respects, and where drugs, chemicals, and galenical preparations described in the Codex are official in the British Pharmacopœia or the Pharmacopœia of the United States of America that fact is indicated.

Before concluding this brief summary of the progress of pharmaceutical science it should be mentioned that from the ranks of the younger pharmacists several new workers of promise have come forward during the year, and that in the higher branches of pharmacy there are no signs of decadence.

Proposals in Regard to Pharmaceutical Education.

Pharmaceutical education, on which the future progress of pharmacy so greatly depends, is in the melting-pot. The proposal to institute a compulsory curriculum for candidates and to divide the qualifying examination into two parts is still under consideration. The draft scheme submitted by the council of the Pharmaceutical Society to local associations and schools of pharmacy for criticism has been fully discussed, and a committee has been appointed to take into consideration the draft scheme in conjunction with the observations made upon it by the associations and educational bodies consulted and to formulate by-laws embodying points of agreement. The general feeling is undoubtedly favourable to a division of the qualifying examination, but there is a diversity of opinion as to the nature of the curriculum that should be imposed on candidates. It is thought in many quarters that if candidates for the first part of the examination were required to attend courses of lectures at recognised schools much inconvenience would be caused to apprentices in country places and small towns where educational facilities are lacking, and some modification of this part of the draft scheme will doubtless be necessary. A possible way out of the difficulty would be to accept certificates in certain subjects granted by technical colleges, and it might be found desirable to require candidates for the second part of the examination only to attend classes at recognised schools. Under the present system there is no compulsory curriculum of study of any kind, so that if the proposals are adopted only in a very modified form the new system would be an improvement on the old.

Imperial Pharmaceutical Reciprocity.

Until the Poisons and Pharmacy Act, 1908, came into operation the Pharmaceutical Society had no power to make the proposed alterations in the educational system; the same Act also gave the society power to make by-laws providing for the admission of colonial pharmacists to the British Register without examination. By-laws for the latter purpose have been drafted by the Council and will shortly be ready to receive the approval of the Privy Council. In most parts of the British Empire the British pharmaceutical diploma is accepted for registration in lieu of examination, but the Canadian boards of pharmacy have, during the last few years, declined to recognise the British diploma on the ground that their diplomas are not recognised in this country. When the new by-laws come into force the Canadian grievance will be removed and the door will be open for imperial pharmaceutical reciprocity. The new by-laws, however, will not permit of a similar interchange of courtesies between Great Britain and Ireland, for the English Pharmaceutical Society has no power to accept the Irish certificate and similarly the Irish Society is not empowered to accept the British diploma.

Pharmacists and the National Insurance Scheme.

The Government scheme of national sickness insurance naturally formed the chief subject of discussion among pharmacists during the second half of the year. The operation of the scheme will effect considerable changes in pharmaceutical practice, and it remains to be seen whether these changes will be beneficial or otherwise.

The Bill, as it was introduced in Parliament, was singularly deficient in regard to the provisions for pharmaceutical service. It merely provided that Friendly Societies and Local Health Committees should make provision "for the supply of proper and sufficient drugs and medicines," and that except in certain circumstances they

should not make arrangements for such supply with a medical practitioner at an inclusive fee. There was nothing in the Bill to prevent Friendly Societies from making arrangements which would have rendered them independent of pharmacists already established in business, and it was soon made clear that Friendly Societies intended to take advantage of the deficiencies of the Bill and to open central drug depôts and branch dispensaries from which insurance patients could be supplied with medicine. Had this intention been carried into effect pharmacy would have suffered a heavy loss and a large number of pharmacists would probably have been ruined. Such dispensaries would not necessarily have been under the supervision of a qualified medical or pharmaceutical practitioner, nor would they have been subject to the control of the Sale of Food and Drugs Acts, the Weights and Measures Act, or the Pharmacy Acts, so that the scheme, so far as it related to the supply of drugs, would have been open to many abuses.

On the initiative of the Pharmaceutical Society a campaign was begun with the object of obtaining such amendments as would secure that the dispensing under the scheme should be done by qualified persons; meetings of local pharmaceutical associations were summoned in all parts of the country, and a mass meeting—the largest gathering of pharmacists that has ever assembled—was held in London to protest against the inadequacy of the provisions made for the pharmaceutical service under the proposed scheme. A deputation arranged by the council of the Pharmaceutical Society and representing all branches of pharmacy waited on the Chancellor of the Exchequer and explained to him the alterations desired by pharmacists. Briefly, the more important of these were that Local Health Committees and not Friendly Societies should control the medical and pharmaceutical services, that insured persons should have free choice of chemist, that the drugs should be supplied and the dispensing done under qualified supervision, that payment should be made according to a scale of charges to be agreed upon between the Local Health Committee and those carrying on business as chemists within the area of the committee, and that pharmacy should be represented on the Advisory Committee and on the local committees.

During the Committee stage some of these principles were incorporated in amendments introduced by the Chancellor himself and others in amendments brought forward by Mr. W. S. GLYN-JONES, the Pharmaceutical Society's Parliamentary secretary, whose valuable services on behalf of pharmacists cannot be too highly praised. Several of the demands, notably that concerning representation on the administrative bodies, have not been conceded, and while pharmacists have not succeeded in obtaining all the privileges to which they claim to be entitled, their position under the Act is not altogether unsatisfactory.

The pharmaceutical sections of the "medical benefits" clause ensure that no arrangement for the dispensing of medicines shall be made—save in special circumstances—except with persons, firms, or bodies corporate entitled to carry on the business of a chemist and druggist under the provisions of the Pharmacy Act, 1868, as amended by the Poisons and Pharmacy Act, 1908. Such persons will be required to undertake that all medicines supplied by them to insured persons shall be dispensed either by or under the direct supervision of a registered pharmacist or by a person who for three years has acted as a dispenser to a medical practitioner or public institution. Drugs, other than poisons, and medical appliances may be supplied by unqualified traders, but medical practitioners will have the satisfaction of knowing that all medicines prescribed for insurance patients will be dispensed under qualified supervision.

Pharmacists, to a considerable number, are dissatisfied because more has not been conceded to them, but a little reflection should convince these that there is no just reason for serious complaint. There can be little doubt that the action of the General Medical Council in desiring the Government to place the dispensing of medicines in qualified hands greatly strengthened the case of the pharmacists. The threatening influence of the National Insurance Bill in the form in which it was introduced had the effect of showing pharmacists the need and the value of organisation. As a result the forces of pharmacy are better organised at the end of the year than they were at the beginning. Moribund associations have become active, new ones have come into existence, and in most localities the membership of associations has increased. The Council of the Pharmaceutical Society, with the object of keeping pharmacists throughout the country informed as to its policy and of assisting local effort generally, has appointed an officer whose special duty it is to control the movement, and, through the Council, direct it into proper channels. If the National Insurance Act does nothing else for pharmacy it has certainly given an impetus to pharmaceutical organisation.

Other Legislation and Regulations.

Concerning other legislation affecting pharmacy there is little to be said. The Shops Act, while it will not greatly interfere with facilities for obtaining drugs and appliances, compels pharmacists, like all other people who keep open shop, to give their assistants certain periods of leisure which the vast majority of them already gave without compulsion. The promised inquiry into the sale of secret remedies will be welcomed by pharmacists as a whole, and it is their hope that the inquiry will be followed by reasonably restrictive legislation. The new regulations as to the sale of the mineral acids and ammonia, while placing no limitations on the classes of traders who may sell these substances, should tend to prevent accidents. On the other hand, new regulations under Section 2 of the Poisons and Pharmacy Act have been sanctioned which will increase the facilities for obtaining poisonous compounds for use in agriculture and horticulture from unqualified shopkeepers and the danger attendant upon the careless distribution of poisons is consequently enhanced.

CHEMISTRY.

The Constitution of Matter and Transmutation.

There has again, of course, been a busy band of workers in the field of chemical science, but the progress has been of a steady rather than of a startling kind. During recent years chemists have almost overwhelmed themselves with amazing discoveries, and there appears to be an agreement amongst them now to stop and ponder over the significance of the secrets which they have wrested from Nature, in order, so to speak, that a place may be found for them in a harmonious system. Stock-taking has its advantages in scientific as well as in commercial affairs. The question, Where are we? is often worth asking in case a wrong turning has been taken. Rapid insights have been made of recent years into the constitution of matter; we have reduced the atom into hundreds of little bits which are regarded as nothing more than superposed layers of positive and negative electricity, and yet not so long ago the atom was held to be indivisible. The old alchemists' views have been revived by the electrical theory of matter, and we are beginning to think seriously again that all things are variants of one and the same material. Hence a stimulus has been given to obtain evidence of transmutation accomplished. The evidence, however, does not increase rapidly. The disintegration theory applies well enough to the unstable radium which resolves itself into emanation or niton and helium, and it seems to be established that these further

"degrade" into other distinct and rare elements. The familiar metals seem much too obstinate to yield to any energies which we are yet capable of applying to them to force them to resolve into inferior colleagues. It is true that Sir WILLIAM RAMSAY has reported that the energy of radium applied to copper salts has converted part of the copper into lithium, and similar experiments have indicated that thorium, zirconium, titanium, and silicon are degraded into carbon, but the experiments and results were on a microscopic scale. Conceivably, when it becomes possible to apply enormous strains to such familiar metals as gold, copper, lead, iron, and zinc, some tangible amounts of metallic products of degradation may be obtained and an actual demonstrable transmutation effected.

Industrial Electrolysis.

The electric current threatens to supersede classic chemical processes in the production of chemical substances and in the refinement of metals. The separation of sodium and the subsequent production of pure alkali from common salt is an example of the former, and the electrical purification of copper of the latter. Practically 90 per cent. of the copper used in the world is refined electrolytically. About 80 per cent. of the original copper contains arsenic, minute quantities of which vitiate its conducting properties. The offending metal is removed by electrolysis, and pure copper is thus obtained for electrical purposes—a case of electricity ministering to its own needs. The increasing production of aluminium in a pure state is again due to an electrolytic process.

The Origin of Diamonds.

The question of the origin of the diamond has been further discussed, and it seems to be concluded now that inorganic carbon as opposed to organic carbon is the starting point. One view is that carbon monoxide and carbon dioxide are caught in molten iron and there compressed by the closing together of the cavities. The enormous pressure forces a union of the oxygen with the iron and leaves crystal carbon. The fact that diamonds are associated with iron in their native surroundings supports this view. Graphite and coal are accounted for as products of organic matter, but it is contended that the origin of the diamond must be placed in pre-organic times.

A New Method of Chemical Analysis.

Sir J. J. THOMSON has employed the positive rays to determine the nature of the gases present in a vacuum tube. The method, he says, enables us to determine, not merely whether an element—say, for example, oxygen—is present in the tube, but will tell us in what form it occurs, whether, for example, it is present in the atomic as well as the molecular condition, and whether there are allotropic modifications present, such as ozone, O_3, and other still more complex aggregations. The method is capable of dealing with much smaller quantities of matter than the methods formerly employed by chemists, and is "capable of detecting transient phases in the processes of chemical combination." It is confidently hoped that this ingenious and pretty device will be of service in throwing light on one of the most interesting and mysterious problems in either physics or chemistry—the nature of chemical combination.

Industrial Syntheses.

Industrial synthetic products are increasing with amazing rapidity, and bid fair to render us, in regard to certain products, independent of natural supplies. Caoutchouc, camphor, indigo, veronal, caffeine, and many varieties of perfume, afford examples, and it is quite possible that even organic foodstuffs—e.g., protein—will eventually be successfully and economically built up from their elements.

In calling attention to these triumphs of the synthetic chemist, Professor EMIL FISCHER referred to the resemblances between chlorophyll and the colouring matter of the blood. He pointed out that chlorophyll and the colouring matter of the blood are closely allied chemically. "This indicates," he added, "a kind of blood relationship between the plant and animal kingdoms. It must, however, be of great antiquity—i.e., it must go back to the time when there was no distinction between the two kingdoms."

The Absorption of Oxygen by the Lungs.

Dr. J. S. HALDANE and Dr. C. GORDON DOUGLAS have continued their interesting work upon this subject. Their recent results indicate that the lung epithelium is excited directly or indirectly to active secretion of oxygen inwards by products of metabolism proceeding from the muscles and other tissues when their oxygen supply is insufficient to meet ordinary requirements. That such insufficiency actually occurs during muscular work, and when air with a low partial pressure of oxygen is breathed, has already been shown. It is pointed out that the results are of special interest in connexion with the phenomena of adaptation to very high altitudes, and throw a new light on the physiology of mountain climbing and balloon ascents, and of ordinary muscular work.

CONTRIBUTIONS FROM "THE LANCET" LABORATORY.

The work of chemical investigation in THE LANCET Laboratory has been heavy during the year. The inquiry, begun in 1910, in regard to the chemistry of the cup of tea has been finished, and the final report was published recently in THE LANCET of Dec. 2nd, 1911. The first report appeared in the first number of the year. The total analyses published in connexion with this investigation amounted to 590. New analytical methods were devised, and it seems to have been established that in good teas caffeine and tannin occur in a definite relationship as a compound—viz., caffeine tannate. In indifferent teas one or the other substance occurred in excess. It was shown that so long as tannin was combined chemically with caffeine to form a tannate its astringent qualities were in abeyance. An infusion of tea rarely coagulates milk, which would be the case if free tannin were present. Analysis showed that this compound contained 1 of caffeine to 3 of tannin. The compound can be prepared artificially from commercial tannin and caffeine, when it shows the same composition as that found in tea infusion. When caffeine and tannin occur together in the proportions of 1 to 3 in tea infusion the expert taster, it was found, invariably regarded a tea yielding such an infusion as of superior quality. The objections to tannin in the free state cannot be raised against tannin in the form of caffeine tannate, and the action of the alkaloid may be modified by association with tannin. Caffeine tannate is very soluble in hot water, but is to a large extent precipitated in the cold. It is very soluble in quite weak alcohol and in weak alkali. The fact that an infusion of tea is alkaline keeps the caffeine tannate in solution. This may to a great extent be precipitated by adding acid to neutralise the alkali.

We hoped to publish during the year the results of an inquiry into the character and amount of the soot deposit in London, but the inquiry entailed so much analytical work that only recently have the results been extracted from the calculations. We hope to publish these in an early number.

We are glad to be able to record the success of the Rag Flock Bill. From time to time we have placed evidence in front of our readers from our Laboratory in proof of the urgency of this industry being placed under simple sanitary control.

In THE LANCET of Jan. 28th an account from the Laboratory was published of a diabetes cure which had given rise

to symptoms in a patient suggesting the presence of an alkaloid. No alkaloid, however, was found, and ultimately it was concluded that the dried leaves submitted were polygonum hydropiper, commonly known as water pepper.

During the year a considerable discussion arose in the lay press as to the impoverishment of the food value of bread effected by modern milling methods. We have for long urged that it was desirable to maintain a high efficiency of nutritive value in wheat flour, and that something should be done to check the production of flours owing their whiteness to chemical bleaches or the use of "improvers." According to recent investigations it is probable that the nutritive value of bread is determined by biological factors connected with the germ.

We welcomed a valuable report from the Local Government Board upon skimmed condensed milk in relation to its ignorant use in infant feeding. For a good many years we have drawn attention to this subject, and in this report we were glad to find that steps were recommended to control the sale of skimmed condensed milk for infant feeding. Its practical freedom from fat, of course, renders it absolutely unfit for such a purpose.

During the year we took up once again the question of flannelette. It was represented to us that, in spite of the recommendations of the Coroners' Committee in 1910 that the Merchandise Marks Act, 1887, should be amended by adding a provision making it penal to describe as uninflammable material which will not stand prescribed tests, there was not only no abatement in the sale of inflammable material, but inflammable material was being sold claiming to be non-inflammable. We made a number of tests with materials bought in the open market, and found that though there was evidence that steps were being taken to supply the public with a safer material, there were still cheap flannelettes obtainable which were dangerous. In some cases it was found that the materials had been rendered perfectly safe by treatment with certain metallic salts. The report contained 48 drawings showing the way various materials had behaved when submitted to ignition tests.

During the year several new inventions were tested in the laboratory, and the results reported in our columns.

A special article upon Strathpeffer Spa appeared in THE LANCET of July 1st as the result of a visit of our Laboratory Commissioner to a health resort at which many developments in the direction of modern hydro-therapeutics have been recently effected.

During the year we have analysed and reported upon numerous quack medicines submitted to us by our readers.

Under the heading of "Analytical Records and Reports from THE LANCET Laboratory," 67 preparations comprising drugs, special foods, waters, and beverages were dealt with. The total number of analyses made in connexion with this column and with the special reports reviewed above was 804.

GENERAL MEDICAL COUNCIL.

The usual two meetings of the General Council of Medical Education and Registration were held during the year, and the proceedings showed the Council to be ready to deal in a business-like way with matters closely concerning the well-being of the medical profession.

At the summer meeting the Council resumed consideration of the position of the Preliminary Sciences in the medical curriculum, and as a result the Education Committee were instructed to report to the Council on the alterations necessary in the regulations for the registration of medical students so as to make those regulations consistent with the position under which it is optional for a student to take the preliminary scientific subjects of his curriculum elsewhere than at a medical school. Sir HENRY MORRIS pointed out the difficulty which the Council must have in justifying regulations which gave to students, their parents, or their masters, a misleading impression that it was absolutely necessary that the courses in the Preliminary Sciences should be taken in the medical curriculum, an error that had led to the withdrawal of boys from public schools sooner than was necessary. Similar questions arose under a motion by Sir HENRY MORRIS to place on a list of institutions approved by the Council for the commencement of medical study secondary schools which had been duly inspected and recognised by a licensing body. The motion, amended so as to include the approval also of the Students Registration Committee for such schools, was passed by the Council, and as a consequence at the winter session a list of schools which had been recognised by the English Conjoint Board were approved by the Council. Sir HENRY MORRIS has intimated that at the next session he will bring forward a suggestion, in the form of a motion, that the Council should recommend to all the licensing bodies, universities, and schools, that the study taken at these approved institutions should not be allowed—even if it extended over two or three years—to count as more than six months of the medical curriculum.

At the summer meeting the Council appointed a committee of 9 members, 3 nominated by each Branch Council, to consider the Insurance Bill and make representation through the Privy Council to the Government on any matters within the province of the Council. The Council saw that the proposal affected the medical profession in many ways of which they might be compelled to take cognisance; especially might medical education be endangered by a decline in the efficiency of the clinical schools attached to the hospitals. The committee made a certain number of proposals of amendment through the Lord President to the Government, which were advocated at a personal interview with the Chancellor of the Exchequer and other officers of the Treasury. The correspondence with the Chancellor which ensued was made public, and the Chancellor's personal agreement with the recommendations of the Council was recognised in amendments. The Council, however, found that, as time went on, the changes in the Bill, which when they were made appeared satisfactory, were in later stages modified by further amendments; and at the winter meeting, held on Nov. 28th and following days, the President's address implied that the administration of the medical benefits might be placed in an unsatisfactory position and that the stability of clinical hospitals was in distinct danger.

Certain penal cases during the year attracted the widespread attention of the public as well as of the medical profession. Three medical men working in connexion with the Sandow Health Institute appeared before the Council at the summer meeting on a charge of unprofessional conduct made by the British Medical Association, with the result that one of them was removed from the Register of the profession, while the consideration of the cases against the other two was postponed until the next session. Thereupon one gentleman dissociated himself from the institute, while the other elected to remain in connexion with it, considering that the administration of the institute had been altered to meet the objections of the Council. Concerning the last case interesting proceedings took place, the practitioner being represented by able counsel, who attempted to convince the General Medical Council that his client's behaviour had been, during the six months' probation, of a professional character. The Council, taking the opposite view, decided to postpone a decision as to the practitioner's name remaining on the rolls of the profession for a further period.

During the year there was an election of Direct Representatives of the medical profession for England and Wales,

which resulted in the re-election of Dr. H. W. LANGLEY BROWNE and Dr. H. A. LATIMER and the election of Mr. T. J. VERRALL; Dr. J. A. MACDONALD having earlier in the year been elected to fill the vacancy caused by the regretted death of Dr. L. S. MCMANUS. In Scotland Dr. NORMAN WALKER was re-elected without opposition, as also was Dr. LEONARD KIDD in Ireland.

BRITISH MEDICAL ASSOCIATION.

The annual meeting of the Association was held at Birmingham from July 25th to 29th, and was in every way a great success. Large numbers of members and ladies travelled to the Midland capital, and the beautiful weather added much to their pleasure. The scientific and social arrangements were well planned and carried out. The Representative meeting, which occupied the four days before the opening of the annual meeting, was largely occupied with important matters relating to the National Insurance Bill. The Representative body discussed the Bill in committee, and its proceedings were *in camerâ*; only the resolutions finally arrived at by the committee being placed before the Representatives, who confirmed them all. The substance of their conclusions was to reaffirm all the main points of the Association's policy, as already declared and embodied in the familiar six-fold demand, and the Council was instructed to take every means in its power to carry this policy into effect.

At the annual general meeting on July 25th the retiring President, Sir HENRY BUTLIN, vacated the chair for Professor ROBERT SAUNDBY, the President-elect, who delivered his address on the Present Position of the Medical Profession the same evening. This was published in THE LANCET of July 29th, together with the Address in Medicine by Dr. BYROM BRAMWELL, and the Address in Surgery by Mr. JORDAN LLOYD. The scientific work of the meeting was spread over four days, and was divided into 16 sections, some of which held joint sessions. The business of the sections was conducted in the class-rooms of the University building in Edmund-street. This is very central and conveniently close to the Midland Institute and the town hall, which were set apart for addresses and large meetings and the reception of visitors. A compact and instructive pathological museum, illustrating various special subjects, was arranged in some of the laboratories adjoining the meeting-places of the scientific sections. The annual exhibition of instruments, foods, and drugs was held in Bingley Hall and attracted a good deal of interest; it was formally opened by the Lord Mayor on July 25th.

The sections this year were five less than at the seventy-eighth annual meeting in London in 1910, and less also than in 1909. Last year there were separate sections for anatomy and physiology, bacteriology was divorced from pathology and otology from laryngology, and there were independent sections for anæsthetics and for the Services. The 21 sections of the London meeting established a record in the division of labour at the Association's annual gatherings, and this multiplicity of interests was justified by the special circumstances of a great meeting in the metropolis; but the reduction in number at Birmingham this summer was probably well advised, and little seemed to be lost by the bringing together of closely allied subjects. Nevertheless, we hope the Section of Anæsthetics will be revived. Many papers of high clinical and scientific value were read at the sectional meetings, and there were some interesting debates. These were reported in the issues of THE LANCET of August 5th, 12th, and 19th.

But, except for the brief days in July allotted to the business of the scientific sections, the energies of the British Medical Association have been almost completely absorbed throughout the year by the grave problems arising out of the National Insurance Bill. Thus the scientific side of the Association's work has been greatly overshadowed by the medico-political side, and the executive officers have been continuously engaged upon the double task of shaping the policy of the Association and of attempting to carry that policy into effect. The leaders of the Association have been brought into direct contact with the political machinery of the country, and the action taken by the Council and the decisions reached by the Representative Body have been fraught with momentous consequences to members of the Association, to the medical profession, and most of all perhaps to the public.

HONOURS TO MEDICAL MEN.

New Year Honours.

The list of honours which was issued at the beginning of the new year included the names of the Right Hon. LEANDER STARR JAMESON, who was made a baronet, and those of Dr. HORATIO BRYAN DONKIN, Mr. FREDERIC S. EVE, Dr. DAVID FERRIER, Dr. GEORGE NEWMAN, Dr. JOSEPH MICHAEL REDMOND, and Lieutenant-Colonel DAVID SEMPLE, R.A.M.C., who received knighthoods. Sir STARR JAMESON, although the work of his maturer life has not been medical, owes his success in no small measure to his early medical training. Sir HORATIO BRYAN DONKIN, medical adviser to the Prison Commission and late Director of Convict Prisons, did much useful work as a member of the Royal Commission on the Care and Control of the Feeble-minded, while he also assisted the Departmental Committee on the Inebriates Acts and the Treatment of Inebriety. Sir FREDERIC S. EVE is senior surgeon to the London Hospital and a consulting surgeon to the Evelina Hospital. His work as a clinician and a pathologist is well known. Sir DAVID FERRIER has to his credit original researches in neurology which have been recognised and appreciated in all parts of the civilised world. Sir GEORGE NEWMAN, chief medical officer to the Board of Education, is a member of the Board of Hygiene Studies at the University of London, and is the author of some important publications on public health and bacteriology. As we have before pointed out, the best testimonial to the work which he has done is his suggestive report on the inspection of school children to the Board of Education for the year 1909, which was presented to Parliament at the end of November, 1910. Sir JOSEPH MICHAEL REDMOND is an ex-President of the Royal College of Physicians of Ireland who has written much and ably on medicine. Lieutenant-Colonel Sir DAVID SEMPLE, of the Royal Army Medical Corps, is Director of the Central Research Institute at Kasauli, who has done much good work on bacterial vaccines and serum-therapy generally. In addition to these honours the Kaisar-i-Hind gold medal was conferred upon Lieutenant-Colonel HENRY SMITH, of the Indian Medical Service, civil surgeon of Amritsar; on Major THOMAS WALTER IRVINE, of the Indian Medical Service, late residency surgeon at Mewar; and on Major R. J. BLACKHAM, R.A.M.C., sanitary officer of the First Division, Indian Army.

Coronation Honours.

Among the names in the list of honours issued in connexion with the KING'S Coronation were those of Mr. HENRY T. BUTLIN, Dr. WILLIAM OSLER, Dr. JAMES F. GOODHART, Sir CHARLES B. BALL, and Sir W. THORNLEY STOKER. Each of these gentlemen received a baronetcy. Sir HENRY T. BUTLIN, the distinguished ex-President of the Royal College of Surgeons of England, is also the Past-President of the British Medical Association. His public services to medicine have been great and varied. Sir WILLIAM OSLER, Regius professor of medicine in the University of Oxford, who is famous throughout two continents, has enriched the literature of medicine with many works of high scientific and literary

value. Sir JAMES F. GOODHART is an eminent clinician whose name is a household word in general medicine as well as pædiatrics. Sir CHARLES B. BALL, the President of the Royal Academy of Medicine in Ireland, is a distinguished member of a distinguished family. He is the representative on the General Medical Council of the University of Dublin. Sir W. THORNLEY STOKER, consulting surgeon to the Richmond, Whitworth, and Hardwicke Hospitals, Dublin, is another eminent member of the Irish medical profession. He is H.M. Inspector of Anatomy and Government Inspector under the Vivisection Act in that country.

Knighthoods were bestowed upon Mr. ANTHONY A. BOWLBY, Mr. RICHARD BRAYN, Dr. ALEXANDER DEMPSEY, Dr. FREDERICK W. HEWITT, the Hon. JOHN MCCALL, and on Mr. FREDERICK C. WALLIS. Sir ANTHONY A. BOWLBY, C.M.G., Surgeon-in-Ordinary to the King, served as senior surgeon in charge of the "Portland Hospital" in the South African war; Sir RICHARD BRAYN is Home Office Adviser in Lunacy and late medical superintendent of Broadmoor Asylum; Sir ALEXANDER DEMPSEY is a well-known Belfast obstetric physician; Sir FREDERIC W. HEWITT is anæsthetist to the King and physician-anæsthetist to St. George's Hospital; the Hon. Sir JOHN MCCALL is Agent-General for Tasmania in London and Member of the House of Assembly and of the Executive Council; and Sir FREDERICK C. WALLIS is surgeon to Charing Cross Hospital.

The honour of K.C.B. was conferred upon Inspector-General DOYLE M. SHAW, Inspector-General THOMAS D. GIMLETTE, Surgeon-General WILLIAM L. GUBBINS, C.B., Surgeon-General ADAM S. REID, C.B., Major RONALD ROSS, and Dr. BENJAMIN ARTHUR WHITELEGGE, C.B. Inspector-General Sir DOYLE M. SHAW saw active service during the Crimea and the bombardment of Alexandria, and was in charge of several naval hospitals before his retirement; Inspector-General Sir THOMAS D. GIMLETTE is the head of the Royal Naval Hospital, Haslar; Surgeon-General Sir WILLIAM L. GUBBINS is Director-General of the Army Medical Service; Surgeon-General Sir ADAM S. REID, Indian Medical Service, was lately principal medical officer of the Punjab Command; Sir RONALD ROSS is professor of tropical medicine in the University of Liverpool and the Liverpool School of Tropical Medicine; he was awarded the Nobel Prize for Medicine in 1902, and his services in the campaign against malaria are world famous; and Sir B. A. WHITELEGGE is H.M. Chief Inspector of Factories and Workshops.

The distinction of K.C.M.G. was conferred upon Dr. JOHN ROSE BRADFORD and Dr. JOHN PRINGLE. Sir JOHN ROSE BRADFORD is one of the two secretaries to the Royal Society, and among our foremost scientific physicians; Sir JOHN PRINGLE, C.M.G., is a member of the Privy and Legislative Councils of Jamaica.

Dr. BERTRAND DAWSON received the K.C.V.O. Sir BERTRAND DAWSON is physician-extraordinary to the KING and physician to the London Hospital.

The C.M.G. was conferred upon Dr. JAMES W. BARRETT, member of the council and lecturer of the University of Melbourne; Mr. DUGALD CHRISTIE, head of the Mukden Medical Mission; and Dr. T. ZAMMIT, Government analyst, Malta. The following were appointed C.B.'s: Inspector-General C. C. GODDING, Inspector-General A. W. MAY, Inspector-General H. J. MCC. TODD, and Fleet-Surgeon P. W. BASSETT-SMITH, of the Royal Navy; Surgeon-General G. W. ROBINSON, Surgeon-General JAMES G. MACNEECE, Colonel C. F. WILLIS, and Colonel T. GRAINGER, of the Indian Medical Service; Lieutenant-Colonel H. E. R. JAMES, R.A.M.C. (retired); Colonel G. S. ELLISTON, Administrative Medical Officer of the East Anglian Division; and Colonel P. B GILES. Colonel J. R. THOMAS was appointed Honorary Physician, and Colonel DAMER HARRISSON Honorary Surgeon to His Majesty for His Majesty's Territorial Force.

The C.V.O. was conferred upon Fleet-Surgeon A. R. BANKART, Mr. MILSOM REES, and Mr. MAYO ROBSON, and the M.V.O. upon Mr. WILLIAM FAIRBANK.

Dr. MICHAEL COX was made an Irish Privy Councillor. The Hon. Sir FREDERICK BORDEN, Canadian Minister for Militia and Defence, was made an Honorary Surgeon-General; and Sir JAMES REID, Bart., G.C.V.O., K.C.B., was granted by HIS MAJESTY an augmentation of arms in consideration of services rendered to His late Majesty KING EDWARD.

In connexion with the visit of the KING and QUEEN to Scotland after their Majesties' Coronation the honour of knighthood was conferred upon Dr. THOMAS SMITH CLOUSTON and Dr. JAMES ORMISTON AFFLECK. Sir THOMAS CLOUSTON retired from his position of superintendent of the Royal Asylum for the Insane, Edinburgh, in 1908. During his tenure of office there he brought about great improvements in the treatment, nursing, and housing of the insane, perhaps the most outstanding achievement being the completion of Craig House about 21 years ago. Sir JAMES AFFLECK is well known in Edinburgh as a practitioner and consultant. He has been thrice appointed examiner in medicine and clinical medicine at the University of Edinburgh, and for many years acted as examiner in medicine for the Royal College of Physicians.

The Durbar Honours.

In connexion with the crowning of HIS MAJESTY the KING as EMPEROR of INDIA, Surgeon-General CHARLES PARDEY LUKIS, C.S.I., and Surgeon-General FRANCIS WOLLASTON TREVOR, C.B. K.H.S., received Knight Commanderships of the Order of the Star of India. Surgeon-General Sir CHARLES PARDEY LUKIS is the Director-General of the Indian Medical Service and an additional Member of the Council of the Governor-General of India for making Laws and Regulations, and Surgeon-General Sir FRANCIS WOLLASTON TREVOR is Principal Medical Officer in India. Lieutenant-Colonel WILLIAM BURNEY BANNERMAN, I.M.S., Colonel GEORGE FRANCIS ANGELO HARRIS, V.H.S., and Lieutenant-Colonel ARTHUR RUSSELL ALDRIDGE, R.A.M.C., were made Companions of the Order.

In the list of Knights Commanders of the Order of the Indian Empire was the name of Surgeon-General ARTHUR MUDGE BRANFOOT, C.I.E., I.M.S. (retired). Surgeon-General Sir ARTHUR MUDGE BRANFOOT is President of the Medical Board of the India Office. Lieutenant-Colonel CHARLES MACTAGGART, I.M.S., Major LEONARD ROGERS, I.M.S., Major HENRY BURDEN, I.M.S., Lieutenant-Colonel JAMES REED ROBERTS, I.M.S., and Major FREDERICK FENN ELWES, I.M.S., received Companionships of the Order.

Colonel CHARLES JAMES BAMBER, I.M.S., received the C.V.O., and Lieutenant-Colonel CHARLES HENRY BEDFORD, I.M.S., was made a Knight Bachelor. Lieutenant-Colonel Sir CHARLES HENRY BEDFORD, I.M.S., is chemical examiner, Bengal.

The following officers received the "Kaisar-i-Hind Medal for Public Service in India" of the First Class:—Major ALBERT ELIJAH WALTER, I.M.S., Major ARTHUR GWYTHER, I.M.S., Surgeon Lieutenant-Colonel THOMAS JOSEPH O'DONNELL, K.G.F. Vols., V.D., Captain JASPER ROBERT JOLY TYRRELL, I.M.S., and Major WILLIAM HANCOCK TUCKER, I.M.S. Similar honours were conferred upon Dr. HERBERT F. LECHMERE TAYLOR, the Rev. JOHN CAMERON YOUNG, M.B., C.M. Glasg., and upon Dr. RAGHAVENDRA ROW.

Foreign Honours.

The Insignia of the Third Class of the Imperial Order of

the Medjidieh were conferred by the KHEDIVE of EGYPT upon Dr. ERNEST COTTON FISCHER, professor of ophthalmology at the School of Medicine, Cairo; Dr. REGINALD GOWER KIRTON, Chief Medical Inspector of Prisons, Cairo; and Dr. P. C. E. TRIBE, honorary physician to the Anglo-American Hospital at Cairo. Captain GEOFFREY WALLACE GRAINGER HUGHES, R.A.M.C., received the Order of the Fourth Class. Major FREDERICK FITZGERALD CARROLL, R.A.M.C., and Captain ROBERT BARCLAY BLACK, R.A.M.C., were the recipients of the Imperial Ottoman Order of the Osmanieh, Fourth Class.

His Majesty the KING of ITALY conferred upon Surgeon-General JAMES GAUSSEN MACNEECE, principal medical officer, 8th (Lucknow) Division, India, a Commandership of the Order of St. Maurice and St. Lazarus.

The decoration of the First Class, Third Division, Imperial Chinese Order of the Double Dragon was conferred by His Majesty the EMPEROR of CHINA upon Mr. WILLIAM HAROLD GRAHAM ASPLAND, M.D. Toronto, medical professor at the Union Medical College, Peking; Dr. JOHN MAITLAND STENHOUSE, of the Union Medical College, Peking; and Dr. BERNARD SCORE BROWNE, of the Church Missionary Society Hospital, Ningpo, in recognition of valuable services rendered during the recent epidemic of pneumonic plague.

Dr. HENRY CURWEN received the decoration of the Fourth Class of the Order of El Aliyeh from the SULTAN of ZANZIBAR.

HOSPITAL FUNDS.

Metropolitan Hospital Sunday Fund.

Under the presidency of Sir THOMAS VEZEY STRONG, the just retired Lord Mayor of London, the year's collection resulted in a total of £67,015 14*s.* 8*d.*, the collections in the various places of worship amounting to £37,061, or £3717 less than in 1910. The Metropolitan Cathedral of St. Paul headed the list with £4323. The following are the largest collections from contributing places of worship: Christ Church, Lancaster Gate, Rev. Prebendary GURDON, £1009; St. Michael, Chester-square, Rev. J. GOUGH MCCORMICK, £672; St. Peter, Eaton-square, Rev. Prebendary STORRS, £470; St. Mary Abbots, Kensington, Rev. Prebendary PENNEFATHER, £422; Holy Trinity, Chelsea, Rev. H. R. GAMBLE, £400; St. Mark, North Audley-street, Rev. H. P. CRONSHAW, £293; St. Paul, Onslow-square, Rev. Prebendary WEBB-PEPLOE, £289; St. Paul, Knightsbridge, Rev. F. L. BOYD, £280; St. Peter, Cranley-gardens, Rev. W. S. SWAYNE, £231; St. Jude, South Kensington, Rev. Prebendary EARDLEY WILMOT, £225; St. George, Hanover-square, Rev. F. N. THICKNESSE, £216; Wimbledon Churches, Rev. J. ALLEN BELL, £213; Westminster Abbey, Very Rev. the DEAN, £203; St. John, Paddington, Rev. E. P. ANDERSON, £200; St. Columba, Pont-street, Rev. A. FLEMING, £311; Theistic Church, Swallow-street, Rev. CHARLES VOYSEY, £200; West London Synagogue, Rev. M. JOSEPH, £319; Great Synagogue, the CHIEF RABBI, £237; Essex Church, Kensington, Rev. F. K. FREESTON, £233; Westminster Chapel, Rev. G. CAMPBELL MORGAN, £296; City Temple, Rev. R. J. CAMPBELL, £152; St. Paul's Presbyterian Church, Westbourne-grove, Rev. J. W. WALKER, £100; St. Andrew's Presbyterian Church, Frognal, Rev. R. MACLEOD, £130; Greek Church, Bayswater, the ARCHIMANDRITE, £75; Brompton Oratory, Rev. H. D. S. BOWDEN, £54; Carmelite Church, Kensington, Very Rev. the PRIOR, £50; Victoria Park Christian Evidence Association, Mr. T. COLE, £74; Dutch Church, Austin Friars, Rev. S. B. DE LA FAILLE, £40; German Church, Camberwell, Rev. O. GOEHLING, £46; Metropolitan Tabernacle, Rev. A. G. BROWN, £40; Wanstead Society of Friends, Mr. THEO. GODLEE, £30; Jackson's Lane, Highgate, Wesleyan Church, Rev. W. A. LABRUM, £32; Gordon-square Catholic Apostolic Church, Mr. H. S. HUME, £24. The sum of £8000 was received from the executors of the late Mr. GEORGE HERRING, which, with £17,790 0*s.* 6*d.*, the amount of dividends upon investments of residue transferred to the Fund, made a total of £25,790 0*s.* 6*d.* on this account. Mr. WILLIAM HERRING gave a donation of £1000, and a further payment of £125 was received on account of Mr. C. E. LAYTON'S bequest. The amount awarded to 166 hospitals and institutions, 59 dispensaries, and 32 nursing homes was £56,710. During the year the Fund sustained a severe loss by the deaths of the CHIEF RABBI, the Rev. Dr. WALLER, Mr. RICHARD FOSTER, and Mr. JOHN HAMPTON HALE, the chairman of the Finance Committee.

King Edward's Hospital Fund.

The amount received by this Fund up to Dec. 8th for general purposes, and after payment of expenses, was £176,745. The amount available for distribution among London hospitals was £151,000, as against £150,000 in 1910. The number of hospitals applying for grants was 105. In addition, 43 convalescent homes and seven consumption sanatoriums applied for grants, and £6500 were distributed among these institutions, as against £5000 in 1910. The scheme for placing beds in country consumption sanatoriums at the disposal of patients in London hospitals has proved very advantageous. The satisfactory condition of the Fund is, of course, largely owing to the interest taken in it by the Royal family. HER MAJESTY the QUEEN has increased her annual subscription to 100 guineas, while last year the KING increased his subscription from £500 to £1000, and the PRINCE of WALES gives a subscription of £100. The KING has also allocated to the Fund a share amounting to £2000 in the munificent Coronation gift of His Highness the MAHARAJA OF GWALIOR. Among the receipts of the Fund for the year was an anonymous gift of £10,000. The Fund lost by death among its members Lord NORTHCOTE, the Rev. Dr. ADLER, and the Rev. J. GUINNESS ROGERS. Dr. A. R. RAINY, a most valuable visitor for the Fund, also passed away during the year. Mr. FRY, one of the honorary secretaries, has retired from that position, and Mr. JOHN G. GRIFFITHS has been invited to take his place.

At a meeting of the League of Mercy held at St. James's Palace on Dec. 14th it was stated that the League had collected £19,306 for the year, or £1881 less than in 1910. It was proposed to distribute £19,200.

Hospital Saturday Fund.

The annual income of the Hospital Saturday Fund, which was founded in 1873 for the purpose of obtaining help for the metropolitan hospitals and kindred institutions from those who were not reached through the operations of the Metropolitan Hospital Sunday Fund, now exceeds £34,000, which is obtained from some 8000 places of business. The annual report shows that help is obtained from practically every trade, friendly society, and club, the employees of the London County Council, the borough councils, the railway companies, the Metropolitan Water Board, the General Post Office, the Royal Arsenal, Woolwich; the Royal Small Arms Factory, Enfield Lock; the Royal Victoria Yard, Deptford; the Dock Companies, and so forth, and the members of the Metropolitan and City police. Since its foundation the Fund has collected and distributed among the medical charities of London £549,545. In recent years there have been about 200 participating institutions. The Fund, recognising the great importance of early treatment in cases of tuberculosis and other chest diseases, has endowed beds at the Benenden Sanatorium, Kent; at the Mount Vernon Hospital, Hampstead, and its sanatorium at Northwood; at

the Fairlight Home, Hastings; and at the Eversfield Hospital, St. Leonards. Forty-three beds are at present endowed, the patients paying, as a rule, 7*s.* 6*d.* per week for the first six weeks, after which time the rates are arranged in accordance with the means of the patients and other circumstances. The sum thus received enables the Fund to assist many applicants who could not otherwise be relieved. During the present year the various departments of the Fund have made steady progress, and it is hoped that when the books are made up in January they will show a record collection for 1911. Up to Dec. 16th the total receipts of the Fund amounted to £25,061, as against £23,536 in the corresponding period of 1910.

SANITATION ON THE RIVIERA.

The Drainage of Cannes.

After a lapse of some years we have renewed our investigations concerning the general and sanitary condition of the health resorts on the French Riviera. Of these the best known and most patronised by the highest classes from England is the old fishing village that Lord Brougham discovered, which has now become the flourishing town of Cannes. It seems curious that though this winter station owes its great prosperity almost exclusively to the patronage of English families, the British influence has failed to bring about the adoption of some satisfactory drainage scheme. At Cannes, built along the sea shore, there is insufficient fall for water carriage drainage. Endless disputation arose as to the mechanical methods that might be adopted to overcome this natural difficulty. At last a system has been adopted, and this year we were able to record that Cannes now possesses sewers to the length of 25 miles, draining 2000 out of a total of 2600 houses and villas. This is much better than nothing, though still removed from perfection. The main collector has practically no fall—barely 1 in 1000, and the current is only kept going by 55 automatic flush tanks, which discharge their contents six times a day. About half the sewage falls into the sea at the end of the Mole, but the rest flows out of six minor outfalls, which are too near to the shore, and, as the figures given above show, in spite of 30 years' agitation, more than 20 per cent. of the houses still retain the old-fashioned and dangerous cesspool system. This is the more inexcusable as the sewer tax levied where houses drain into public sewers amounts to a much smaller sum than the cost each householder must pay for the emptying of his cesspool. In the disposal of household refuse the municipality of Cannes has shown more initiative. Instead of creating a nuisance by sorting this refuse or incurring great expense by cremating it in a destructor, it is simply buried. Along the arid coast line, at some distance from the town in the La Bocca district, great and broad trenches are dug in virgin soil. The refuse carts tilt their contents into these trenches, the earth is shovelled over the rubbish, and five years are allowed for the process of natural purification. After that time it can all be dug up, the hard core—pots, pans, basins, tins, &c.—sifted away, and a fine inodorous earth remains, which is sold for market gardening and other such purposes.

Reckless Disposal of Refuse at Mentone.

This affords a very favourable contrast to the abominable desecration of the beautiful road to Sospel from Mentone. There the refuse from some 10,000 people is thrown into ravines and allowed to fester and ferment in the open air, breeding millions of flies, and spoiling the country for some distance around. In the meanwhile the town authorities are discussing what sort of destructor they ought to employ. Then they have discovered, but too late, that the heat generated in the destructor might help to provide motive power for the manufacture of electricity and thus reduce the cost of lighting the town.

Fertilising with the Refuse of Nice and Marseilles.

At Nice the neighbouring arid and stony banks of the rivers Paillon and Var supply enough ground to receive the town refuse for a hundred years or more. The town is creating assets for the future by converting arid into fertile soil with the aid of its town refuse. The greatest scheme, however, of this description is realised in the desert of La Crau. Here, under the able guidance of M. DE MONTRICHER, the rocky soil is blown up with dynamite, and trains bring every day the fresh refuse from Marseilles which is poured over the broken rock. To-day a part of the desert is green with the almond and olive trees that are growing there.

The Drainage of Monaco and Monte Carlo.

The Principality of Monaco, always enterprising and often ahead of its neighbours, was the first to set an example in regard to the disposal of refuse. In 1898 it spent £3400 in the building of a destructor, and even before the cholera epidemic of 1885 attempts had been made to dig down into the hard rock, so that the old historic town of Monaco might have a proper sewage system. In 1894 the English system of drainage by water carriage, and gravitation with the Shone elevators and ejectors where there was not a sufficient fall, was adopted for the entire Principality. There are now 15 miles of sewers, and no more sewage is allowed to flow into the port. Old sewers have been rebuilt and new ones laid, automatic flush tanks help to scour the sewers in dry weather, and the work has been well done throughout with but one very important exception. The scheme provided that the street sewer inlets should be also utilised as sewer ventilators. Pipes reaching to the top of the nearest house were to be connected with each inlet, yet this latter and essential part of the work has for some unaccountable reason been neglected. Since describing this defect His Serene Highness PRINCE ALBERT has informed us that "careful note would be taken of the just and useful observations" we had made. We consequently hope it will not be long before the sewers of the Principality are ventilated throughout.

Monaco's Model and New Hospital.

In one respect, and this is to a large extent due to the personal intervention and generosity of PRINCE ALBERT, the Principality has acquired undoubted pre-eminence. The new hospital is one of the best situated, most perfect, and luxurious buildings of the sort on the whole of the Riviera coast. The rocky mountain side, 81 metres above the sea, was hewn out to make a broad terrace, absolutely sheltered, facing the southern sun and the blue Mediterranean. Here well-built pavilions with solid stone walls, connected by sheltered colonnades and surrounded by beautiful flower beds and trees, have been constructed regardless of expense. In this manner the PRINCE has spent an enormous sum for the benefit of his people. The results are so excellent—and we published the very favourable statistics of the operations performed—that any number of persons who are not Monegasques have resorted to ingenious stratagems so as to gain admittance to this beautiful hospital. Nor is this institute intended only for the poor. At one end of the sheltered terrace there is the Villa Albert, fitted as a luxurious nursing home, where well-to-do patients of all nationalities are received. The charge varies from 8*s.* to 16*s.* a day according to the room occupied. This is a great boon to the traveller. The hospital is managed like a first-class hotel, the patient is attended by the physician he selects and pays, but there is a staff of fully trained nurses to carry out the medical advice given. Many other details and an illustration were given concerning this hospital, which was

inaugurated when the International Conference of the International Association of the Medical Press met at Monaco in 1902. Sufficient time has now elapsed to be able to show that the mortality from major surgical operations performed in this hospital is below the average.

THE HOUSING PROBLEM IN SOUTH WALES.

The very rapid increase of population due to the development of the mining industries has led to a house famine. Of recent years the population has multiplied fourfold, and private enterprise utterly fails to provide a corresponding addition to the housing accommodation. Indeed, there is every interest to keep the supply below the demand, for it is thus possible to charge extravagant rentals. The abuses resulting were studied on the spot and described at some length in THE LANCET early this year. Merthyr Tydfil, the valley of the martyrdom of the British Princess TYDFIL, has well sustained its early reputation. Here and to this day thousands have been brought prematurely to the grave by low wages and bad housing. These martyrs of modern industrialism are so numerous that the Valley of Martyrdom is no misnomer for this sinister part of Wales. Local Government Board inquiries, and pictorial descriptions written by Mr. GEORGE R. SIMS and other journalists agree with what our Sanitary Commissioner further described and denounced. Fortunately all these complaints and criticisms have produced some improvements, and the local authorities of Merthyr, Swansea, and elsewhere have now themselves built houses to be let at low rentals. But the difficulty is not all on one side. It is no easy matter to deal with the people themselves, for they generally prefer a central but unwholesome, overcrowded tenement to removing to the outskirts of a town where cheaper, ample, and healthy accommodation can be obtained. In South Wales there is a further difficulty caused by the fact that social wrecks drift there from all parts of the country. They work for something less than a living wage and take no interest whatever in their homes. Such tenants soon degrade good property and are the despair of all reformers, while their bare-footed and rag-clothed children are a disgrace to the community. This has led to the enactment of a very stringent and useful by-law at Merthyr, dated Oct. 21st, 1907. It applies to private lodgings in private houses where the rent is under 5*s.* unfurnished and 7*s.* 6*d.* furnished. As a great many workmen's families living in a cottage take in a lodger it brings the whole of this large class under sanitary control. The by-law gives the right of inspection both night and day, insists on 400 cubic feet of space for each adult, and not only states that the place must be kept clean, but gives full details as to how, and how often, the premises are to be cleaned. In this respect, and in regard to the "over and under" houses built against the side of precipitous hills, we gave details that were curious and instructive, arising from the peculiar local conditions. We are glad to think that some progress has been made and some improvements realised, while the chief cause of regret is the long delays that have occurred.

OBITUARY.

From the beginning of this year up to and including our issue of Dec. 23rd we have had the mournful duty of inserting in our columns special obituaries of well-known and highly appreciated medical men.

Mr. HENRY POWER died on Jan. 18th at the age of 81. He was consulting ophthalmic surgeon to St. Bartholomew's Hospital, and for more than 40 years a regular member of the staff of THE LANCET. He was an untiring as well as a methodical worker, and his industry and love of order enabled him not only to keep abreast of ophthalmological literature, but also to read widely in anatomy, physiology, and botany, and to record his candid views upon what he read with regularity. Mr. FREDERICK MELLAND died on Jan. 17th, having nearly completed his ninety-third year. He was connected for many years with the Chorlton Dispensary and the Ancoats Hospital, Manchester. Mr. GEORGE BIRT died on Jan. 25th, aged 64 years. He held the post of honorary surgeon to the Stourbridge Dispensary. Mr. CALEB BARRETT died in January at the age of 90 years. He had been medical officer to the Southern Dispensary in Bath, and also medical officer to the Abbey and Weston districts of the Bath union. Mr. JUSTIN THEODORE VULLIAMY, who died on Jan. 23rd at the age of 41 years, was assistant surgeon to the Rugby Hospital. Dr. FREDERICK WILLIAM PEARCE JAGO died on Feb. 1st at the age of 93 years. He practised at Plymouth for 50 years; he took a great interest in all matters connected with Cornwall and was the author of "The Ancient Language and the Dialect of Cornwall." Lieutenant-Colonel ALFRED WILLIAM FREDERICK STREET, D.S.O., died on Jan. 30th at the age of 58. He entered the Indian Medical Service in 1877 and saw much active service. From 1887 to 1902 he held the position of Deputy Sanitary Commissioner under the Government of Bombay, in which he did very valuable service, both in the sanitary control of a very wide area and in the suppression of plague itself. Dr. JAMES EDMUNDS, who died on Feb. 16th, was born in 1832. He was consulting physician to the London Temperance Hospital. He was one of the founders of the British Medical Temperance Association and its president from 1876 to 1879. Dr. CHARLES ALEXANDER MACMUNN died in February at the age of 58. He was consulting physician to the Royal Orphanage, Wolverhampton. He wrote particularly on the relation of chemistry to medicine. Dr. ARTHUR FRAME JACKSON died on Jan. 25th from plague at Mukden, where he was on the staff of the large hospital as medical missionary.

Dr. ANDREW SMART died on March 8th at the age of 86. He was consulting physician to the Royal Infirmary, Edinburgh. He is said to have been the first to discover the presence of micro-organisms in living tissue, the discovery being made in connexion with his work on rinderpest in 1865. Dr. WILLIAM PALEY died on March 13th at the advanced age of 94. He was at one time physician to the Peterborough Infirmary. Dr. LEONARD STRONG MCMANUS died on March 26th at the age of 54. He interested himself in municipal and political affairs with great advantage to those with whom he associated. He was highly esteemed by the profession, as was shown by his election to the General Medical Council as one of the Direct Representatives for England. Dr. THOMAS REID died on March 23rd at the age of 80. He was a member of the staff of the Eye Infirmary at Glasgow. He was also honorary consulting oculist to the Western Infirmary and Sick Children's Hospital in that city. He obtained a gold medal for his display of microphotographic work in the University of Turin. Surgeon-General JEFFERY ALLEN MARSTON died on March 31st at the age of 79. He was honorary surgeon to H.M. the KING. He had a distinguished military service, and on his retirement he became President of the Army Sanitary Committee as well as a member of the Indian Medical Board. For 30 years, whenever his conditions of employment allowed, he was a regular member of the staff of THE LANCET. Dr. HENRY PICKERING BOWDITCH, who died at the age of 71, was the *doyen*, and in reality the founder, of the American School of Physiologists. After prolonged study in Europe he returned to Boston (United States), and the present splendid position of the Harvard Medical School is due to him, as dean, more than to any other one man.

Dr. HENRY JAMES STOKES, of Highbury, who died on

April 12th at the age of 88, was one of the few remaining links which connected the medical profession of the present day with that of the earlier nineteenth century. He commenced medical practice in Islington in 1848, and continued to discharge its duties until his seventy-ninth year. Mr. FRANCIS JOHN MARSHALL died on April 1st, aged 68 years. He held the post of resident medical officer to St. George's Hospital for 30 years with remarkable success. Dr. WILLIAM WALKINSHAW MACREIGHT died during April at Torquay at the age of 83. He was for many years physician to Torbay Infirmary and to the Western Consumption Hospital. He was consulting physician to the Torbay Hospital up to the time of his death. Dr. HENRY SIMPSON died on April 13th at the age of 82. He was consulting physician to the Manchester Royal Infirmary, to the Manchester Hospital for Consumption and Diseases of the Throat, to the South Manchester Hospital for Diseases of Women and Children, and to the Manchester Ear Hospital. He was an authority on sanitary progress and reform. Dr. ARTHUR JAMES MACDONALD BENTLEY died on April 19th. He had held the posts of colonial surgeon to the Straits Settlements, medical adviser to the Johore Government, and physician to the SULTAN. Of late years he practised alternately at Llandrindod Wells during the summer and at Cairo during the winter. Dr. JOSEPH CARNE ROSS died at the age of 66. He was physician to Ancoats Hospital, Manchester. Mr. SAMUEL KNAGGS died on April 23rd at the age of 82. He was consulting surgeon to the Huddersfield Infirmary, and took an active part in the administration and development of the institution. Mr. JOHN TATHAM THOMPSON died on April 28th at the age of 52. He was consulting ophthalmic surgeon to the Cardiff Infirmary. He had made a special study of miner's nystagmus. Surgeon-General BEATSON (Indian Army) died on April 26th at the age of 86. He was the author of "The Indian Medical Service: Past and Present." Dr. CLAUDE CLARKE CLAREMONT died on April 30th at the age of 56. He was physician to the Royal Portsmouth Hospital. The Rev. ROBERT ELLIOTT, L.R.C.S. Irel., died on April 25th. He was secretary of the medical committee of the Church Missionary Society, being in charge of the medical missions of that society. Brigade Surgeon Lieutenant-Colonel ISIDORE BERNADOTTE LYON died on April 27th at the age of 71. He was for a time physician at the Jamsetjee Jeejeeboy Hospital; he was dean in medicine of the University of Bombay in 1888, and was created C.I.E. in the following year. He wrote a text-book on "Medical Jurisprudence," of which several editions have since appeared.

Mr. EDWARD MILLS GRACE died on May 20th at the age of 69. He was coroner for the lower division of Gloucestershire and a well-known cricketer. Dr. EDWARD H. DOUTY died on May 27th at the age of 48. He was at one time assistant surgeon and surgeon in charge of the gynæcological department, Addenbrooke's Hospital, Cambridge, and lecturer on midwifery in the University. Later he settled at Cannes and became surgeon to the Asile Evangelique, Cannes, and to the Queen Victoria Memorial Hospital, Nice. Dr. PETER HUME MACLAREN died on May 20th at the age of 74. He was consulting surgeon to the Royal Infirmary, Edinburgh. He was President of the Royal College of Surgeons, Edinburgh, in 1894 and 1895. He contributed largely to the knowledge of specific disease.

Dr. ALEXANDER BRUCE died on June 4th. He was physician to the Edinburgh Infirmary and one of the most noted neurologists in Europe. He devoted a large amount of time to the *Review of Neurology and Psychiatry*. His "Illustrations of the Mid and Hind Brain" and his "Topographical Atlas of the Spinal Cord" are acknowledged as among the finest things of their kind. Sir RUBERT WILLIAM BOYCE died on June 16th at the age of 48. He was Holt professor of pathology at the University of Liverpool and dean of the Liverpool School of Tropical Medicine. He published various papers on the pathology of the nervous system, which earned for him the Fellowship of the Royal Society. Later he became absorbed in tropical research, and served personally on expeditions of the Liverpool School of Tropical Medicine. Mr. ALFRED STILEMAN BOSTOCK, who died on July 1st at the age of 65, was a prominent practitioner at Chichester. Dr. THOMAS LAW WEBB died on July 3rd, aged 65. He practised at Ironbridge, Shropshire. He was profoundly interested in the etiology of cancer; his best-known work was that on "Cancer Houses," founded on observations made in his own registration sub-district of Madeley, and extended over a period of some 60 years. Dr. HERBERT TIMBRELL BULSTRODE died on July 21st at the age of 52. He was Medical Inspector to the Local Government Board, and lecturer on preventive medicine at Charing Cross Hospital Medical School. He delivered the Milroy lectures before the Royal College of Physicians of London in 1903 on the Causes, Prevalence, and Control of Pulmonary Tuberculosis. He was commissioned to make special inquiry into the sanatorium treatment of tuberculosis, the result being the volume entitled "Sanatoria for Consumption," a standard work which was published by the Local Government Board. Dr. JOHN BEDDOE died on July 19th at the age of 85. He was at one time physician to the Royal Infirmary and consulting physician to the Children's Hospital, Bristol, and to the Bristol Dispensary. Able physician as he was, it was as an anthropologist that he made his mark in this country and abroad. He also made valuable researches in archæology. Dr. JOHN DUNNELL RAWLINGS died on July 17th at the age of 43. He was surgeon to the Dorking Hospital.

Dr. SAMUEL JONES GEE died on August 3rd at the age of 71. He was consulting physician to St. Bartholomew's Hospital. His work on "Auscultation and Percussion" attained a sixth edition. In 1871 he delivered the Goulstonian lectures at the Royal College of Physicians of London, in 1892 the Bradshaw lectures on Signs of Acute Peritoneal Diseases, and in 1899 the Lumleian lectures on Bronchitis, Pulmonary Emphysema, and Asthma. Dr. GEORGE FIELDING BLANDFORD died on August 17th, aged 82. Throughout his professional life he was associated with psychological medicine. He was for many years lecturer on psychological medicine at St. George's Hospital Medical School. He wrote a text-book on "Insanity and its Treatment," which passed through four editions. At the time of his death he was President of the Society for the Relief of Widows and Orphans of Medical Men. Dr. FRANK PIERCE FOSTER died on August 13th at the age of 69. For 31 years he was editor of the *New York Medical Journal*. Dr. LEONARD CANE died on Sept. 2nd at the age of 63. He was consulting physician to the Peterborough Infirmary. Mr. ARTHUR BEADLES died on August 19th. He had a large practice at Forest Hill.

Mr. JAMES REID died on Sept. 12th at the age of 90. He was consulting surgeon to the Kent and Canterbury Hospital. Dr. FREDERICK WILLIAM PAVY died on Sept. 19th at the age of 82. He was consulting physician to Guy's Hospital. His literary work was both voluminous and important. It was mainly devoted to the physiology of digestion and the subject of diabetes. His views on diabetes, if not always in accord with contemporary opinion, were based upon his own experimental researches and clinical observation. In 1882–83 Dr. PAVY became Censor of the Royal College of Physicians, an office which he held again in 1891.

Dr. JOHN HUGHLINGS JACKSON died on Oct. 7th at the age of 76. He was consulting physician to the London Hospital and to the National Hospital for the Paralysed and

Epileptic. By his death English neurology has suffered a loss the extent of which it would be difficult to exaggerate. Many of his researches culminated in discoveries which made his name familiar wherever medicine is taught the world over. The psychologist of to-day has adopted his hypothesis of "levels" in the central nervous system; the physiologist has established the truth of his views on the functions of the motor cortex and of the cerebellum; the clinician and the pathologist are reaping in many fields where he sowed. Dr. JOSEPH BELL died on Oct. 4th. He was consulting surgeon to the Royal Infirmary, Edinburgh. He possessed an extraordinary faculty of detecting the ordinary routine of his patients' careers or the environments in which they lived; this faculty led Sir A. CONAN DOYLE to create his famous hero SHERLOCK HOLMES. Mr. LOUIS STROMEYER LITTLE, who died on Oct. 4th at the age of 70, was at one time surgeon to the London Hospital, and then went to Shanghai, where he was surgeon to the Shanghai General Hospital. Mr. GEORGE THOM died on Oct. 8th at the age of 65. He was consulting surgeon to the Royal Albert Hospital, Devonport. Sir H. J. BLANC died on Sept. 30th at the age of 80. He served in the Crimea and retired from the service with the honorary rank of deputy surgeon-general. To the late King EDWARD, when Prince of Wales, he proved of signal service, the reward for which came to him in the K.C.V.O. Dr. WILLIAM RICHARD HUGGARD died on Oct. 10th. He practised at Davos, where he was British Consul. Mr. CHARLES VERNON HITCHINS died on Oct. 11th at the age of 84. He was honorary surgeon to the Weston-super-Mare Hospital and Dispensary. Dr. ALFRED PETER HILLIER died on Oct. 24th at the age of 53. He spent many years in South Africa, and was a prominent member of the Reform Committee at the time of the Jameson raid. He was joint editor of *Tuberculosis*. Politics attracted him strongly, and he was Member of Parliament for North Herts. Dr. STANLEY SMITH died on Oct. 25th in the sixtieth year of his age. He was physician to the Railway Clearing System Superannuation Fund Corporation.

Sir SAMUEL WILKS died on Nov. 8th at the age of 87. He was consulting physician to Guy's Hospital. Of his literary works, the most important was the publication in book form, in 1859, of his lectures on Pathological Anatomy. He was President of the Royal College of Physicians of London from 1896-99. In 1897 he was created a baronet and was awarded the Moxon gold medal. He also received the appointment of physician to Their Royal Highnesses the Duke and Duchess of CONNAUGHT, and that of physician-extraordinary to Queen VICTORIA. Dr. JOHN ALFRED COUTTS died on Nov. 1st at the age of 60. He was physician to the East London Hospital for Children. He contributed several articles upon children's diseases to ALLCHIN'S "Manual of Medicine" and to the "Encyclopædia Medica." Dr. WILLIAM WILFRED WEBB died on Nov. 18th at the age of 54. He joined the Indian Medical Service in 1882, and attained the rank of major. He took great interest in biographical, genealogical, and heraldic work. Dr. WILLIAM HENRY WEBB died on Nov. 14th at the age of 58. He was medical officer of health of the Kingsbridge urban and rural districts, and honorary surgeon to the Kingsbridge Cottage Hospital. He was also Surgeon-Lieutenant-Colonel of the 2nd Battalion Devon Regiment (T.F.), V.D. Dr. FRANCIS THOMAS BOND died on Dec. 5th at the age of 77. He was medical officer of health, Gloucestershire combined district. Mr. HENRY ROBERT HEATHER BIGG died on Dec. 7th at the age of 58. He devoted himself to the study of orthopraxy. Dr. WALTER WYMAN died on Nov. 20th. He was Surgeon-General of the United States Public Health and Marine Hospital Service. Under his administration many far-reaching and important improvements regarding the health of the United States—civil, naval, and military—were effected.

Dr. EDMOND FAURIEL TREVELYAN died on Dec. 11th at the age of 52. He was senior honorary physician to the Leeds Public Dispensary and physician to the Leeds General Infirmary. He was one of the most ardent supporters of the Leeds Association for the Prevention and Cure of Tuberculosis. Dr. GEORGE HUBERT MAPLETON died on Dec. 10th, aged 53. After 14 years of medical practice in the West Indies he went to Goudhurst, Kent, in 1896, and practised there until his death.

THE NATIONAL INSURANCE ACT.

The passing of the National Insurance Bill into law within eight months of its first presentation to Parliament has been to the medical profession the most important public event of the year. It is unnecessary for us here to enter into a detailed discussion of the medical position under the Bill as it first stood or under the Act as it now stands, because week by week we have reviewed the situation as it changed or developed, and numerous correspondents have freely ventilated their opinions of the measure in our columns. A general survey shows that for a short time after the Chancellor of the Exchequer launched his scheme the attention of the medical profession, like that of many other interests affected, was more occupied with the admirable principles underlying the Bill than with the true significance and value of the methods proposed. But from the first it was shown by us that the Bill as it was drafted involved grave risks to the practice of medicine, and later disclosures and discoveries only emphasised the need for this warning. Time after time we insisted that, notwithstanding the general motive of the Bill, grave danger must lie in forcing through a scheme which proposed to improve the public health by a vast extension of club practice. It soon became obvious that the Bill as it stood could not be accepted by the profession, and the British Medical Association took in hand the task of formulating the minimum demands which must be conceded by the Government before the profession would coöperate in working the scheme. Hence arose the so-called six cardinal points, and upon these a large majority of the profession agreed to take a stand, pledging itself by inference to undertake the work if these were definitely granted and guaranteed. Throughout the summer and autumn and into the winter the leaders of the Association carried on negotiations with the Chancellor, and meanwhile the Bill passed through the House of Commons, undergoing innumerable changes in its course, but not coming into line with medical requirements in any definite or satisfactory manner. For a time indeed it seemed as though a deadlock had arisen, because certain concessions made by the Chancellor with the idea of appeasing medical men caused a serious outbreak of hostility towards the Bill in the large Friendly Society world. The gathering storm, however, cleared suddenly, and the medical profession then found that what had been grudgingly given to it with one hand had been largely taken away with the other.

Recent events are too fresh to need recapitulation. Mr. SMITH WHITAKER'S appointment, the passing of the Act, and the great protest meetings in London, Manchester, Birmingham, and Sheffield are all affairs of yesterday. The present position can scarcely be considered satisfactory. That there is division of opinion within the profession cannot be denied or ignored. But in spite of this we trust that a common basis of action may yet be found upon which all may loyally and honourably unite. The questions whether the Council of the Association have done the best that could have been

done, whether they gave good or bad advice to the Representative Body, or whether they should have sanctioned their Medical Secretary's appointment, must, alas, remain open for discussion. But the more that these questions can be thrust into the background, the better will be the chance for a development throughout the whole profession of a real spirit of union. A highly organised profession, seeking no legislation on the point in question, suddenly finds itself, by certain sections of a complicated measure, involved in a struggle for existence. While the struggle is still going on, the Bill, in a manner against which no protest can be too vigorous, becomes the law of the land. We have to decide upon a common line of policy, justifying every step of our resistance.

Annotations.

"Ne quid nimis."

METROPOLITAN HOSPITAL SUNDAY FUND.

AT a meeting of the constituents of the Metropolitan Hospital Sunday Fund, held at the Mansion House on Dec. 21st, under the presidency of the Lord Mayor, the report of the Council for the year 1911 was received. The Council were re-elected for the year 1912 with the addition of the Ven. Archdeacon of London, the Rev. Prebendary Perry, the Rev. J. Allen Bell, the Rev. H. A. Hall, the Rev. Simpson Johnson, Sir Thomas Vezey Strong, Mr. Arthur Finch Charrington, and Mr. Andrew Motion; and June 9th was fixed for Hospital Sunday, 1912. The figures of the report will be found in THE LANCET of Dec. 9th, p. 1641, and in our present issue, p. 1876. The Bishop of London moved that the report be received, and in doing so remarked that the Fund formed a golden bridge between rich and poor and was a wonderful bond of union and goodwill between people of all denominations. Sir J. Bell seconded the motion. Mr. H. S. Stowe asked why the Distribution Committee of the Fund had accepted the assurance of the authorities of St. George's Hospital that money paid to the medical school from the funds of the hospital really went to the sick poor, when the King's Fund had not been satisfied, and as a consequence had made no grant. Sir William Church said that no grant had been given by the King's Fund to St. George's Hospital because the authorities of that hospital had not applied for one, and read a letter from Mr. A. W. West, the treasurer of the hospital, which stated in the clearest manner that not one penny of the money subscribed by the Metropolitan Hospital Sunday Fund, or from any other source to the general funds of St. George's Hospital, was used for any other purpose save for the treatment of the sick poor. Mr. Stowe then moved an amendment which would have had the effect of deleting from the report the amount already given to St. George's Hospital. The Lord Mayor declined to accept this amendment because the money had already been paid. Subsequently the Rev. L. S. Lewis proposed an amendment in the following terms: "That as King Edward's Hospital Fund, after careful investigation into the accounts of St. George's Hospital, has felt itself unable to make a grant to that hospital, the Metropolitan Hospital Sunday Fund refuses to encourage what King Edward's Fund condemns, and wishes it to be an instruction to the Distribution Committee next year to fall in line with the King Edward's Fund on this matter." This was seconded by Mr. Stowe, and after a long discussion, which was taken part in by, among others, Sir Sydney Holland, Sir William Church, the Bishop of London, Mr. A. W. West, and the Rev. G. M. Hanks, the amendment was withdrawn, after the Bishop of London had remarked that the word of Mr. West was sufficient for him, though he appreciated the opinions behind the amendment. The Lord Mayor has promised that he will inquire into the matter during his year of office, and he will be doing a great public service if he can arrive at the proper solution of a grave difficulty.

THE SANATORIUM MOVEMENT IN DENMARK.

IN a recent lecture Dr. H. Rördam has given an interesting account of the vigorous campaign against tuberculosis which has been carried on in Denmark during the last decade. At the close of the year 1900 there were only three consumptive hospitals or sanatoriums in Denmark. Ten years later there were 12 sanatoriums, with a total of 1069 beds for the working classes, and 52 Government hospitals for tuberculosis, with a total of 1113 beds. Thus in the course of ten years 2147 beds were provided for cases of tuberculosis among the working classes, the Government paying three-quarters of the cost of treatment. Denmark, therefore, with a population of 2½ millions, has practically got for every 1000 inhabitants one bed devoted solely to tuberculous patients. The credit for this energetic campaign against tuberculosis is largely due to the Danish National Society for the Prevention of Tuberculosis. This society, which has now existed for ten years, has promoted about 500 lectures on tuberculosis throughout the country; it provided in 1908 a central station in Copenhagen, to which 300 doctors have sent 1750 patients. 12,200 suspect cases have been medically examined and 12,300 visits have been paid by the nursing staff attached to the station. With the money provided by the sale of the society's "Höstblomst," or autumn flower, over 300 children have been given suitable treatment. Owing largely to the society's activity a number of laws have come into force dealing with the notification of phthisis and with general hygiene. It is accordingly somewhat disappointing to find that whereas the mortality from phthisis fell rapidly in the period 1880 to 1900, its decline has been much slower in the last decade, and it even shows a tendency to rise in 1905. Probably this rise was more apparent than real, as it synchronised with the introduction of compulsory notification of phthisis; and it is certain that a greater proportion of cases of phthisis are now diagnosed as such than was formerly the case. It must also be borne in mind that in such a disease as tuberculosis it is easier to reduce a high to a low death-rate than to reduce a low death-rate to *nil*. To what extent sanatorium treatment has reduced the death-rate from tuberculosis in Denmark it is impossible to say, as no satisfactory comparison has yet been made between the results obtained by sanatorium and the older methods of treatment. The result of a careful inquiry showed that at the close of 1910 3037 patients had undergone sanatorium treatment at different periods during the past decade, and that 1358 of these were still fit for a full day's work.

RARE CONTRACTED PELVES AND CÆSAREAN SECTION.

NEARLY 40 years ago the late Dr. G. E. Yarrow, of Finsbury, contributed to THE LANCET a report of a Cæsarean section which he performed on a rachitic dwarf, 4 ft. 2 in. in height.[1] The child was saved, but the mother died. As stated in Dr. Yarrow's original report the pelvis was preserved and presented to the Obstetrical Society of London. The collection of pelves, once the property of that society, has been recently acquired by the Royal College of Surgeons of England. It includes the Yarrow pelvis which has been

[1] Report of a Case of Cæsarean Section, THE LANCET, Oct. 12th, 1872, p. 523.

carefully examined in the College Museum. A rare type of malformation has in consequence been detected. The lateral mass of the first sacral vertebra is replaced by a transverse process in form like the same process in the fifth lumbar. This deformity would be termed "left-sided lumbar assimilation" by Bayer in his standard work "Das Becken und seine Anomalieen." Symmetrical development of a separate transverse process of the lumbar type in the first sacral makes a "low assimilation pelvis," and symmetrical fusion of the transverse processes of the fifth lumbar into the lateral masses of the first sacral constitutes a "high assimilation pelvis," whilst asymmetrical sacral assimilation of the fifth lumbar has been observed. Unilateral "assimilation" of the first sacral vertebra, as existing in the Yarrow pelvis, causes slight obliquity and narrowing of the inlet, as Whitridge Williams and others have shown. In Dr. Yarrow's specimen, however, the obliquity is but slight, especially as compared with the rare yet well-known Nägele's pelvis, where early ankylosis of the sacro-iliac joint on one side involves defective development of the corresponding os innominatum. The College also possesses a pelvis showing extreme deformity due to mollities, which disease developed in a woman who had previously given birth to several children with ease. Dr. Broughton of Preston performed Cæsarean section, but, as in Yarrow's case, the child only was saved. This pelvis is being re-examined specially with a view of ascertaining by comparison with specimens of mollities in other collections whether there be a distinct mollities or osteomalacia of pregnancy. The disease certainly develops quite independently of gestation, and may be associated with true rachitis; the annals of Cæsarean section, as collected by Radford and Amand Routh, throw some light on this subject, but more is to be desired. Under the direction of the Museum Committee of the College a collection of female pelves illustrating deformities more or less liable to obstruct labour is in course of preparation. The series, including Yarrow and Broughton's specimens, will be added to the College Museum. It is an excellent thing that the College authorities should thus recognise the absolute need of a standard collection of obstetric pelves. Should any readers of THE LANCET possess specimens of malformed female pelves which they may feel inclined to present to the College such specimens will be gratefully received and duly acknowledged by the conservator, Dr. A. Keith.

WE congratulate Miss Eleanor Davies-Colley as the first woman to attain the distinction of becoming a Fellow of the Royal College of Surgeons of England. Her father, the late Mr. J. N. Davies-Colley, was a member of the Council and of the Court of Examiners of the College, and two of her brothers are Fellows. Her grandfather was also a medical man.

Dr. Bernard Hudson has been appointed His Majesty's Consul at Davos.

TYPHOID FEVER IN LEICESTER.—During the month of December an epidemic of typhoid fever has taken place in Leicester, the number of patients admitted to the isolation hospital during that month being greater than during the whole of the previous 11 months of the year. Special inquiries have been made by the medical officer of health of the borough (Dr. C. Killick Millard), and he has ascertained that in practically all the cases the patients admit the consumption of mussels in a raw state. A special report has been prepared for the Leicester sanitary committee, and this has been forwarded to the Local Government Board.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7539 births and 5083 deaths were registered during the week ending Dec. 16th. The annual rate of mortality in these towns, which had been 14·2, 15·7, and 15·2 in the three preceding weeks, rose to 16·4 per 1000 in the week under notice. During the first eleven weeks of the current quarter the mean annual rate of mortality in these towns averaged 14·5 per 1000, and was 0·4 per 1000 above that recorded in London during the same period. The annual death-rates in the 77 towns in the week under notice ranged from 6·0 in Hastings, 6·7 in Walthamstow, 7·7 in King's Norton, and 8·0 in Tynemouth, to 22·5 in Liverpool, 22·8 in West Hartlepool, 23·1 in St. Helens, and 25·2 in Warrington. The 5083 deaths from all causes in the 77 towns were 365 in excess of the number in the previous week, and included 305 which were referred to the principal epidemic diseases, against 276 and 238 in the two preceding weeks. Of these 305 deaths, 71 resulted from measles, 68 from infantile diarrhœa, 64 from diphtheria, 53 from whooping-cough, 27 from scarlet fever, and 22 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases was equal to 1·0 per 1000, against 0·9 and 0·8 in the two preceding weeks. The deaths attributed to measles, which had been 44, 66, and 52 in the three preceding weeks, rose to 71 in the week under notice, and caused the highest annual death-rates of 1·4 in Stockport and in Warrington, 1·5 in Smethwick, 1·9 in York, 2·0 in Bournemouth, 2·6 in Norwich, and 3·9 in Burnley. The deaths referred to infantile diarrhœal diseases which had continuously declined from 2714 to 45 in the 16 preceding weeks, rose to 68 in the week under notice, and of these 24 were recorded in London and its suburban districts, 6 in Liverpool, and 3 in Leicester. The fatal cases of diphtheria, which had been 61, 57, and 60 in the three preceding weeks, rose to 64 during the week, and included 17 in London and its suburban districts, 4 in Portsmouth, and 3 each in Plymouth, Derby, Liverpool, Huddersfield, Bradford, and Leeds. The deaths assigned to whooping-cough, which had steadily risen from 16 to 45 in the six preceding weeks, further rose to 53 in the week under notice; 9 deaths occurred in London, 6 in Walsall, 4 each in Birmingham, St. Helens, and Sunderland, 3 in Manchester, and 3 in Sheffield. The deaths referred to scarlet fever, which had declined from 29 to 16 in the three preceding weeks, rose again to 27 during the week, and included 5 in London, 3 in Liverpool, and 2 each in Birmingham, Sheffield, and Rhondda. Of the 22 fatal cases of enteric fever, which were equal to the average number recorded in the five preceding weeks, 5 were registered in London, 2 in West Ham, and 2 in Bradford. The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had decreased from 2213 to 2089 in the four preceding weeks, had further declined to 2042 on Saturday, Dec. 16th; 224 new cases of this disease were admitted to these hospitals during the week, against 203, 248, and 241 in the three preceding weeks. These hospitals also contained on Saturday, Dec. 16th, 1356 cases of diphtheria, 211 of whooping- cough, 91 of measles, and 77 of enteric fever, but not one of small-pox. The 1391 deaths from all causes in London in the week under notice were 152 in excess of the number in the previous week, and included 389 which were referred to diseases of the respiratory system, against numbers steadily increasing from 170 to 331 in the six preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had increased from 158 to 201 in the three preceding weeks, declined to 195 during the week, and 480 inquest cases were registered. The causes of 39, or 0·8 per cent., of the deaths registered in the 77 towns in the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, Salford, and in 49 other smaller towns. The 39 uncertified causes

of death included 6 in Birmingham, 5 in Liverpool, 3 in St. Helens, and 3 in Middlesbrough.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 789 births and 587 deaths were registered during the week ending Dec. 16th. The annual rate of mortality in these towns, which had been 18·0 and 16·8 in the two preceding weeks, rose to 17·9 per 1000 in the week under notice. During the first eleven weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·8, and was 2·3 per 1000 above the mean rate during the same period in the large English towns. The annual death-rates in the several Scotch towns in the week under notice ranged from 7·3 and 15·1 in Perth and Edinburgh to 19·9 in Dundee and 21·4 in Aberdeen. The 587 deaths from all causes were 37 in excess of the number in the previous week, and included 59 which were referred to the principal epidemic diseases, against 72 and 58 in the two preceding weeks; of these 59 deaths, 32 resulted from measles, 8 from whooping-cough, 8 from diarrhœal diseases, 6 from diphtheria, 4 from scarlet fever, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns in the week under notice was equal to 1·8, and was 0·8 per 1000 above the mean rate from the same diseases in the 77 large English towns. The deaths referred to measles, which had been 23, 31, and 23 in the three preceding weeks, rose to 32 during the week, and included 18 in Glasgow and 13 in Aberdeen. The deaths attributed to whooping-cough, which had been 6 and 10 in the two preceding weeks, were 8 in the week under notice, of which number 4 were registered in Aberdeen and 2 in Glasgow. The deaths assigned to diarrhœal diseases, which had continuously declined from 19 to 9 in the four preceding weeks, further fell to 8, all but one of which related to infants under two years of age, and included 5 in Glasgow. The fatal cases of diphtheria, which had been 15 and 8 in the two preceding weeks, further declined to 6 during the week, of which 4 were recorded in Glasgow. The 4 deaths referred to scarlet fever were equal to the average in the four preceding weeks and included 2 in Aberdeen. The fatal case of enteric fever was registered in Glasgow. The deaths referred to diseases of the respiratory system, which had been 113, 113, and 122 in the three preceding weeks, further rose to 126 in the week under notice, and were 4 above the number recorded in the corresponding week of last year. Of the 587 deaths from all causes in the Scotch towns during the week, 164, or 28 per cent., were recorded in public institutions, and 20 were attributed to different forms of violence. The causes of 15, or 2·6 per cent., of the deaths in the eight towns in the week under notice were not certified or not specified; in the 77 large English towns the proportion of uncertified causes did not exceed 0·8 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 615 births and 461 deaths were registered during the week ending Dec. 16th. The annual rate of mortality in these towns, which had been 18·3 and 17·7 in the two previous weeks, rose to 20·9 per 1000 in the week under notice. During the first 11 weeks of the current quarter the mean annual rate of mortality in these towns averaged 18·5 per 1000; in the 77 large English towns the mean annual death-rate during the same period did not exceed 14·5, while in the eight Scotch towns it was equal to 16·8 per 1000. The annual death-rate during the week was equal to 22·0 in Dublin (against 16·0 in London), 20·5 in Belfast, 35·4 in Cork, 11·5 in Londonderry, 21·7 in Limerick, and 22·8 in Waterford; while in the 16 smallest of these Irish towns the death-rate for the week did not exceed 14·8 per 1000. The 461 deaths from all causes were 70 in excess of the number in the previous week, and included 35 which were referred to the principal epidemic diseases, against numbers declining from 47 to 25 in the four preceding weeks; of these 35 deaths, 11 resulted from diarrhœal diseases, 7 from measles, 6 from whooping-cough, 5 from diphtheria, 3 from enteric fever, and 3 from scarlet fever, but not one from small-pox. These 35 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·6 per 1000; in the 77 English towns during the week under notice the mean annual death-rate from these diseases did not exceed 1·0 per 1000; while in the eight Scotch towns it was equal to 1·8. The deaths attributed to diarrhœal diseases, which had been 19, 14, and 7 in the three preceding weeks, rose to 11 during the week, all of which related to infants under two years of age, and included 3 in Dublin, 2 in Belfast, and 2 in Cork. The deaths referred to measles, which had been 4 and 2 in the two preceding weeks, rose to 7 in the week under notice, and comprised 5 in Dublin and 2 in Cork. The fatal cases of whooping-cough, which had been 11 and 6 in the two preceding weeks, were again 6 in the week under notice, of which 3 were recorded in Dublin and 3 in Belfast. The 5 deaths referred to diphtheria, which comprised 4 in Dublin and 1 in Belfast, were equal to the average in the two preceding weeks. The 3 fatal cases of scarlet fever were also equal to the average in the two preceding weeks, and included 2 in Belfast. The 3 deaths from enteric fever, which were slightly in excess of recent weekly numbers, were all recorded in Dublin. The deaths referred to diseases of the respiratory system, which had been 78, 77, and 92 in the three preceding weeks, further rose to 105 during the week. Of the 461 deaths from all causes in the Irish towns in the week under notice, 135, or 29 per cent., were recorded in public institutions, and 9 were attributed to different forms of violence. The causes of 21, or 4·5 per cent., of the deaths in the 22 towns during the week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 0·8 per cent. in the 77 English towns, but was equal to 2·6 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeons: H. W. Gordon-Green to the *Collingwood*; E. R. Dimsey to the *President*, additional, for three months' hospital course; J. D. Hughes to the *St. Vincent*; and H. B. Marriott to the *Cornwall*, on recommissioning. Staff-Surgeons: R. H. Atkins to the *Pathfinder*; A. W. Iredell to the *Victory*, additional, for disposal; R. W. B. Hall to the *Active*, on commissioning; and R. R. Horley to the *Prince of Wales*. Surgeons: E. L. Markham to the *King Edward VII.*, additional, for Nore Sub-Division, Home Fleet; A. G. V. French to Haslar Hospital; G. T. Verry to the *Victory*, additional, for disposal, and for long P.T. course; and B. Pick to the *Cornwall*, on recommissioning.

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd London (City of London) Field Ambulance, Royal Army Medical Corps: Cecil William Rowntree to be Lieutenant (dated Nov. 18th, 1911).

1st Western General Hospital, Royal Army Medical Corps: Keith Waldegrave Monsarrat (late Surgeon-Captain, 5th Battalion, The King's (Liverpool Regiment)), to be Captain (dated Dec. 23rd, 1911).

Attached to Units other than Medical Units.—Lieutenant George M. A. Thomas to be Captain (dated Oct. 23rd, 1911). Captain Edward Gray to be Major (dated Nov. 27th, 1911). Lieutenant-Colonel and Honorary Surgeon-Colonel William H. Packer resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated Dec. 23rd, 1911).

For Attachment to Units other than Medical Units.—Geoffrey Seccombe Hett to be Lieutenant (dated Nov. 1st, 1911).

ROYAL SUSSEX COUNTY HOSPITAL.—Thanks to the generosity of Mr. Charles Borradaile, vice-chairman and ex-president, every ward at the Royal Sussex County Hospital at Brighton has just been equipped with new bedsteads of the latest hospital pattern.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—Notwithstanding all that has been written and spoken about the National Insurance Bill it is doubtful whether many medical men had given much personal thought to its medical aspects before the measure received Royal Assent a few days ago. The members of the profession were aware that the British Medical Association, through its recognised authorities, had adversely criticised certain provisions in the Bill and was endeavouring to amend them so as not only to secure conditions acceptable to the profession but also to safeguard the prescriptive rights and the vested interest of medical practitioners. It is now believed by many thousands of medical men that these endeavours have failed; and they are profoundly disappointed and dissatisfied.

Though late, it may not be too late to consider the principle underlying the question of the medical benefits provided by the Act.

The Act seeks to effect the insurance of many millions of men and women of all sorts and conditions; workers in many and different trades and in occupations of great diversity of effort, skill, and risk, and persons of every state of physical health and vitality, and of various standards of morality. Many of these persons will be genuine workers, of good health and good habits, industrious, sober, thrifty. But a large number will belong to the proletariat who form the fringe of society and are without a definite calling and are too often not only diseased but of depraved habits and of low morals.

Hitherto the principle of insurance has been applied either to carefully selected lives or to small sections of the community whose vital, social, and economic conditions are more or less understood. In the National Insurance Act there is no selection, no discrimination, no gradation. Good lives and bad lives, the virtuous and the vicious, the thrifty and the improvident, the strong and the weak, are lumped together. Not only does this place those who are insured under very unequal terms, the good lives paying for the bad, but it inflicts positive injustice on the members of the medical profession by requiring them to render services indiscriminately at a fixed rate of payment that is barely remunerative even when restricted to specially picked lives.

Medical practitioners have reasonable grounds of objection to such a proposal, and resent the implicit autocratic dictation of the Act. Moreover, no compensation is provided by the Act for the inevitable depreciation in the selling value of a practice, and there is no appreciation of the disturbance which the Act will cause in the existing status of medical men, and in the relations of medical men to one another and to their patients. The Act also ignores—wilfully, perhaps—the fact that in the case of thousands of practitioners, especially those in the smaller towns, their private *clientèle* will be practically wiped out.

Medical men are the only class in the community whom it is attempted to exploit in this way. Lawyers, purveyors of food and fuel and clothing are not placed under any restriction or limitation or supervision as to what they shall charge for their services or commodities to those who come within the provisions of the Act. Perhaps this is reserved.

Unless, therefore, the members of the profession hold together and present a solid and united front, helping each other and bearing each others' burdens, there is a grave risk that the pressure of circumstances may be too great for some of the weaker brethren, who may find themselves compelled, unwillingly perhaps, to accept the poor rate of remuneration and the humiliating terms of service which the Act offers. Or what may be a greater evil, the Act will tend to bureaucratise the profession and introduce a class of "whole-timers" who will thereby become State functionaries, and be able by their subsidies to engage in an unfair and ruinous competition with free practitioners, to whom will remain in many cases only a small fragment of the community from which to draw patients.

Further, the Act abrogates the tacit agreement of the State that those who have devoted time and money and thought to the acquisition of professional knowledge and skill, and who have secured a legal right to practise, shall be entitled to free use and enjoyment in the disposal of their possessions. Further, it will check honourable rivalry of skill and talent, which always benefits the public; it will withdraw the stimulus to high endeavour, and will ultimately degrade the status of the profession of medicine by withholding the prospect of reasonable recompense for the large outlay necessary for a full and complete medical training.

Such a consummation would ultimately injure the whole community. If the profession should fail to attract the best class of men the standard of knowledge and skill will decline to the detriment and danger of public health and safety.

With such grave issues at stake it was scarcely prudent to negotiate about details such as rates and methods of remuneration, and terms of service, &c. It would have been wiser to stick to principles.

Granting, for the sake of argument, that the motive underlying the National Insurance Act is well-intentioned, we cannot close our eyes to the fact that the Bill was not allowed free and impartial discussion, but was forced through the House of Commons by methods which violated the best traditions of Parliamentary procedure; that one of the great political parties—the largest in numbers and the most homogeneous in character—repudiated all responsibility for the Act, and that the House of Lords refused any reasoned consideration of the Bill.

Although personally I do not regard the so-called "six cardinal points" as sufficient in themselves, we have pledged ourselves to them and should abide by them. But they should be the irreducible minimum and should be clearly provided for without the possibility of cavil or equivocation.

If these "points" are rejected or evaded, then the profession is free either to refuse to do any work under the Act or to negotiate afresh.

Should fresh negotiations become practicable I would venture to suggest that whatever other protecting precautions may be taken the profession should insist that all payment for medical services under the Act should be for work done, and not on any system of capitation, which would not only perpetuate but aggravate the evils of contract practice.

I am, Sir, yours faithfully,

Dec. 26th, 1911. J. TWEEDY.

To the Editor of THE LANCET.

SIR,—The question whether the Council of the British Medical Association has or has not failed in its duty to the members of the Association will, I understand, be dealt with at a special general meeting to be held at an early date. In regard to this matter I desire to direct attention to a few facts which hitherto have not received the publicity they deserve.

Whenever a member of the Council speaks at a meeting or writes in the press in defence of the recent negotiations, we always hear the same remark—"The Representative meeting of Nov. 23rd and 24th authorised us by its resolutions to go on negotiating with the Government, and we have simply followed instructions." Now it can be shown that this so-called "Representative" meeting was conducted by the two gentlemen who successively occupied the chair (Dr. Maclean and Dr. Buist) in such a way that it was not representative in character, and this being so the Council's defence is gone.

In proof of my assertion I shall deal first with a remark made by Dr. Maclean. At an early stage of the proceedings he told the representatives that they were free to vote as they thought fit, and that they were not bound by the terms of the resolutions passed by their divisions. I desire to draw particular attention to the fact that all reference to this remark was omitted from the otherwise full account of the meeting published in the *British Medical Journal* Supplement of Nov. 25th. I wish also to point out that in the correspondence reprinted from the *Scotsman* in the Supplement of Dec. 23rd Dr. Maclean and Dr. Macdonald in their joint letter avoided dealing with this point, which had been specially raised by Dr. William Craig, and contented themselves with saying "We do not propose to follow Dr. Craig in his criticism of the internal proceedings of the Representative meeting, as

we do not consider your columns a suitable place for such a discussion." I fancy many of us will agree with Dr. Maclean and Dr. Macdonald that there is a better place than the *Scotsman* columns for dealing with the matter, and will look forward instead to a ventilation of the subject at the forthcoming special general meeting. Again, I would draw attention to the fact that though the remark of Dr. Maclean with which I am dealing was quoted by Mr. Pinder in his speech at the Queen's Hall meeting on Dec. 19th, this reference was suppressed from the report in the *British Medical Journal* Supplement of Dec. 23rd; it will, however, be found recorded in other accounts of the meeting—for example, in the report given in the *Medical Press and Circular* dated Dec. 20th. So far from Dr. Maclean's ruling as to the representatives' freedom in voting being a correct one, it has been condemned by everyone I have spoken to regarding it, and there can be no doubt as to the view any one of the divisions would have taken had its representative inquired, prior to the meeting, "Am I or am I not bound in my voting by the terms of your resolutions?" This particular Representative meeting was a momentous one at which a very grave decision had to be made—a decision whether we would go on negotiating or would say, "No, this is not the Bill for us," and I maintain that for Dr. Maclean to influence the meeting in its voting, as it undoubtedly was influenced, was a gross abuse of his position as chairman. I say, further, that the three examples which I have given of suppression of his remark—firstly in the *British Medical Journal* report of the meeting, secondly in the *Scotsman* correspondence, and thirdly in the *British Medical Journal* report of the Queen's Hall meeting—strongly suggest that the Council is none too anxious for Dr. Maclean's statement to have the publicity which I for one am determined it shall receive. I am not aware of any rule or by-law of the Association giving the representatives freedom to vote in a direction contrary to the definite instructions of their divisions. If such a rule does exist, I think the body of the profession will be with me in agreeing that the sooner it is rescinded the better.

The next point to which I wish to direct attention is this. The "Representative" meeting was most certainly swayed and directed by the special pleading of members of the Council, who managed to get certain resolutions and amendments passed, and thus caused others to be ruled out of order as incompatible with those already secured. The result was that a large number of the really important resolutions which had been sent up by various divisions—resolutions to break off negotiations, to refuse to work under the Bill, and so forth—had no chance of discussion at all, but were merely mentioned to be withdrawn from the meeting. The representatives found their time being frittered away instead in useless discussions, such as whether they should demand three, five, or eight members on a committee of 80, just as if it were not obvious that in any case their representatives on such a committee would be in a quite helpless minority. I say unhesitatingly that no onlooker at that meeting would have thought for a moment that the members of the Council were there as *our* representatives to carry out *our* instructions, but on the contrary he would certainly have taken the Council to be holding a brief for the Government as against ourselves. I myself (present as an onlooker) noticed many expressions of indignation at the way the meeting was carried on.

I have also to mention the Council's recommendation in the matter of Mr. Smith Whitaker's appointment. At the "Representative" meeting a member rose and said there were rumours in the smoke-rooms of clubs and elsewhere that a high appointment under the Bill had been offered to an official of the British Medical Association, and he proposed a resolution that no member of the Association should take any post under the Bill without the consent of the Association. In dealing with this matter Dr. Maclean said in effect that, speaking for himself, if any such post were offered him his answer would be irrevocable; that he much preferred to continue to work for the Association in the future as he had worked in the past, and that, as to the smoke-room rumour, it was best left in the smoke, where it had been found. These remarks by Dr. Maclean undoubtedly influenced the meeting greatly. The representatives cheered loudly, and obviously accepted the statement as an assurance that any rumours were unfounded. They felt that any distrust they might have had in the Council had not been merited, and that they might safely trust the Council to continue negotiations. It is now clear that the subject of Mr. Smith Whitaker's appointment was deliberately concealed from the meeting. Dr. Maclean has said he considered that at the time of the Representative meeting the matter had dropped. But, if so, surely he should have told the meeting, "There has been an offer but it has been declined, and the matter is considered dropped." If, on the other hand, he did not consider the matter dropped it was equally his duty to tell the meeting "There has been an offer." At a divisional meeting held at the Battersea town-hall on Dec. 13th I moved a resolution calling upon the Council to resign. Dr. Lauriston Shaw, who had been invited to attend the meeting, spoke in defence of the Council, and said that Dr. Maclean could not have told the Representative meeting what was going on as the matter was confidential. But surely there would have been no breach of confidence in making a general statement, mentioning no names, that there had been an offer from the Government. And, as a matter of fact, Dr. Maclean, in replying to Dr. Major Greenwood at the Council's meeting of Dec. 2nd, did not claim anything on the ground of the matter being confidential. He simply said that at the time of the Representative meeting "the declension of the Medical Secretary to accept the offer controlled the position."[1] It is clear, then, that the Chancellor's offer was deliberately concealed from the meeting without any justification. Can anyone doubt that had the representatives known what was going on they would have passed very different resolutions?

I repeat that the Council has acted as if it held a brief for the Government, and this at a time when the aims of the Government and of ourselves are, as most of us are convinced, in hopeless antagonism. In trying to solve the problem how it comes about that the very men whom we have ourselves chosen have been acting against us I can only imagine that the members of the Council were so gratified to find themselves hob-nobbing with Cabinet Ministers and receiving the smiles and flattery of the Chancellor of the Exchequer that they forgot all about those 20,000 men who had placed their faith in them, and whose interests had been entrusted to their care.

I am not now attempting to discuss the ultimate effect of the Act upon our profession and upon the public welfare, though the vast extension of contract practice which is contemplated seems to an overwhelming majority of us to be a disastrous move from all points of view, and most of us are firmly of opinion that the medical provisions of the Act should be dropped. This letter is simply the result of a very strong feeling that we have not had the fair-play and straightforward dealing which we had a right to expect from the Council. That body committed, to say the least, a grave error of judgment when it conducted that "Representative" meeting in such a way as to induce it to pass a resolution authorising the continuance of negotiations. I for one look forward to the appointment of a new Council which shall be truly representative of the members of the Association.

I must apologise for the length of this letter, but the points dealt with seem to me of considerable importance at the present juncture, and this must be my excuse.

I am, Sir, yours faithfully,

EDWIN SMITH, M.D. Lond.,
Barrister-at-Law.

London, S.W., Dec. 26th, 1911.

To the Editor of THE LANCET.

SIR,—This is an appeal to refuse work under the Insurance Act, for the following reasons:—

1. That the six cardinal points originally formulated by the British Medical Association have not been conceded and no assurance has been given by Parliament that they ever will be conceded.

2. That the majority of the divisions of the British Medical Association passed resolutions in the following terms previous to the Representative meeting held Nov. 24th, 1911: "That unless the six cardinal points were embodied in the Bill we should refuse to undertake any duties under the Bill."

3. That our minimum requirements have not been embodied

[1] See Supplement, Dec. 9th, p. 587.

in the Act in statutory form after months of negotiations and the expenditure of a large sum of money; therefore it follows we should refuse all work under the Act.

4. That the "Wait and See" policy of the Council of the British Medical Association is not the wisest policy for the profession to adopt. First, their policy for "collective local bargaining" will lead to disunion of the profession and endless wrangling. To bargain effectually we must bargain on equal terms. Our position to bargain under this Act is three medical men in a committee of 40 (minimum), three in a committee of 80 (maximum). Second, is it a professional way of behaving to bargain and wrangle for fees before a Local Health Committee? It must be remembered that the Local Medical Committees have no statutory powers, and, knowing what representation we have on the Local Health Committees, what chance can we possibly have of forcing the demands of the Local Medical Committees?

5. That the Act promises adequate medical attendance to 15,000,000 people probably under the worst form of contract practice. For the sum of money provided for the medical part of the Act is £4,500,000 only, and no mention has ever been made as to the amount of work or the remuneration —including payment for consultations, anæsthetics, night visits, mileage, minor operations, vaccines, antitoxins, certificates, &c. No mention is made as to hospital treatment for the insured.

6. That taking everything into consideration regarding the Act, and knowing that all our negotiations have failed to get our minimum demands, would it not be much more dignified for us as a profession to refuse at once to work under the Act, and to straightway inform "the State" that if they want the medical profession to work the Act they must come *to us* with their terms? We can then consider whether they are good enough for us to accept or not.

I am, Sir, yours faithfully,

H. J. GODWIN,

Dec. 27th, 1911. Hon. Secretary, Winchester Division B.M.A.

SOME POINTS IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—I note that no one has made any comment on my letter in THE LANCET of Sept. 2nd, 1911, p. 723. Dr. Camac Wilkinson has never made the least attempt to answer the letter which I wrote commenting on one of his to the *British Medical Journal* a few months since. In America tuberculin appears to be given the same way as I am at present giving it here. No one has any right to administer tuberculin until he has had the patient under supervision in bed for a period, and no one is justified in giving tuberculin without taking a rectal temperature before rising in the morning.

It is unfortunate that neither Dr. Wilkinson nor his opponents take proper precautions to see whether or not they are doing good when giving tuberculin. There is no doubt that tuberculin is a useful adjunct in treating suitable cases of phthisis, and it may be necessary to the cure of some persons. Unfortunately, its limitations are very great, and in some apparently suitable cases it does a great deal of harm.

I have noticed that cases in which there is a well-marked local reaction to an injection of tuberculin have relatively a favourable prognosis. I am of opinion that the swelling at the seat of injection produces in the healthy tissues at the site of injection an anti-tuberculin which is bactericidal. I cannot account otherwise for a fall in temperature apparently preceded by no negative phase.

One thing is, I think, clear, and that is that Dr. Wilkinson does not rightly understand the problem he is attacking; and another is that we have by no means learnt the correct way of giving tuberculin. However, the more care that is taken in giving tuberculin the less disastrous, and the more beneficial, will be the results. It is unnecessary, it seems to me, to put forward tuberculin as a specific when at present, at least, it is but an uncertain adjunct. Were the remedy considered apart from its results it would be surprising, indeed, if it were accepted as being what many of its sanguine exponents would have us believe. The fact that it *may* be useful is the reason for its having such a hold on persons who have never had the opportunity of studying phthisis either on themselves or on others under their constant care. I notice a growing tendency to publish the results of treatment when the after-history extends to only a few weeks or months. This is, of course, ridiculous with regard to phthisis. There is certainly such a thing as auto-inoculation, though some doubt now appears to be cast on this; it occurs most frequently after movements of the diseased focus. This auto-inoculation, however, probably ceases soon after the temperature has become normal, and a great deal of exercise can be indulged in after the disease has become quiescent without producing auto-inoculation. In many cases of pulmonary tuberculosis starting with hæmoptysis auto-inoculation is probably impossible by violent exertion. It is as well to remember that a fresh spread of the disease is not correctly described as auto-inoculation, and yet this is often what people really mean when they talk of auto-inoculation. Of course, this spread may directly result from too large an auto-intoxication. If tuberculin and exercise are taken at the same time it is probably much easier to produce an auto-inoculation.

It may be said that (*a*) No one can be said to be cured of pulmonary tuberculosis who is capable of auto-inoculation; (*b*) a chronic case may be very difficult to auto-inoculate and yet not be cured. It is doubtful whether the mere tolerance of the body generally for tuberculin can be regarded as a cure. Indeed, I am not sure but what after such tolerance has been established it does not become impossible to cure the patient. Something in the tissues appears to be used up which is necessary for a cure.

I am, Sir, yours faithfully,

EDWARD E. PREST.

Ayrshire Sanatorium, New Cumnock, Dec. 18th, 1911.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Surgical Disinfection of the Skin by Means of Alcohol.

As long ago as 1887 Fürbringer endeavoured to show that alcohol was a satisfactory disinfectant for the skin of the hands, but at a subsequent period the results of experimental work were published tending to prove that the application of soap was insufficient. According to general opinion at the present time alcohol has hardly any antiseptic properties. M. Marquis has, however, taken a different view in a report written by him and read by M. Savariaud at a recent meeting of the Surgical Society, giving statistical details of 50 operations in which there was healing by primary union without stitch suppuration. After treatment of the skin of the hands with alcohol for a period varying from four to ten minutes no microbial product was found in the epidermis. It was stated that 15 experiments were made in which a preliminary infection of the skin was followed by washing for ten minutes and drying by free exposure to the air for two minutes, the result being that in 10 of these cases no colonies were found. Rinsing was not so effective as rubbing with a sterilised compress. The hands remained sterile for 20 or 30 minutes. Sections of the skin after treatment with alcohol did not show any microbial lesion.

Advantages of Classical Study for Medical Practitioners.

Of late years several alterations have been made in the programmes of study in France, and as happens with all reforms these alterations have found supporters on one hand and a great number of opponents on the other. The latter include all those who hold that the studies known as "the humanities" are an essential instrument of mental culture. This question has been quite recently discussed from a medical point of view by Dr. Laignet Lavastine at a meeting of the Société de l'Internat des Hôpitaux de Paris. His discourse had a threefold division, showing successively how it has come about that the utility of classical studies for medical practitioners was called in question at the present day; how the objections that have been raised against such studies on the ground both of principle and of actual fact might be met; and, in the third place, how evident it was that such studies, instead of being eliminated from medical education, ought rather to be obligatory as advantageous to society, to patients, and to practitioners. He said that the decline of classical culture among young medical men dated from the

year 1902, when holders of the Bachelor Degree without Latin and Greek began to be admitted to the Faculty of Medicine equally with bachelors who had passed in Latin and Greek. Other causes of the deterioration of the general culture of young medical men were the inefficient teaching of languages both living and dead, too early specialisation, and the encyclopædic but superficial cramming which was given to them nowadays.

Murderous Attack on a Medical Man.

Dr. Lepers, of Roubaix, has recently been the victim of an attack in which he was wounded in the hand and the head as he was leaving a house where he had been attending a child. The motive of the crime remains unexplained.

Suspension of Lectures on Anatomy.

The medical students in Paris are at present greatly excited by recent occurrences at the Faculty. As a result of the disturbances which, as I have already mentioned, took place in the classroom of Professor Nicolas, steps were taken by Professor Landouzy, the dean, to prevent repetition of these disorders, and he accordingly directed that the amphitheatre where the lectures were delivered should be occupied by municipal guards and police officers. Here, however, there was now no disturbance, for the students, changing their tactics, arranged among themselves to surround the laboratory of Professor Nicolas in such numbers that they literally blockaded him in his laboratory and prevented him from coming out. Seeing that they could not be pacified, Professor Landouzy reported the circumstances to the vice-rector of the Academy of Paris, whereupon M. Liard issued an edict suspending until further orders the anatomical lectures of the Faculty of Medicine and the courses of practical instruction connected therewith. On the other hand, the old pupils of Professor Nicolas in Nancy have sent him an address expressive of their respectful sympathy with him in his present difficulties. Naturally enough, the students feel themselves seriously affected by the rector's decision, and they have held meetings for the purpose of considering how they may be able to get it withdrawn.

Fracture of the Cervical Spine through Diving.

The question of the fracture of the cervical spine through diving has been raised by M. Lejars, speaking on behalf of Dr. Lecoq of the army medical service. Dr. Lecoq had reported the case of a soldier who on diving into the sea struck the bottom at a depth of one metre. He lost consciousness, and on examination was found to have a wound on the top of his head as well as complete paralysis of the lower limbs, partial paralysis of the upper limbs, complete anæsthesia of the abdominal wall, and partial anæsthesia of the upper limbs. The diaphragm acted, but respiration was slow and difficult. In the back of the neck and in the pharynx there was a painful spot without deformity. A fixation apparatus was applied. The same evening his temperature rose to 40° C., and the patient died 73 hours after the accident. The second case being of a similar character Dr. Lecoq expressed the opinion that as the nature of the lesions was quite unknown it was advisable not to attempt an operation under such circumstances. On the subject being debated at the Surgical Society M. Routier said that in the case of a man suffering from a similar injury he had attempted reduction of the dislocation, but the patient succumbed; a Japanese, however, who presented the same phenomena of paralysis in consequence of a fall received no surgical treatment and recovered, although remaining somewhat hemiplegic. M. Tuffier, M. Reynier, M. Championnière, and M. Auvray questioned the propriety of an operation. M. Faure said that if there was no deformity he thought that there ought to be no operation, but in the contrary event it was better to operate, because the patient was not made worse by exploring the vertebral column. The principal point was to relieve compression of the spinal cord if it existed, and there was a possibility that the result might be successful, but if the cord was crushed nothing could be done.

French Balneological Congress.

The French congress representing mineral water localities, sea-bathing places, and climatic health resorts has just met in Paris under the presidency of the mayor of Vichy. The congress adopted resolutions to the effect that instruction in hydrology ought to be given in the various faculties of medicine, beginning with the next academical half year; that professorial chairs of hydrology ought to be instituted; and that in towns frequented by visitors in search of health suitable dietary scales should be introduced in the hotels. It was further recommended that the drinking water in balneary and climatic health resorts should be analysed at the commencement and during the course of each season, that a portion of the assessment deducted by the State from the proceeds of the sports and gaming should be devoted to improving the general appearance and hygienic conditions of the place, and that the visitors' tax (*taxe de séjour*) should be in operation next season.

Dec. 23rd.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Ottoman Red Crescent Society and the War.

THE above society was formed 46 years ago. In consequence, however, of the absolutist *régime* during Abdul Hamid's reign it could do very little good. Its settlement upon a firm scientific basis took place only after the deposition of the ex-Sultan and the establishment of a Constitutional Government. Its present organisation it owes to Madame Rifaat Pasha, the wife of the former Foreign Minister, at present Ottoman Ambassador in Paris. The latest and most useful establishments of the society, due principally to the initiative of that lady, are the following: Three medical and sanitary stations have been erected in the burnt-out quarters of Akserai and Balat, in Stamboul. In each of these quarters a permanent medical service has been established. During the cholera epidemic all the patients received gratuitous treatment, getting, in addition, milk and yaourt free of charge. Prompt prophylactic measures were taken by the society, and the sum of about £700 was expended for disinfectants and various apparatus. Soon after the proclamation of war the Red Crescent Society got to business under the guidance of Dr. Kerim Sebati Bey, professor of the Medical Faculty at Haidar Pasha, and as a result excellent work is now being done at Tripoli, where an ambulance lazaretto is in working order. The outlay for this humanitarian work, amounting to about 5000 Turkish liras, was entirely met from the means of the society. Another staff, consisting of three medical men and five nurses, was sent under Dr. Arif Bey to Benghazi at an expense of 1500 Turkish liras. Already about £8000 have been expended, and as the war will most likely last for some time further considerable expenses will have to be met. The means of the society are beginning to be exhausted and an earnest appeal is made to the Ottoman nation for contributions. The appeal is especially made to the Moslem ladies, who are urged to form committees and sub-committees in different cities of the Ottoman Empire. According to paragraph 43 of the regulations of the society, Turkish women are allowed actively to participate in the work of the society, which is in itself a remarkable sign of progress in Turkey, considering that during the late *régime*—i.e., only three years ago—no Moslem women were ever allowed to overstep the narrow limits of their dull, utterly inactive, harem life.

The Treatment of the Insane.

Constantinople has very little accommodation for insane people. It was expected that with the advent of the Constitution matters would be put right in this direction. This expectation has not been realised, for there were so many other needs demanding immediate attention. The Turks consider a lunatic a sort of saintly personality, who must not be touched and who must enjoy complete freedom. The deplorable occurrences that result from such an attitude can easily be imagined. Of late the police authorities have been trying to accommodate all the insane, who used to roam freely in the streets, but as the asylums are few and far between the lunatics are often confined in the garden of the police administration with no special attention at all. The scenes that take place in this confinement are indeed lamentable. Frequently the police are driven, in self-defence, to have recourse to force. I understand that the municipality

is taking the matter into serious consideration and that new asylums will soon be erected.

The Cholera Epidemic.

Although competent authorities assert that there are no more cholera cases in Constantinople, there can be no doubt that sporadic deaths from this disease still occur. Thus, in the Greek Hospital at Balukli, two women succumbed to it the other day. A few isolated deaths from cholera have also taken place on board the steamers which have arrived here from the seat of war. Precautionary measures are being taken.

Dec. 23rd.

Medical News.

UNIVERSITY OF OXFORD.—In the Congregation held on Dec. 16th the following degrees were conferred:—

D.M.—H. C. G. Semon, Magdalen.

B.M.—J. A. Noble, Queen's; W. J. Pearson and C. J. G. Taylor, University; W. J. Oliver, Oriel; W. W. Wagstaffe, New College; W. H. Bleaden, Brasenose; and T. B. Heaton, Christ Church.

UNIVERSITY OF CAMBRIDGE.—The following candidates passed the Second Examination for medical and surgical degrees, Part I. (Human Anatomy and Physiology):—

J. C. Andrews, St. John's; G. L. Attwater, B.A., Pembroke; L. W. Batten, B.A., Sidney Sussex; G. A. G. Bonser, B.A., St. John's; J. C. Bramwell, Trinity; H. F. Brice-Smith, B.A., St. John's; W. E. H. Bull, B.A., Caius; H. R. Buttery, B.A., Christ's; A. B. Buxton, Trinity; M. Chadwick, B.A., St. John's; G. F. Clifton, B.A., Downing; G. R. E. Colquhoun, Trinity; A. C. M. Coxon, B.A., Magdalen; E. C. Cunnington, B.A., Corpus Christi; E. D. D. Davies, B.A., Christ's; A. N. Drury, Caius; H. Dunkerley, B.A., Downing; H. S. Evans, B.A., Trinity; E. Forrester-Paton and L. S. Fry, B.A., King's; H. A. C. Goodwin, B.A., Jesus; E. H. H. Granger, Clare; C. Grantham-Hill, Caius; W. T. Hare, B.A., Christ's; J. B. Hunter, St. John's; J. H. Jordan, B.A., Emmanuel; H. D. Lander, B.A., Caius; F. C. Lapage, B.A., King's; H. W. Leatham, Trinity; A. H. Little, Corpus Christi; H. D. McCall, B.A., Christ's; E. C. Malden, Caius; R. A. Mansell, Emmanuel; C. G. T. Mosse, Caius; D. F. A. Neilson and W. D. Newcomb, Trinity; W. Oats, B.A., Caius; H. B. Padwick, Emmanuel; H. R. Pollock, B.A., Trinity; S. R. Prall, Emmanuel; W. B. Purchase, B.A., Sidney Sussex; G. D. Read, B.A., St. John's; W. H. C. Romanis, Trinity; T. H. Somervell, Caius; G. E. Spicer, Trinity; and H. N. Stafford, A. R. S. Warden, and E. Watson-Williams, Caius.

At the Third Examination in Part I. (Pathology and Pharmacology) the following were successful:—

M. Avent, B.A., Caius; H. M. McC. Coombs, B.A., Emmanuel; R. Gamlin, M.A., King's; H. K. Griffith, B.A., Trinity; A. N. Hodges, B.A., Queens'; R. M. Miller, M.A., Clare; C. G. H. Moore, B.A., Caius; R. S. Morshead, B.A., Trinity; G. M. Parker, B.A., Emmanuel; C. H. G. Philp, B.A., St. John's; and V. T. P. Webster, B.A., Emmanuel.

ROYAL SANITARY INSTITUTE.—The following members of the medical profession have been elected Fellows of the Institute: Fleet-Surgeon W. E. Home, R.N.; Sir Victor Horsley, F.R.S.; Dr. J. W. Mason, medical officer of health of Hull; Dr. E. M. Smith, medical officer of health of York; Mr. T. H. A. Valintine, chief health officer, Wellington, New Zealand; and Dr. W. H. Willcox.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—A communication to the council of this hospital has been made by Dr. D. Barty King, assistant physician to the hospital, of an offer by an anonymous donor of a sum of money to cover the entire cost of rebuilding and enlarging the out-patient department. The new buildings will include a lecture theatre, pathological museum, and research laboratory for clinical instruction and research in diseases of the chest. The gift will amount to over £6000.

KING EDWARD'S HOSPITAL FUND FOR LONDON.—Since the Distribution Committee of King Edward's Hospital Fund for London agreed on its recommendations to the Council with regard to the awards for the current year the following communication has been made to the Fund. In memory of his daughter, the late Mrs. Maud Ashley, Sir Ernest Cassel is giving to hospitals and other kindred institutions the sum of £50,000. Of this sum £7000 is divided between the Romsey Nursing Home, Romsey, Hampshire; the Royal Hants County Hospital, Winchester, Hampshire; the Victoria Hospital, Blackpool, Lancashire; the Fleetwood Cottage Hospital, Fleetwood, Lancashire; the Lytham Cottage Hospital, Lytham, Lancashire; the Royal National Hospital for Consumption and Diseases of the Chest, Ventnor; the Royal Sea Bathing Hospital, Margate; and £31,500 go to King Edward's Hospital Fund for London, on the understanding that it is divided among the institutions which receive grants from the Fund this year in the same proportion as the Fund's grants are divided, thus increasing the distribution of the Fund by one-fifth from £157,500 to £189,000. The remainder has been allocated among various London hospitals, subject to certain conditions.

POST-GRADUATE DEMONSTRATIONS AT THE MANCHESTER ROYAL INFIRMARY.—A clinical demonstration open to all qualified medical practitioners free of charge will be given at the Manchester Royal Infirmary every Monday and Friday at 4.30 P.M. The demonstrations will begin on Monday, Jan. 15th, and will continue throughout the year with the exception of Whit-week and the months of April, August, and September. The demonstrations will be given by members of the honorary medical staff, and the subjects will be found each week in the list of post-graduate lectures in THE LANCET. It is intended as far as possible to devote the Monday demonstrations to subjects of medical, and the Friday demonstrations to subjects of surgical, interest. A notice giving the particulars of each day's demonstration will be posted in the lodge at the main entrance in Oxford-street.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the executive committee of this society was held at 429, Strand, London, W.C., on Dec. 15th. There were present Dr. F. de Havilland Hall (in the chair), Dr. F. C. Martley, Mr. J. Brindley-James, Dr. M. G. Biggs, Mr. F. S. Edwards, Dr. F. J. Allan, Dr. F. S. Palmer, Dr. J. Pickett, Mr. E. Bartlett, Dr. W. Knowsley Sibley, and Dr. J. B. Ball. The sickness experience of the society during the summer and autumn months has been well under the amount expected and provided for, and the financial results of the working of the society for this year bid fair to be exceptionally satisfactory. The number of new entrants has been unusually great, and more members have availed themselves of the power given by the rules to increase their sickness benefits than in any previous 12 months of the society's operations. Prospectus and all further particulars may be obtained on application to Mr. F. Addiscott, secretary, Medical Sickness and Accident Society, 33, Chancery-lane, London, W.C.

THE CHILDREN'S SANATORIUM FOR THE TREATMENT OF PHTHISIS.—On Dec. 19th Mr. Theodore Hamilton Beit performed the ceremony of laying the foundation-stone of the new building of this sanatorium near Holt, Norfolk, the cost of which was chiefly met by the generosity of his father, Mr. Otto Beit. During the present year Queen Alexandra has graciously given her patronage to the institution, and its value has been recognised by King Edward's Hospital Fund. The chairman, the Rev. E. C. Bedford, and others spoke, and a vote of thanks was passed to Mr. Otto Beit for his generous assistance. Whatever may be the effect of the Insurance Act on sanatoriums, it is still most necessary that voluntary help for this important work should not fail. For it must be remembered that although the cost of building has been provided for, it now becomes necessary to augment the maintenance funds in proportion to the increased number of children who will be accommodated when the new building is opened in the coming summer. The secretary is Mr. T. H. Wyatt, M.V.O., 68, Denison House, Vauxhall Bridge-road, London, S.W.

BOOKS, ETC., RECEIVED.

CASSELL AND CO., LIMITED, London.

Letts's Diaries for 1912:—Medical Diary. Space for 54 patients' names daily. Prices 2*s.* 6*d.*, 3*s.* 6*d.*, and 4*s.* Space for 108 patients' names daily. Prices 4*s.*, 5*s.*, and 5*s.* 6*d.*

Nurses' Report Book and Diary. Price 2*s.* net.

Office Diary and Almanac. No. 10. Price 4*s.* 6*d.*

No. 31. Rough Diary. Plain. Price 1*s.* 6*d.*

No. 32. Rough Diary. Interleaved blotting. Price 1*s.* 6*d.*

Pocket Diary. No. 111. Cloth. Price 2*s.*

HAZELL, WATSON, AND VINEY, LIMITED, 52, Long Acre, London, W.C.

Smith's Physicians' and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements for 1912. Sixty-sixth year. Prices from 2*s.* 6*d.* to 6*s.* 6*d.*, in four styles of binding.

RUDALL, CARTE, AND CO., LIMITED, 23, Berners-street, London, W.

The Professional Pocket-book or Daily and Hourly Engagement Diary for 1912. Specially adapted for Professional Engagements. In three parts. January-April, May-August, September-December. Price not stated.

WALKER, JOHN, AND CO., LIMITED, London.

Walker's Diaries for the year 1912:—444/904. "A Day to a Page." Crushed morocco. Price 3s. 6d. 7/147. "A Week at an Opening." Crushed morocco. Price 2s. 6d. 3/73. Russia calf. Price 3s. 2/102. Long grain roan. Price 1s. 1 151. Long grain roan. Price 1s. 6d. 17 427. "Graphic." Solid pigskin. Price 2s. 3d. 8 48. Walker's Society Diary. Satin cloth. Price 2s. 6d. 777 D613 34. Walker's Loose Lea Diary. Morocco, leather lined, with pockets. Price 7s. 6d. net.

Walker's "Tear-off" Block Calendars for 1912:—Imperial Calendar. Price 1s. 9d. Graphic Calendar. Price 1s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ALLNUTT, E. B., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at Westminster Hospital.

COLLEDGE, LIONEL, F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Throat Hospital, Golden-square.

CORE, WILLIAM, M.B., Ch.B. Edin., has been appointed Junior House Surgeon at the Blackburn and East Lancashire Infirmary.

CUMBERLIDGE, W. I., M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Leicester Infirmary.

DUNDAS, J., M.B., B.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Ramsgate District of the county of Kent.

FAIRLEY, JAMES, M.D. Glasg., D.P.H., has been appointed Assistant Medical Officer to the Portsmouth Municipal Tuberculin Dispensary.

HAIGH, W. E., F.R.C.S. Eng., L.R.C.P., D.T.M., has been appointed Senior Resident Medical Officer at the General Hospital, Nottingham.

HICKS, J. A. BRAXTON, M.D., B.S. Lond., D.P.H. Camb., has been appointed Clinical Pathologist to the West End Hospital for Nervous Diseases.

MARSHALL, J. COLE, M.D. Lond., F.R.C.S. Eng., has been appointed Ophthalmic Surgeon to the Royal Waterloo Hospital.

PYBUS, FREDERICK, M.S. Durh., F.R.C.S., has been appointed Surgeon to the Hospital for Sick Children, Newcastle-on-Tyne.

WILSON, WILLIAM, M.B., Ch.B. Vict., has been appointed Honorary Assistant Ophthalmic and Aural Surgeon to the Royal Infirmary, Wigan.

ERRATUM.

Under this heading in THE LANCET, Dec. 23rd, page 1817, the appointment of Dr. Oates should read as follows:—

OATES, GEOFFREY EUGENE, M.D. Lond., M.R.C.P. Lond., has been appointed Assistant Medical Officer of Health of Ilford.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHNAL GREEN INFIRMARY, Cambridge Heath, E.—Assistant Medical Officer. Salary at rate of £100 per annum, with apartments, board, and washing.

BIRMINGHAM EDUCATION COMMITTEE.—School Medical Officer. Salary £260 per annum.

BRIGHTON PARISH WORKHOUSE INFIRMARY.—Consulting and Operating Surgeon. Salary 50 guineas per annum.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant Pathologist. Salary £100 per annum, with board, residence, and laundry. Also Assistant House Surgeon, unmarried. Salary £80 per annum, with apartments, board, and laundry.

BRISTOL ROYAL INFIRMARY.—Dental House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

BURNLEY, VICTORIA HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with residence, board, and washing.

CANCER HOSPITAL, Fulham-road, London, S.W.—House Surgeon for six months. Salary £70 per annum.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and residence.

CROYDON MENTAL HOSPITAL, Upper Warlingham, Surrey.—Pathologist and Third Assistant Medical Officer. Salary £200 per annum, with quarters, board, and laundry.

GERMAN HOSPITAL, Dalston.—Honorary Assistant Physician.

GRIMSBY AND DISTRICT HOSPITAL.—Senior House Surgeon and Assistant House Surgeon. Salaries respectively £100 and £60 per annum, with board, lodging, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Resident House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £30, with board and residence. Also Casualty Medical Officer. Salary £200 per annum, with luncheon.

HULL ROYAL INFIRMARY.—Senior Assistant House Surgeon. Salary £100 per annum, with board and lodging. Also Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

ITALIAN HOSPITAL, Queen-square, London, W.C.—Honorary Surgeon. Also Honorary Assistant Surgeon.

KENSINGTON AND FULHAM GENERAL HOSPITAL, Earl's Court, S.W.—Ophthalmic Surgeon.

LARBERT, STIRLING DISTRICT ASYLUM.—Second Assistant Medical Officer. Salary £130 per annum, with board, &c.

LEEDS GENERAL INFIRMARY.—Assistant Clinical Pathologist. Salary £150 per annum.

LEICESTER INFIRMARY.—Assistant House Physician for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, residence, and washing.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Resident Medical Officer. Salary £150 per annum, with residence and board.

MANCHESTER, ANCOATS HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board, residence, &c.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood.—House Physician at Northwood. Salary £75 per annum, with board, residence, and washing.

REDHILL, EARLSWOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and washing.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL.—Resident House Surgeon, unmarried, for six months. Salary £100 per annum, with board, residence, and washing.

ST. MARY'S HOSPITAL, London, W.—Resident Assistant Anæsthetist for six months. Salary at rate of £100 per annum, with board and residence.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Honorary Dentist.

SUNDERLAND, CHILDREN'S HOSPITAL.—Resident Medical Officer for six months. Salary £80 per annum, with board, residence, and laundry.

SUNDERLAND ROYAL INFIRMARY.—House Physician for six months. Salary £80 per annum, with board, residence, and laundry.

TOOTING, S.W., FOUNTAIN ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £180 per annum, with board, lodging, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Anæsthetist.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Youlgreave, in the county of Derby.

Births, Marriages, and Deaths.

BIRTHS.

GLADSTONE.—On Dec. 22nd, at Rosedale, Sydenham-road, S.E., to Dr. and Mrs. Howard Gladstone, a son.

HAYNES.—On Dec. 23rd, at Markfield, near Leicester, the wife of H. G. L. Haynes, M.R.C.S., L.R.C.P., of a son.

HUNT.—On Dec. 19th, at Carlisle Mansions, Westminster, the wife of E. Henderson Hunt, F.R.C.S., of Secunderabad, India, of a daughter.

ORMEROD.—On Dec. 18th, at Beauchamp Lodge, Wimborne, the wife of Ernest W. Ormerod, M.D., of a daughter.

MARRIAGES.

BOLTON—GEORGE.—On Dec. 21st, at St. Marylebone Parish Church, Charles Bolton, M.D., F.R.C.P., to Ethel Mary, elder daughter of the late Mr. Henry George.

CURTIS—MURPHY.—On Dec. 28th, at Ewell, by the Rev. A. L. Watt, George Herbert Curtis, M.R.C.S., L.R.C.P., L.D.S. Eng., third son of Mrs. Curtis, Ewell, to Florence Emily, elder daughter of Mr. and Mrs. Murphy, of Eaton-square, London.

PALMER—CORFE.—On Dec. 19th, at the Church of St. Cross, Winchester, C. J. Linton Palmer, M.R.C.S., L.R.C.P., Stoke House, Gosport, to Henrietta Margaret, daughter of Mr. C. C. Corfe.

SAVAGE—MARRIAGE.—On Dec. 23rd, at Little Waltham Church, Ernest Smallwood Savage, M.A., M.B. Oxon., F.R.C.S., to Constance, daughter of Henry Marriage, of Ayletts, Broomfield, Chelmsford.

SAWYER—THOMAS.—On Dec. 9th, at the Parish Church, Haseley, Warwickshire, R. Fitz-James Sawyer, of the Midland Circuit, younger son of Sir James Sawyer, M.D., F.R.C.P., and Lady Sawyer, of Haseley Hall, and Winifred, daughter of the late Rev. D. Thomas, M.A., Rector of Garsington and Fellow of Trinity College, Oxford.

DEATHS.

HUME.—At 4, Ellison-place, Newcastle-on-Tyne, Frances Diana, wife of George Haliburton Hume, M.D.

SWINDALE.—On Dec. 17th, at Warrington-road, Ipswich, John Popham Swindale, M.R.C.S. Eng., late of Binfield, Berks, aged 69 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE SUPERVISION OF AN INDIAN PILGRIM FAIR.

WE have received a copy of the official report on the Ashadhi Fair held at Pandharpur in Bombay Presidency during last July. 143,000 pilgrims were estimated as visiting Pandharpur during the progress of the fair, which lasts for nine days, and during which time the pilgrims pass in a continuous queue through Vithoba's temple and undertake the ceremony known as *darshan* ("Salute the God"). The fair passed off very successfully, there being an entire absence of epidemic disease, and the number of deaths did not average more than three per diem. Major H. A. F. Knapton, I.M.S., Deputy Sanitary Commissioner of the district, was assisted by a staff of 19 assistant surgeons, and the medical arrangements left nothing to be desired. The cholera hospital had been improved by the provision of wire-gauze netting to the windows to render them fly-proof. A supply of warm blankets and saline-injection apparatus, with an establishment of nurses and ward-boys, were kept ready, but fortunately not a single case of cholera or other epidemic disease occurred during the fair. The following among other sanitary precautions were taken. A large police force was employed; their duties were multifarious, including the guarding of the water-supplies. All the wells in Pandharpur with steps were closed temporarily. On the roads leading to the town water-drawers were put on all the wells to guard against pollution. Trench latrines were placed at a distance from the river and access to the river was protected by barbed wire fences and cactus hedges. A party of sanitary inspectors, nine in all, were employed on patrol duty in the outskirts of the town to prevent people squatting on open spaces. As a result the fields were kept clean. The latrines and portions of the river where washing was prohibited were marked with large flags of different colours. Muslin was provided for all sweetmeat sellers in the town, and they were enjoined to keep their goods covered with it. A Marathi leaflet containing simple directions to the pilgrims was printed, and 30,000 copies were distributed.

A WARNING.

Dr. A. Ogier Ward, 37, Onslow-square, S.W., writes:—A man of medium height, with spotty face and (I think) a moustache, presented a note addressed to me on 2nd inst. in the evening. It purported to be written by himself, and stated that he had been referred to me by a priest at the Brompton Oratory for a letter for a skin hospital. During the time my servant took to bring me the note and for me to read it and go into the hall, the man, who was left standing on the mat, had secreted an umbrella in the leg of his trousers. He went sideways down the front steps bowing and apologising for troubling me. He has visited two other practitioners near. If he calls, any medical man is requested to ring up the nearest police station.

Mr. John Dunlop wishes to make a correction in his letter published in THE LANCET of Dec. 16th, p. 1731. He fears that the words "contract practice on the lines of the National Deposit Friendly Society, however, is not quite in harmony with my ideas of sound and honest practice" may give the impression that he doubts the soundness and honesty of the principles of that society. This is not the case. He has always quoted the society as a model.

S. M. S.—A classified list such as our correspondent inquired for would lend itself to many abuses and could not be of advantage to the public.

A P. & O. Pill Mixer will find that the correction he sends was covered by a letter in our last issue from the author of the book.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

Dec. 27th-30th (Baltimore).—American Physiological Society.

In 1912:—

Jan. 20th-27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
Feb. 13th-14th (London).—Central Poor-Law Conference.
March 7th-11th (Berlin).—Thirty-third Balneological Congress.
March 23rd-April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
,, (London).—First Congress of Pure Food and Health Society of Great Britain.
April 1st-7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
,, 14th-20th (Rome).—Seventh International Congress on Tuberculosis.
,, 15th-18th (Wiesbaden).—Twenty-ninth German Congress for Internal Medicine.
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.
May 7th-17th (Washington).—Ninth International Red Cross Conference.
,, 25th-27th (Paris).—International Musical Festival.
,, 27th-June 1st (London).—Eighteenth International Congress of Americanists.
,, (London).—International Horticultural Exhibition.
June 24th-27th (London).—The (Biennial) Health Conference and Exhibition.
,, (London).—Missionary Exhibition.
,, (Dublin).—Celebration of the Bicentenary of the School of Physic in Ireland (Medical School of Trinity College, Dublin).

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

THURSDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION, at 11, Chandos-street, W., at 8 P.M.

Specimens:
Dr. Drummond Maxwell: Angio-chorioma of Uterus.
Dr. Inglis Parsons: (1) Fibroid of Uterus Undergoing Degeneration; (2) Fibroid Uterus Removed 20 Years after Apostoli's Treatment.
Dr. Dauber: Suppurating Ovarian Cyst with Sarcomatous Degeneration of its Wall.
Dr. Blair Bell (Liverpool): (1) Exfoliation of Endometrium during Menstruation; (2) Bilateral Solid Tumours of the Ovary, probably Carcinomatous Sarcomata.

Short Communications:
Dr. Colwell and Dr. Glendining: On the Presence of Blood-pigment in the Fæces of the Newborn Child.
Dr. Swayne (Clifton): Two Cases of Missed Labour.
Dr. Blair Bell: Case of Rhabdomyosarcoma of Uterus.

Paper:
Dr. Briggs (Liverpool): On the Relative Size of the Uterus in Cases of Hydatid Mole (with illustrative cases and specimens).

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Dr. W. J. Hadley: Diseases of the Colon.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women.
THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street, Piccadilly, W.

TUESDAY.—3 P.M., Dr. P. C. Mitchell: The Childhood of Animals—III., Colours and Patterns of Young Animals.
THURSDAY.—3 P.M., Dr. P. C. Mitchell: The Childhood of Animals—IV., Young Animals at Home.
SATURDAY.—3 P.M., Dr. P. C. Mitchell: The Childhood of Animals—V., The Feeding of Young Animals.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M., Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (6th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

The Index and Title-page for the current half year are published in this issue, which completes the second volume of the year 1911.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1911 will be ready shortly. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

Cases for binding the half-year's numbers are now ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

THE COLONIAL AND FOREIGN EDITION (printed on thin paper) is published in time to catch the weekly Friday mails to all parts of the world.

The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 1 0	One Year	£1 5 0
Six Months	0 12 6	Six Months	0 14 0
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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 27th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Dec. 21	29·09	S.E.	0·49	49	47	44	45	45	Raining
,, 22	29·84	W.	0·06	47	47	41	41	42	Fine
,, 23	30·04	N.W.	0·37	51	44	39	39	39	Fine
,, 24	29·61	S.W.	0·22	67	53	39	40	41	Cloudy
,, 25	29·38	S.W.	0·20	62	47	40	41	43	Fine
,, 26	29·76	S.W.	0·16	47	47	41	42	42	Cloudy
,, 27	29·85	W.	0·12	55	44	40	40	41	Overcast

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